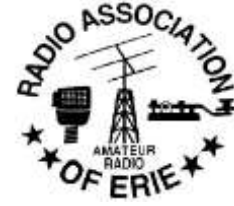




The QUARAE



Volume 21 Issue 9/10

Editor John Lindvay WB3IFD

September/October 2020

It Seems to Me

News from hams in the area.

I was sorry to hear that KC3COG, Mike Morrison's, oldest son passed away recently. Mike and his wife have been staying home because of the pandemic.

Mike Brumburg KB3DEL has moved to an assisted living home on the water front, off the Bayfront highway.

Doug Sweet AD4UL finally made it back to Erie, from Florida a few weeks later than usual.

Joe Ponchak KA3CPO has completely retired from ham radio. He sold his last antennas; a pair of VHF boomers to Fred N2LXD.

Gene Brinig, KB3JBL, has been busy making home improvements. He and Joe Ponchak have started to go out for lunch on Thursdays.

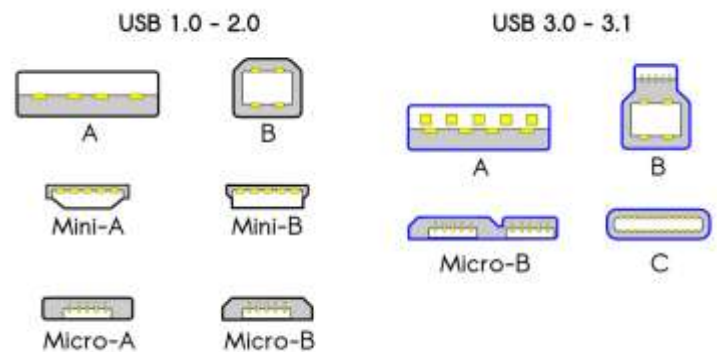
I heard that Ron Seybolt WA3DOM and his wife, Sue, Bob Sorenson KB3GBD, Craig Hill KP3LV and his XYL, and others have been going to lunch at Valerio's on the east side of town on Thursdays..

Rick Cutter WA3MKT has been constructing a repeater for the Wattsburg Wireless Society. At the moment it is VHF, 147.39 MHZ.

Sadly this is the last QuaRae I am doing. It is time to move on to other things. I find the lack of interest to be one of the reasons why I this is my last issue. I'm sure that the club can find someone to do a better job and spark more interest in a club newsletter. I would be willing provide my experience and tools to help any new QuaRae editor.

USB Cables


From Nuts & Volts Magazine



USB, short for [Universal Serial Bus](#), is a common type of computer port that makes it easy to charge a device or transfer data between two devices. Since it was first developed in the '90s, USB has continued to evolve alongside technology, progressively becoming smaller, faster, and more powerful. With so many devices that use USB, it's easy to get confused by the different connectors. But fear not—we're going to demystify all of that today.

When it comes to USB, there are really only four things that matter: form factor, transfer speeds,

Don't FORGET!



**Radio Association of Erie
Club Meeting at Wagner
Road. Last meeting at
club house until spring**

**Thursday October 1
7 PM- General Meeting
Program: TBA**

power delivery, and video delivery. Let's dig in.

Form Factor

There are multiple types of USB that have popped up over the years, each with a unique design and

The most common types are USB-A, Micro-USB, and USB-C, but we'll briefly discuss all of them.

USB-A

USB-A, or USB Type A, is the original flat and rectangular connector that no one could ever figure out how to plug in correctly the first time. These cables always have USB-A on one end with a different port type on the other, and can be used for device charging and data transfer. USB-A is still widely used and can be found on devices like computers, gaming consoles, TVs, and all kinds of peripherals.

USB-B

USB-B is pretty much only used on large devices, like scanners or printers. Visually, this connector looks almost square. Most of these are USB-B to USB-A cables, though some newer devices have moved on from USB-B to smaller options, like Micro-USB or Mini-USB.

Micro-USB

Micro-USB was the standard a while back for certain portable devices, like Android tablets and smartphones because it can transfer data and provide charge. It comes in both Type-A Micro and Type-B Micro flavors, and is smaller than USB-A. Some manufacturers still opt for using Micro-USB parts for their devices, as they're less costly than those for USB-C.

Mini-USB

As its name suggests, Mini-USB is a smaller version of USB-B. It was the standard for charging or transferring data from devices like tablets before Micro-USB was. There are also Type-A and Type-B versions of this connector. It's uncommon to see

many products using Mini-USB today, though you can still find them on older electronics like MP3 players or the PlayStation 3 controller.

USB-C

This is the current standard, and it marries power and data delivery with display connectivity. **USB-C** is what you'll see on most new devices like smartphones, game controllers, earbud cases, **microphones**, and laptops. Its form factor is small, oblong, and reversible, so it can be plugged in either way (take that, USB-A). The port's 100-watt connection makes it perfectly suited for fast charging and data transfers, even with larger devices.

USB-C can do more than other USB types can, and get it done faster. USB-C has the potential to replace all other cables, thanks to its diverse multi-tasking abilities. It has the ability to power even the most power-hungry devices, like laptops and TVs. It can also transfer 40 gigabits of data per second (Gbps), and can be used to deliver 4K video to external monitors.

While manufacturers continue to release new products with ports other than USB-C (looking at you, Apple), we aren't yet able to live in a single-cable society, but we're getting there we, and we may eventually be freed from the burden of lugging around multiple cords.

Lightning

Technically, Lightning is not USB, but rather Apple's proprietary connector type that works similarly to USB. You'll see it on Apple's devices, like the iPad and iPhone. It's similar to USB-C in that it is reversible. It supports speeds similar to USB 3.0.

Data Transfer Speed

In addition to coming in a variety of shapes and sizes, USB types also have multiple speed standards. Keep in mind that some USB cables are data transfer only, and others are power delivery

only, but also that there are options that can handle both tasks. Be sure to verify a cable's abilities before purchasing it.

The first, USB 1.x, is old and incredibly slow, and can only move 1.5 Mbps. Your odds of finding a device in the wild still on 1.0 are slim to none. The slightly less old (and comfortably slow) USB 2.0, however, is still relatively common, though you'll really only find it on older electronics. 2.0 has a full-speed option that can handle 12 Mbps, and a high-speed version that can handle 480 Mbps. SuperSpeed USB 3.x can transfer data between 5-20 Gbps.

The latest entries, USB 4.0, [Thunderbolt 3](#), and [Thunderbolt 4](#), are where you'll find the highest data transfer speeds: a maximum capable throughput of 40 Gbps. Thunderbolt is another transfer speed standard used in some USB-C cables—all Thunderbolt 3 and 4 cables are USB-C, but not all USB-C cables are Thunderbolt. So if Thunderbolt is what you're after, you'll need to make sure that's part of the cable you're buying.

These super-high transfer rates are impressive, but they don't matter much if you aren't regularly transferring hundreds of GB of data or doing something wild like editing video on an external hard drive. If you are, however, you'll want at least Thunderbolt 3.

Power Delivery

As we mentioned above, some USB cables are only capable of delivering power or transferring data, though most can do both. PD (power delivery) standards fall into one of three main categories: power only, slow charge, and fast charge.

USB 2.0 supports 2.5W charging and USB 3.0 supports 4.5W charging. To put things in perspective, 10W is enough power to slow charge your phone, and 18W is enough to fast charge your smartphone or power a Netbook or similar bare-bones laptops.

In contrast, USB PD can handle up to 100W, which is powerful enough to power things like a MacBook Pro, monitors, docking stations, and most TVs. It can also fast-charge smaller compatible devices like your phone or Nintendo Switch. PD also only provides the necessary charge to your device but won't overcharge it. Newer [battery banks](#) are starting to support USB PD, which are more capable of keeping your power-hungry devices powered and fully charged.

Video Delivery

Being able to transfer data *and* power a device is already impressive. But you can also choose to use USB-C to connect to monitors in place of a bulky HDMI or VGA cable. USB-C also has support for 4K video delivery to a screen. Thunderbolt 4 cables can handle displaying 4K content on two monitors at a time, or 8K on a single monitor. Again, this isn't going to be the use case for most people, but as 4K and 8K video becomes more commonplace, you'll eventually need a cable that can keep up.

How to Know if You're Using a Safe USB Cable

The rule of thumb is that you should always use the cable that came with your device and that you should buy any replacements from the manufacturer as well. That cable is specifically engineered to be used with your phone, tablet, or computer.

However, if you want to purchase one from a third party, be sure to stick with trusted established brands like Anker, Aukey, or Belkin, or at least look to see if a different brand lists the cable's USB certification. Otherwise, you could end up with an inferior cable that lacks official [USB-IF](#) certification and could potentially damage your device.

FCC wants 50 bucks!!!

From Steve Szabo WB4OMM #5913
NAQCC President

Important!!! This impacts - YOU! You might well want to file comments against this NPRM.

The FCC filed a Notice for Proposed Rule Making (NPRM) to start collecting a \$50 fee for Amateur Radio License Applications, Vanity Calls, renewals and for a copy of your license. Currently, these are free.

Comments are being accepted on the Notice of Proposed Rulemaking (NPRM) in MD Docket 20-270, which proposes application fees for radio amateurs. Formal deadlines for comments and reply comments will be determined once the NPRM appears in the Federal Register. Comments may be filed now, however, by using the FCC's Electronic Comment Filing System (<<https://www.fcc.gov/ecfs/filings>> ECFS), posting to MD Docket No. 20-270.

The docket is already open for accepting comments, even though deadlines have not yet been set.

Here is the link to file your comments (copy and paste in your browser):

<https://www.fcc.gov/ecfs/filings/express>

* In the first box type, "20-270", then select the "Amendment of the Schedule of Application Fees...."* Then fill out the remainder and submit. It won't immediately show up, it has to be reviewed first.....mine showed up this morning.

Here are the comments I submitted: "I strenuously implore the FCC to drop this fee initiative for Amateur Radio License Applications and Renewals. Amateur Radio Operators provide VOLUNTARY COMMUNITY SERVICES. VOLUNTEER Examiners, SKYWARN, ARES, RACES, and CERT are all VOLUNTARY groups and services. Even the title, "AMATEUR" denotes VOLUNTEER service (non-paid). I see this fee as a huge barrier to youth (Boy and Girl Scouts, High School, Elementary Students) at a minimum; I see it as a,

"slap in the face" to folks who provide volunteer community services. If you need funding, raise the fees of the commercial license holders who profit from the license. Thank you for the opportunity to provide comments."

If you provide comments, make them your own...there are over 300 comments on the site against this NPRM as of today, but obviously the more the better. No nastiness, "just say no!".

Thanks for reading! I hope you understand why I sent this out.

Amateur Radio Calendar

September 27 – Cleveland Hamfest in Berea, Ohio
(Canceled)

October 1 – RAE Club meeting. See <http://www.w3gv.org/>

October 3 – California QSO Party. See <http://www.cqp.org/Rules.html>

October 3 - SKCC CW QSO Party. See www.skccgroup.com

October 4 - Anniversary of Sputnik 1

October 6 - Birthday of George Westinghouse. American inventor and industrialist who was chiefly responsible for the adoption of alternating current for electric power transmission in the United States

October 6 – Corry Club meeting. See <https://w3yxerac.wixsite.com/raoc>

October 7 - VHF-UHF FT8 Activity Contest. See ft8activity.eu/index.php/en

October 8 – Union City Amateur Radio Club meeting. See <https://www.wa3uc.org/>

October 10 - ARRL EME Contest. See arrl.org/eme-contest

October 10 – Arizona QSO Party. See <https://www.azqsoparty.org/>

October 10 – Nevada QSO Party. See nvqso.com/contest-rules

October 10 – Pennsylvania QSO Party. See paqso.org

October 10 - South Dakota QSO Party. See www.sdqsoparty.com

October 12 - Columbus Day

October 13 – Wattsburg Wireless Club Meeting. See <http://www.wattsburg-wireless.us/>

October 17 – New York QSO Party. See <http://nyqp.org/wordpress/>

October 17 – VE Session. See <http://www.wattsburg-wireless.us/>

October 18 – Illinois QSO Party. See <http://w9awe.org/ILQP.htm>

October 19 – Conneaut Club Meeting. See <https://www.dxzone.com/dx28514/conneaut-amateur-radio-club-w8bhx.html>

October 31 - Halloween