

Bits & Bytes

Arkansas' Premier Computer Club



May 2023

The Bella Vista Computer Club - John Ruehle Center

Highlands Crossing Center, 1801 Forest Hills Blvd Suite 208 (lower level), Bella Vista, AR 72715

Website: <http://BVComputerClub.org>

Email: editor@bvcomputerclub.org

MEETINGS

Board Meeting: May 8, 6pm, in John Ruehle Training Center, Highlands Crossing Center.

General Meeting: May 8, 7pm, "PowerToys for Windows", presenter Joel Ewing. This is a free collection of utilities that can be downloaded from Microsoft to add additional functionality to Windows, like renaming multiple files at the same time based on file name patterns.

We will meet in-person in Room 1001 on the lower level of The Highlands Crossing Center, 1801 Forest Hills Blvd, Bella Vista, or you may attend the meeting on-line via Zoom. Zoom access information is published on our website.

Visitors or Guests are welcome.

Consider attending by Zoom if you are unable to attend in-person.

HELP CLINICS

May 6, 9am - noon at John Ruehle center

May 17, 9am - noon at John Ruehle center

Members may request Remote Help on our website at <https://bvcomputerclub.org> at menu path Member Benefits ► Remote Help .

Genealogy SIG: May 19, 1pm-3pm, Training Center

MEMBERSHIP

Single membership is \$30; \$15 for each additional family member in the same household.

Join on our website at <https://bvcomputerclub.org> at menu path Get Involved ► Join/Renew, by mailing an application (from the web site) with check, or complete an application and pay in person at any meeting.

CLASSES

(At BVCC Training Center)

Wednesday, May 10, 9am-11am, "Slow PC? Let's Upgrade or Buy New", with Pete Opland.

Tuesday, May 16, 2pm-4pm, "Basic Computer Security, Part 1", with Justin Sell.

Wednesday, May 24, 9am-11am, "KeePassXC Password Manager", with Joel Ewing

Advance sign up required for each listed class: For reservations: email to edu@bvcomputerclub.org, or sign up at the General Meeting. Classes are free to Computer Club members.

Check the monthly calendar and announcements for any last minute schedule changes at <https://bvcomputerclub.org> .

NEW OR RETURNING BVCC MEMBERS

We are pleased to welcome the following new members or members returning to BVCC after an absence:

Katy Young

Vern Howard

Sandra Gromatka

Barbara Clark

Barry Andrews

DELL LAPTOP MODEL 15-3000 AUCTION AT MAY 8 MEETING

A refurbished Dell laptop will be auctioned off at the May 8 BVCC meeting with a starting bid of \$195. You do not need to be a BVCC member to bid, but remember that BVCC members will get free hardware and software support. This laptop supports Windows 11. Below is a description of the laptop:.

Processor: Intel ® Core™ i7-8566U, 1.80GHz (base), 4.60GHz (Turbo), 4 cores, 8 threads

RAM: 16 GiB

Display: 15.6"

Operating System: Windows 11 (64-bit)

Solid State Hard Drive: 500 GB

Benchmarks at 6.196

Microsoft Office 365 installed (9 programs)

IS A BLUE CHECKMARK ON A TWITTER ACCOUNT NOW USELESS?

By Joel Ewing, President Bella Vista Computer Club
president (at) bvcomputerclub.org
May 2023 Bits & Bytes



On the old pre-Musk Twitter, some users had the status of a "blue checkmark" indicating they had by some means been verified to be an actual person of some importance, and not someone merely impersonating or making a parody of someone famous, or a bot disguised as a person to spread misinformation. The rules for achieving this status were never clearly stated. The Twitter website had some general guidelines, but these were constantly being revised. The blue checkmark was awarded sparingly, both creating a backlog of users wanting that status and serving as an incentive for users to increase their Twitter presence in hopes of being selected for a blue mark of "importance".

It would appear that Twitter actually had a fairly effective verification process at that time, in that having a "verified" checkmark was a good indicator you were who you claimed to be. But, either by design, or to limit the Twitter person-hours spent on verification, there were also many additional important Twitter users who probably warranted verification that were not verified. It was purely Twitter's choice who got the honor, and there were even suggestions that spending \$1000's per month advertising on Twitter was one way to jump the queue.

It would appear that one of the cost-cutting layoffs initiated by Elon Musk was to eliminate those who did user verification. The old legacy verification process has been replaced by a pay-for-a-blue-checkmark option called

Twitter Blue, which cost a minimum of \$84 annually. Many of those who had been awarded legacy blue checkmark status were reluctant to shell out for Twitter Blue -- possibly because they saw their presence on Twitter as of more benefit to Twitter than to themselves.

Until recently, both legacy and Twitter Blue checkmarks have co-existed on Twitter. Effective April 20, 2023, Twitter has terminated the old legacy "verified" blue checkmark, and the only accounts left with blue checkmarks will be those associated with paid Twitter Blue accounts. Although this has the same appearance as the old verified-user account, it is no longer valid to interpret such accounts as verified.

Anyone with access to a credit card or debit card and a phone number can set up a Twitter Blue account. There is a statement that Twitter is "committed to maintaining integrity of accounts on Twitter", but it sounds like anyone with a purchased prepaid credit card and burner phone could supply a fake display name and profile photo and create a Twitter Blue account. There is no indication that Twitter would automatically do any cross checking to verify that billing information or phone number are consistent with the display name for the account. Although official Twitter policy is against misuse of the platform, it would appear that the onus for enforcement now largely falls on other Twitter users for finding and reporting abuse. As might have been reasonably expected, there was a significant upsurge in "bogus" accounts on Twitter following the April 20 discontinuance of legacy blue checkmarks.

There presently is no good way to distinguish between reliable and fraudulent Twitter accounts, only between paid and free accounts. A blue checkmark is no longer an indicator of validity, just an indicator of willingness to pay. You will now invariably be forced to guess whether an account associated with a famous name is bogus, as the presence of a blue checkmark will no longer improve the odds.

Those engaged in the deliberate spread of misinformation on Twitter will no doubt pay to have Twitter Blue checkmarks to make their postings appear more genuine to the gullible and to raise their message priority. Research by a UK-based non-profit (Reset, <https://www.reset.tech>) that studies the effects of social media on democracy has shown that Russian disinformation agencies exploited Twitter-Blue "verified" accounts to spread a confusion of lies around the recent rail disaster in East Palestine, Ohio. Conservative-Right, pro-Russian Americans, unlikely to have received a blue checkmark under the Twitter legacy system, are also using Twitter Blue accounts to amplify their re-posting of those and other Russian talking points. Elon Musk does not see this as a problem, because it increases Twitter revenue and he himself re-posts Russian talking points.

PUBLIC USB CHARGING PORTS REVISITED

By Joel Ewing, President Bella Vista Computer Club
president (at) bvcomputerclub.org
May 2023 Bits & Bytes

In March 2023 Bits and Bytes, one of the articles talked about the dangers of using public USB charging ports to charge mobile devices. The problem is that a USB interface is designed to provide both a power and a data connection. Establishing a data connection to a compromised USB port in a public location could result in the installation of malware on your mobile device or in data theft from your mobile device.



One way to avoid that exposure is to always carry your own AC-to-USB power adapter along with your USB cable and charge your devices from a public AC outlet rather than from a public USB port. This can be a problem if public AC outlets are scarce, or if you are traveling in a foreign country and your AC adapter is not compatible with local AC power.

There is now an alternative solution available, a USB condom. A USB condom, also known as a USB data blocker, is a small dongle that adds a layer of protection between your mobile device and a questionable USB charging port to protect against malware or other viruses. Simply put, it contains pass-thru connections for the power leads but none for the data leads. One example is shown on the right: the USB Data Blocker with male and female USB-A connectors, available at Amazon in a 2-pack for \$11.99. Plug your USB charging cable into this Data Blocker, and then plug the Data Blocker into a USB Charging port and you should be able to safely charge from a potentially-unsafe public USB Charging port.



Data Blockers are also available with various combinations of USB-A and USB-C connectors.

For those traveling in foreign countries, being able to charge from public USB ports has the advantage that unlike AC power, USB ports follow a consistent international standard.

How can you verify one of these dongles is working as advertised? Not by visually inspecting the connectors. The USB connectors have all contacts present, as required by the standards. It is the internal wiring between the connectors that makes the difference. If you have an iPad or iPhone iOS device and a computer, connect the iOS device's USB power cable to the iOS device and plug the USB end directly into your computer. You should see a Window appear on the iOS device asking whether the connected computer should be "Trusted" or "Not Trusted", indicating a Data connection to the computer has been sensed. Remove the cable from the computer, attach the USB end to the Data Blocker dongle and plug the dongle into your computer. The Trusted/Not-Trusted window should not appear, because there is no data connection through the dongle. I assume something similar would happen with an Android mobile device, but am unable to test that.

POWER BASICS

By Dick Maybach, Brookdale Computer User Group
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Electrical power is remarkably reliable, especially considering that much of the system is exposed to the elements and sometimes wildlife. On the rare occasions when it does fail, it will be helpful if you know a bit about it. Troubleshooting by candlelight is seldom quick, and ignorance won't make it faster.

You may have noticed that electric power enters your home on three wires. Two of these, which we'll call "Phase 1" and "Phase 2," carry 110V AC¹, and the third is neutral. Figure 1 shows the voltage waveforms on the "hot" wires; the voltage on the neutral wire is always close to zero.

A 110 volt outlet connects to either phase 1 and neutral or phase 2 and neutral. For example, an appliance needing 220 volts connects to both phase 1 and phase 2. Since phase 2 is the negative of phase 1, such a connection applies twice the voltage to the appliance as that between one of the phases and neutral. Thus, although some devices may need 220 volts, the maximum voltage in your house is 110. By the way, if you measure the voltage, you will find it's about 125. When electric power was first developed, it was 110 volts, but that label is no longer accurate.

Figure 2 shows a portion of a home breaker box, which is the interface between your outlets and devices and the power company. At the top is the master breaker through which all the individual circuits connect. Turn this off to remove all the power in your house. Below are the breakers for the individual circuits. If your home is new, there is probably a sheet on the breaker box cover that lists what each breaker controls. In older houses, this sheet is often out-of-date or even missing. Note that the two top individual breakers are actually two individual ones; these are for 220-volt service. As you go from top to bottom, alternate breakers connect to phase 1 and phase 2. Thus, as breakers are added, the loads on phase 1 and phase 2 remain approximately equal, and adjacent breakers can control 220-volt circuits.

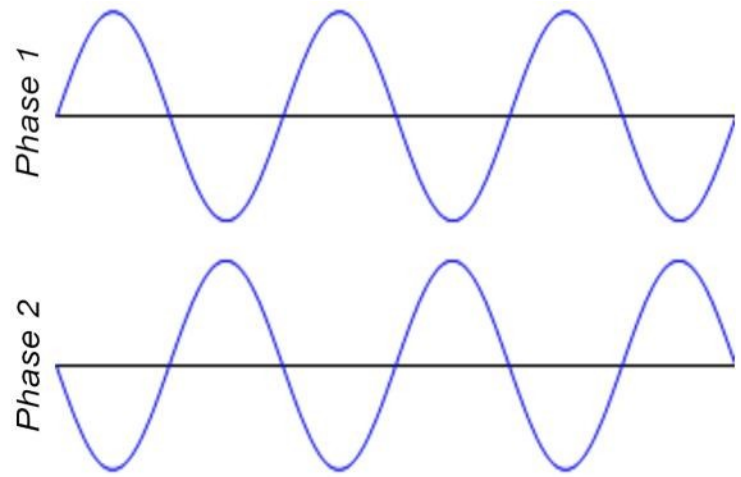


Figure 1. A-C Power Waveforms.

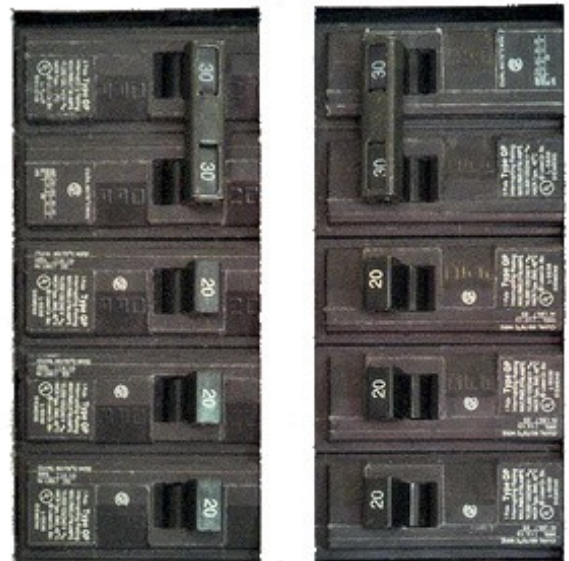


Figure 2. Residential Breaker Box

1 The exact voltage delivered to your house depends on the current loading on the power distribution system. Actual values typically range between 110V and 125V, closer to 125V if the system isn't stressed. -- B&B Editor

There are two common types of 110-volt outlets in the U.S., as shown in Figure 3, but the two-wire one is usually found only in older houses.

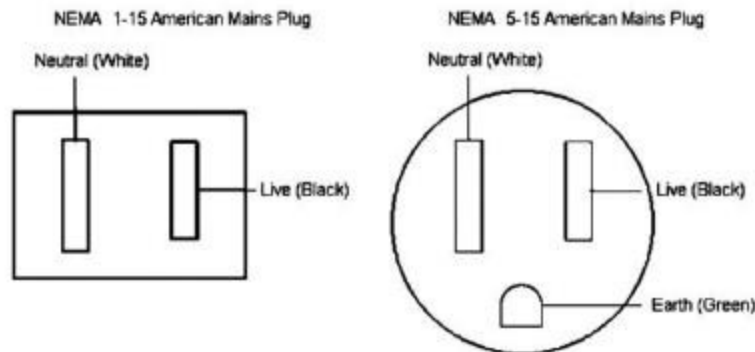


Figure 3. U.S. 110-volt Power Outlets.

The live slot connects to either phase 1 or phase 2 of the incoming power, and neutral connects to neutral. Ground does not connect to the power company but to a good earth ground in your home, typically the incoming water pipe.

You need an adapter between a 3-wire plug and a 2-wire outlet. If you use one, be sure to connect its ground wire to the screw that secures the outlet cover plate². If you have any doubts about your wiring, testers such as the one in Figure 4 are inexpensive insurance. As you can see from its label, the indicator lamp's pattern shows the outlet's state. It's also helpful during the first step of PC troubleshooting, ensuring it has electrical power.



Figure 4. AC Outlet Tester.

2 This might give you a valid "ground" connection, but in most older residences that lack 3-prong grounded outlets, the outlet box is not grounded either and this isn't much better than leaving the ground wire loose. Some devices might detect and object to running without a true ground. Other devices may not care, but it could still be a potential safety issue. -- B&B Editor

You can also use an inexpensive multi-meter to check the voltage at an outlet, but be careful when you insert the probes into the slot; touching 110 volts is always unpleasant and can be lethal. Non-contact testers avoid this hazard, but user reports indicate they aren't reliable.

If a circuit breaker trips repeatedly, either it's defective or the circuit is drawing too much current. Never replace it with one with a higher rating, as the wires in your house are sized to carry currents only up to the breaker rating. In Figure 2, for example, the wires in the 30-ampere circuits are thicker than those in the 20-ampere ones. If you exceed these currents, the voltage at the outlet will drop, and the temperature of the wires in the walls will rise, perhaps enough to degrade the insulation or even to start a fire. Therefore, any electrical work should be done only by a licensed electrician.

In newer homes, some outlets are protected by a Ground Fault Interrupter (GFI), most often in kitchens, bathrooms, and outside the house. Some, particularly those in kitchens and bathrooms, have a distinctive connector, Figure 5.



Figure 5. GFI Outlet.

If a GFI detects any current flowing to ground, it trips the breaker. Note the two rectangular buttons in the center; "Test" checks the operation by tripping the breaker, and "Reset" restores power. Usually, each GFI outlet connects to two or three others that don't have distinctive buttons but are also protected. It may be worthwhile to press each test button to see what other outlets are affected. Not all GFI-protected circuits have distinctive outlets. Figure 6 shows a portion of a residential breaker box.



Figure 6. Breaker Box Equipped with GFI Breakers.

Note the green squares labeled "Test" on five of them. These are GFI breakers, but all their outlets are normal, with no test or reset buttons. This is probably because the outlets are near the floor and can be obscured by furniture, making them difficult to access.

It would be worthwhile to become familiar with your home electrical power system while it's working.

- Check which lights and outlets each breaker controls and update the sheet on the breaker box cover if needed.
- If you have an older home, use a tester like the one shown in Figure 4 to be sure the outlets are wired correctly. Use the test button on your GFI outlets to find which are on each circuit.
- If you don't have GFI sockets, consider hiring a licensed electrical contractor to install them, at least in your bathrooms and kitchen.

The most frequent power problem is storm damage, usually repaired within a few hours. Gasoline-powered emergency generators are a common solution here but don't use them near your house because of the carbon monoxide they also generate. It's not uncommon for GFI breakers to trip, which is an excellent reason to become familiar with the circuits they control. I've had standard breakers fail, especially when they are old; in such cases, call an electrician.