BILL'S HOME TECH
Home & Small Business Tech Solutions

BILL'S COMPLETE MANUALS · NO. 98

External Drives & SD Cards

Flash drives, portable drives, memory cards and card readers — plugging in, copying, ejecting and keeping things safe

Your photos, in your own two hands

Take your time — you can't break it

Written for you by Bill — Bill's Home Tech

(330) 200-8042 · BillsHomeTech.com

For Windows 11, Mac, Chromebook, iPhone, iPad and Android · facts current November 2026

What's Inside

This is your manual for the little things that hold big memories: flash drives, external drives, SD cards and card readers. Read it in any order and at your own pace — there is no test, and you can't fall behind. If a drive won't show up right now, jump to Part 5. If a message is asking you to format a disk, stop and read Chapter 19 first. Each topic covers Windows 11, the Mac, Chromebooks, iPhone and iPad, and Android phones, with slow step-by-step directions. If a screen looks a little different on your device, the idea is still the same.

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PART 1

Getting to Know Your Drives

Flash drives, external drives, memory cards and the plugs that connect them, explained in plain English. Start here if the words on the package have ever confused you.

CHAPTER 1

A Note from Bill

Hello, and welcome. Somewhere in most homes there's a little drawer with a few flash drives in it, a memory card from an old camera, and maybe a black box with a cord that someone said was "the backup." Nobody is quite sure what's on any of them. If that sounds familiar, you're in exactly the right place.

I'm Bill. I've spent more than 30 years working with computers and technology, and these days I help folks right here in Portage County, Ohio, feel at home with theirs. I wrote this guide the way I'd explain it sitting next to you at the kitchen table: slowly, in plain English, one step at a time. When I use a word you might not know, I'll stop and explain it.

Small things that hold big memories

A flash drive, an external drive and an SD card all do the same simple job: they hold a copy of your files, photos and videos that you can carry, put in a drawer, or hand to a family member. That's it. Everything else in this guide is about plugging them in, finding what's on them, copying things safely, and keeping them from getting lost or spoiled.

> **WHAT THIS DOES FOR YOU**
>
> **A copy you can hold**
>
> A drive is a copy of your memories that doesn't depend on a password, a monthly bill or the internet. You can hold it in your hand. Used well, it's one of the simplest ways to make sure the grandkids' pictures and your important papers are never in just one place.

You can't break it, with one exception

Almost nothing you do in this guide can cause harm. Plugging in, looking around, copying and ejecting are all safe. There is one button that deserves respect: **Format** (sometimes called **Erase** or **Initialize**). It wipes a drive clean. I'll point it out every time it comes near, and Chapter 19 explains what to do when a message suddenly asks you to press it.

And I'm only a phone call away

If you get stuck, or a drive holds something you can't bear to lose and it's acting strangely, stop and call me at **(330) 200-8042**. A careful pause is always better than a hurried click. Now let's meet the drives.

— Bill

CHAPTER 2

What a Drive Is, and Why You'd Use One

Every computer, tablet and phone has storage built inside it: the place where your files live. An **external drive** is simply extra storage that lives *outside* the device. You plug it in when you need it and unplug it when you're done. The files on it stay put, even with no power.

The three kinds you'll meet

Name	What it is
Flash drive	A small stick, about the size of a house key, that plugs straight into a computer. Also called a thumb drive, USB stick or jump drive. Great for carrying a few documents or a batch of photos.
External drive	A pocket-sized box with a cable, made to hold a lot: a whole computer's worth of photos, or a backup. Comes in two kinds, hard drives and SSDs (Chapter 5).
Memory card	A thin card, like a postage stamp, that goes in cameras, trail cams, dash cams and some tablets and phones. The common ones are SD and microSD cards (Chapter 6).

Why use a drive when there's "the cloud"?

The cloud (iCloud, Google Photos, OneDrive and the like) keeps a copy of your things on a company's computers over the internet. It's very handy, and I recommend it. A drive is a different kind of copy, and the two work well together:

- **A drive is yours.** No account, no password to forget, no subscription to keep paying.
- **A drive works without internet.** Handy at a library, a print shop, or a relative's house.
- **A drive is a second, separate copy.** If an account gets locked or a cloud plan lapses, the copy in your drawer is still there.
- **A drive is easy to hand on.** You can give a grandchild a flash drive of family photos as a gift.

GOOD TO KNOW

Pairs with Backing Up Everything

This guide is about the drives themselves: what to buy, how to plug in, copy, eject and keep them healthy. The bigger plan, how many copies to keep and where, is in Bill's **Backing Up Everything** manual. Moving photos around on your phone is covered in **Managing Phone Photos**, and turning old prints and tapes into files is in **Digitizing Old Photos & Movies**.

CHAPTER 3

Plugs and Ports: USB-A, USB-C and Adapters

The most common headache with drives isn't the drive at all. It's the plug. Nearly every drive connects with **USB**, but USB comes in two everyday shapes, and new and old devices don't always match. A **port** is the socket on your device; the **plug** is the end of the drive or cable.

The two shapes you need to know

Plug	What it looks like and where you'll find it
USB-A	The older, flat rectangle, about half an inch wide. It only goes in one way up. Found on most desktop computers, many laptops, TVs and chargers.
USB-C	The newer, small oval with rounded ends. It goes in either way up, so there's no wrong side. Found on newer laptops, Macs, Chromebooks, Android phones, iPads, and iPhone 15 and later.
Lightning	Apple's older small plug, on iPhone 14 and earlier and some older iPads. Not USB, but Apple sells adapters so USB drives and card readers can connect.

When the plug doesn't match the port

This is normal and easy to solve. You have three choices:

- **Buy a drive with both plugs.** Many flash drives now have USB-A on one end and USB-C on the other. These are the easiest to share between an old computer and a new phone.
- **Use a small adapter.** A USB-C-to-USB-A adapter (sometimes called a dongle) lets an older drive plug into a newer laptop or phone. They're small and inexpensive; buy a known brand.
- **Use a different cable.** Most external drives have a removable cable. Many come with both kinds of cable in the box.

Speed labels on the package

A USB-C plug tells you the *shape*, not the *speed*. Drives can be fast or slow with either plug. The USB organization now asks makers to print the speed right on certified packaging, such as **USB 5Gbps**, **USB 10Gbps**, **USB 20Gbps**, **USB 40Gbps** or **USB 80Gbps**. Bigger numbers copy faster. Older boxes may say "USB 3.0", "USB 3.2 Gen 1" or "USB 3.2 Gen 2" instead. For photos and documents, any of these is plenty.

TIP

The slowest part sets the speed

A fast drive plugged into an old, slow port, or through an old cable or adapter, copies only as fast as the slowest piece. That's fine for everyday use. It only matters if you're copying a very large collection and wondering why it's taking all afternoon.

HEADS UP

Charging cables don't always carry files

Some cheap USB cables are made for charging only and can't move files. Google's own help pages warn that not every USB cable can transfer files. If a phone or drive charges but never shows up on the computer, try the cable that came with the device.

CHAPTER 4

Flash Drives

A flash drive is the simplest drive there is. It has no moving parts, needs no power cord, and plugs straight into a USB port. Inside is a memory chip much like the one in your phone.

What they're good for

- Carrying documents to a print shop, library or tax preparer.
- Sharing a batch of photos or a video with a family member.
- Keeping a second copy of a small but important folder, like scanned papers.
- Moving files from an old computer to a new one when there's no other easy way.

What they're not good for

- **Being your only copy of anything.** Flash drives are small and easy to lose, step on, or put through the wash. Always keep the original somewhere else too.
- **Long-term storage for decades.** They're fine for years in a drawer, but they aren't designed to be a family archive. Chapter 26 has more on lifespan.
- **Huge collections.** For a whole computer's worth of photos, an external drive is better value.

Choosing one

- **Brand.** Stick with well-known brands from a store or the maker's own shop. Chapter 28 explains why bargain no-name drives online can be fakes.
- **Size.** The amount it holds is printed on it in GB (gigabytes). Chapter 8 explains how much you need. For most people, 64 GB to 256 GB is plenty.
- **Plug.** Match your devices (Chapter 3), or pick one with both USB-A and USB-C ends.
- **A loop or cap.** A drive with a key-ring loop or a cap on a tether is much harder to lose.

TIP

Label it

Put a small sticker or a bit of colored tape on each flash drive and write what's on it: "Photos 2025" or "Tax papers." You'll thank yourself in a year when the drawer has four identical sticks.

CHAPTER 5

Portable SSDs vs. Hard Drives

When you need to store a lot, such as a backup of a whole computer or a lifetime of photos, you'll want an **external drive**. They come in two kinds that look similar from the outside but work very differently inside.

The two kinds side by side

	External hard drive (HDD)	Portable SSD
What's inside	A spinning metal disk and a tiny arm, like a miniature record player	Memory chips, like a big flash drive; no moving parts
Speed	Slower	Much faster
Size you get for the money	More space for less money	Costs more per GB
Toughness	Can be damaged if dropped, especially while running	Handles bumps and drops much better
Size and weight	Pocket-sized, a bit heavier	Often smaller than a deck of cards
Best for	Big backups that sit on a desk	Carrying around, travel, quick copies

HDD stands for "hard disk drive." SSD stands for "solid-state drive"; "solid-state" just means it has no moving parts.

Which should you buy?

- **For a home backup that stays by the computer,** a hard drive gives you the most room for the money. Just treat it gently.
- **For something you'll carry, or if you have shaky hands or a busy grandkid,** an SSD is worth the extra cost because a drop is much less likely to hurt it.
- **For a Mac Time Machine backup,** Apple suggests a drive with at least twice as much space as your Mac's own storage (Chapter 24).

Power and the "desktop" drives

Pocket-sized drives get their power from the USB cable, so there's only one cord. Bigger "desktop" drives have a separate power adapter that plugs into the wall. Those hold the most, but they need an outlet and aren't meant to travel.

HEADS UP

Be gentle with a hard drive while it's working

A hard drive's spinning disk doesn't like being bumped, tipped or yanked by its cable while it's running. Set it flat on the desk, out of the way of elbows and pets, and eject it (Chapter 17) before you move it.

CHAPTER 6

SD and microSD Cards: Sizes and Speed Markings

SD cards are the thin memory cards used in digital cameras, trail cameras, dash cams, some drones, game consoles and many Android tablets. **SD** stands for "Secure Digital." They come in two physical sizes:

- **SD (full size)** — about the size of a postage stamp. Used in most cameras. Has a tiny sliding lock switch on the side.
- **microSD** — about the size of a fingernail. Used in phones, tablets, dash cams, action cameras and game consoles. Often sold with a full-size adapter so it can fit an SD slot.

The SD Association, the group that sets the standards, says the electronics in microSD and full-size SD cards are the same; only the shape, size and pins differ.

The capacity families

Every card has a family name printed on it. It tells you roughly how much it holds and, more importantly, whether an older device can read it:

Family	How much it holds
SD	Up to 2 GB. Very old cards.
SDHC	More than 2 GB, up to 32 GB. (HC means High Capacity.)
SDXC	More than 32 GB, up to 2 TB. The most common family today. (XC means eXtended Capacity.)
SDUC	More than 2 TB, up to 128 TB. Brand-new and rare; only works in devices made for SDUC.

Newer devices accept older cards, but an older device may not read a newer family. A camera from 2008 that only knows SDHC won't read a 128 GB SDXC card. If in doubt, check the device's manual or the label inside its card door.

Speed markings, in plain terms

Cards are covered in tiny symbols. Most of them answer one question: "Can this card save fast enough for my device?" The numbers are the **minimum** speed the card promises when saving, in megabytes per second (MB/s).

Symbol on the card	What it means	Good for
A C with 2, 4, 6 or 10 inside ("Class 10")	Speed Class: the number is the minimum MB/s	Class 10 is fine for photos
A U with 1 or 3 inside (U1, U3)	UHS Speed Class: U1 is 10 MB/s, U3 is 30 MB/s	U3 for 4K video
V6, V10, V30, V60, V90	Video Speed Class: the number is the minimum MB/s	V30 for most 4K cameras
A1 or A2	App Performance Class: how well it runs apps	Phones, tablets, game consoles
Roman numeral I or II (UHS-I, UHS-II)	The type of connection; II is faster, but only in devices made for it	Pro cameras

TIP

The simple rule

For an everyday camera or trail cam, a well-known brand of **SDXC** card marked **U3** or **V30** does the job. For a phone, tablet or game console, look for **A1** or **A2**. Check your device's manual for the largest size it supports, and don't pay extra for speeds it can't use.

GOOD TO KNOW

SD Express

You may also see **SD Express** cards with an E-number such as E150 or E600. They're much faster, but only in devices built for them. In an ordinary camera or reader they work at regular speed.

CHAPTER 7

Card Readers

A **card reader** lets a computer, tablet or phone open a memory card. Some computers have one built in: a thin slot on the side. If yours doesn't, a small plug-in reader does the same job.

Built-in slots

Many Windows laptops and desktops have an SD slot. On the Mac side, Apple lists an SDXC slot on the 14- and 16-inch MacBook Pro from 2021 or later and the Mac Studio, along with some older models. Apple notes a microSD card needs an adapter to fit, and that you insert the card with its metal contacts facing down, toward the computer.

Plug-in readers

- **USB card readers** are small and inexpensive. Many take both SD and microSD. Pick one whose plug matches your computer (Chapter 3).
- **For iPhone and iPad,** Apple sells its own SD card readers, one with a USB-C plug and one with a Lightning plug for older models. Other well-known brands make them too.
- **For Android phones,** any USB-C card reader generally works.

TIP

Card in the reader, label side up

Cards only go in one way. If it won't slide in easily, don't push. Flip it over and try again. A full-size SD card goes in with the cut-off corner leading and the label facing up on most readers.

HEADS UP

Don't pull a card while it's busy

Wait until the computer has finished copying and you've ejected the card (Chapter 17). Apple warns that removing a card at the wrong moment, such as while the Mac is asleep, could lead to lost data.

CHAPTER 8

How Much Space Do You Need?

Drives are measured in **gigabytes (GB)** and **terabytes (TB)**. One terabyte is 1,000 gigabytes. You don't need to do arithmetic; here's a rough feel for it.

Size	Roughly enough for
16 to 32 GB	A few documents, a few thousand phone photos. Fine for carrying papers to the print shop.
64 to 256 GB	A good everyday flash drive or camera card. Tens of thousands of photos, or many hours of video.
1 to 2 TB	A typical external drive. Enough for most families' whole photo collections, or a backup of a typical laptop.
4 TB and up	Big backups, years of home video, or several computers backing up to one drive.

These are rough guides, because a photo from a new phone or camera takes much more room than one from ten years ago, and video takes far more than photos.

How to see how much you have now

- **Windows 11:** open **File Explorer**, click **This PC**, and look at the bar under your main drive (usually C:).
- **Mac:** choose the Apple menu, then **System Settings**, then **General**, then **Storage**.
- **iPhone or iPad:** open **Settings**, then **General**, then **iPhone Storage** (or **iPad Storage**).
- **Android:** open **Settings** and tap **Storage** (the exact name varies by phone).

GOOD TO KNOW

Why a new drive shows a bit less than the box says

A "1 TB" drive usually shows as about 931 GB on a computer. Nothing is wrong. Drive makers and computers count in slightly different ways, and a little space is used to organize the drive. A drive that shows *far* more than it should, from a cheap online seller, is another matter (Chapter 28).

FROM BILL

When in doubt, go one size up

Photos and videos only ever grow. If you're choosing between two sizes for a backup drive, the bigger one usually lasts you years longer for not much more money. If you'd like a second opinion before you buy, call me at **(330) 200-8042**. I don't sell drives, so I have no reason to upsell you.

PART 2

Plugging In and Finding Your Drive

Where a drive shows up on a Windows PC, a Mac, a Chromebook, an iPhone or iPad, and an Android phone. Find your device and follow along.

CHAPTER 9

On a Windows 11 PC

On Windows, everything you plug in shows up in **File Explorer**, the yellow folder icon on the taskbar at the bottom of the screen. (Bill's **Files & Folders** manual gives File Explorer a full tour.)

Plug in and open it

1. Plug the drive or card reader into a USB port. Give it a few seconds.
2. A small message may pop up in the corner asking what you'd like to do with the drive. You can click it, or simply ignore it.
3. Click the yellow **File Explorer** folder on the taskbar.
4. On the left side, click **This PC**. Your drive appears with a letter after its name, such as **USB Drive (D:)** or **SDXC (E:)**. The letter is just Windows' way of naming it.
5. Double-click the drive to see what's on it.

> TIP
> **Your drive might have a different name each time**
> Windows hands out letters in order, so the same flash drive might be D: today and E: next week if something else is plugged in. That's normal. Look for the name, not the letter.

A drive with a lock on it

If the drive's icon shows a padlock and asks for a password when you open it, it was locked with BitLocker. Chapter 25 explains what that means.

> HEADS UP
> **If Windows asks you to format the drive**
> If, instead of opening, Windows shows a message saying you need to format the disk before you can use it, **click Cancel**. Don't format a drive that might have something on it. Chapter 19 explains why and what to do instead.

CHAPTER 10

On a Mac

On a Mac running macOS 26 Tahoe or later, a drive or memory card shows up in the **Finder**, the blue smiling-face icon at the left end of the Dock.

Plug in and open it

1. Plug the drive or card reader in, or slide a card into the Mac's SD slot.
2. The first time you connect a new device, your Mac may ask whether to allow it to connect. Click **Allow** if it's your drive.
3. Click the **Finder** icon in the Dock.
4. Look in the left-hand sidebar under **Locations**. Your drive is listed there by name, with a small eject symbol next to it.
5. Click the drive's name to see what's on it.

Show drives on the desktop, too

If you'd like drives to appear as an icon on your desktop the moment you plug them in:

1. Click the Finder icon in the Dock, then choose **Finder** > **Settings** from the menu bar at the top of the screen.
2. Click **General**.
3. Under **Show these items on the desktop**, tick the box for external disks.
4. If drives don't appear in the sidebar either, click **Sidebar** in the same window and tick the matching box under **Show these items in the sidebar**.

HEADS UP

If the Mac says the disk isn't readable

A message may say the disk you attached isn't readable by this computer, with a button to initialize it. **Don't initialize** a drive that might hold anything you want: initializing erases it. Choose whichever button leaves the drive alone, such as **Ignore** or **Eject**, and read Chapter 19. Often the drive is simply formatted for Windows, or it needs a little care.

CHAPTER 11

On a Chromebook

Chromebooks handle drives and cards in the **Files** app. Google lists the common formats: FAT16, FAT32, exFAT and NTFS drives work normally, while Mac-formatted (HFS+) drives can be read but not changed.

1. Plug the drive or card reader into a USB port, or slide a card into the Chromebook's slot.
2. Select the **Launcher** (the circle in the bottom corner), then open **Files**.
3. On the left, select your drive by name.
4. Its folders and files appear on the right. Double-click a photo to open it.

> **TIP**
>
> **Copy, don't just open**
>
> Photos you open straight from a drive vanish from view when you unplug it. To keep them on the Chromebook, drag them into **My files** or into **Google Drive** on the left (Chapter 14).

CHAPTER 12

On an iPhone or iPad (the Files App)

Yes, you can plug a flash drive or a card reader into an iPhone or iPad. Everything shows up in Apple's **Files** app, the blue folder icon that comes with every iPhone and iPad.

Connecting the drive

- **iPhone 15 and later, and iPads with USB-C:** plug a USB-C drive or reader straight into the charging port, or use a USB-C adapter for an older USB-A drive.
- **iPhone 14 and earlier, and iPads with Lightning:** you need Apple's Lightning-to-USB camera adapter, or a Lightning SD card reader.

Opening it in Files

1. Attach the drive or card reader to the charging port.
2. Open the **Files** app.
3. Tap **Browse** at the bottom (on iPad, look in the sidebar).
4. Under **Locations**, tap the drive's name.
5. Tap a folder to open it, and tap a photo or document to look at it.

Which drives work

Apple says the drive must have a single section (one "partition") formatted as APFS, APFS (encrypted), macOS Extended (HFS+), exFAT, FAT32 or FAT. A Windows-only NTFS drive isn't on that list, so it may not show up. Big hard drives also often need more power than a phone can give; Apple suggests a powered USB hub, or a drive with its own power adapter.

WHAT THIS DOES FOR YOU

No computer needed

No computer? No problem. You can copy photos from your iPhone to a flash drive to give to family, or open the photos on a camera card right on your iPad's big screen.

CHAPTER 13

On an Android Phone or Tablet

Most Android phones and tablets have a USB-C port, so a USB-C flash drive or card reader plugs right in. Google's **Files by Google** app (called simply **Files** on many phones) is the easy way in. Samsung phones also have their own **My Files** app, which works in a similar way.

1. Plug the drive or card reader into the phone's charging port.
2. A notification should appear saying **USB available**, or similar. Open **Files by Google**.
3. If asked, tap the storage device, then tap **Allow**.
4. Tap **Browse**, then scroll to **Storage devices** and tap your USB drive.
5. Tap a folder to open it.

A memory card inside the phone

Some Android phones and tablets have a slot for a microSD card. When you first put one in, the phone may ask how to use it. Google explains the two choices:

Choice	What it means
Portable storage	The card holds photos, music and files, and you can take it out and read it in a computer or another device. This is what Google recommends for most people.
Adoptable storage	The card becomes part of the phone and can hold apps, but it only works in that one phone. It can't be read anywhere else.

HEADS UP

Choosing either option may format the card

Setting up a card as portable or adoptable storage can erase what's already on it. If the card came out of a camera with photos on it, copy them off first (Chapter 15).

PART 3

Copying Photos and Files

Copying to and from a drive, getting pictures off a camera card or a phone, and the safe way to unplug when you're done.

CHAPTER 14

Copying Files to and from a Drive

Copying puts a duplicate in a new place and leaves the original where it was. That's almost always what you want with a drive. (Bill's **Files & Folders** manual explains copying versus moving in full.)

Windows 11

1. Open **File Explorer** and find the files you want, for example in **Pictures**.
2. Click a file to select it. To pick several, hold the **Ctrl** key and click each one. To pick everything in a folder, press **Ctrl** and **A** together.
3. Right-click one of the selected files and choose **Copy**.
4. Click your drive under **This PC** on the left. Open a folder on it if you like.
5. Right-click an empty spot and choose **Paste**. A progress window shows while it copies.

Mac

1. Open a **Finder** window and find the files you want.
2. Select them. Hold the **Command** key to pick several.
3. Drag them onto the drive's name in the sidebar and let go. Dragging to a different drive copies; the originals stay where they were.

Chromebook

1. In **Files**, select the files you want.
2. Right-click and choose **Copy**.
3. Select the drive on the left, right-click an empty spot and choose **Paste**.

iPhone, iPad and Android

iPhone and iPad: in the **Files** app, touch and hold a file, then tap **Copy**. Go to the drive under **Locations**, touch and hold an empty spot, and tap **Paste**. To send photos straight from the Photos app, select them, tap the **Share** button, look for **Save to Files**, and pick the drive.

Android: in **Files by Google**, tap the Down arrow next to a file, then **Copy to**, choose the drive, and tap **Copy here**.

TIP

Check before you delete anything

After copying, open the drive and look at a few photos to make sure they're really there and open properly. Only then think about clearing space on the original, and even then, keep a second copy somewhere.

GOOD TO KNOW

"The file is too large"

If a single big video won't copy and the computer says it's too large for the drive, the drive is probably formatted as FAT32, which can't hold any single file bigger than 4 GB. Chapter 23 has the fix.

CHAPTER 15

Copying Photos Off a Camera Card

A camera keeps its photos on an SD card. Getting them onto your computer is a matter of putting the card in a reader (Chapter 7), then either copying the files or letting a photo app import them. "Import" just means the app copies the photos in and files them by date for you.

Before you start

- Turn the camera off before taking the card out.
- Find the photos on the card: they're usually in a folder called **DCIM** (short for "digital camera images"), inside another folder with a number in its name.

Windows 11: the Photos app

1. Put the card in the reader and plug it in.
2. Open the **Photos** app (type **Photos** into the search box on the taskbar).
3. Select **Import** at the top of the app.
4. Choose the card, pick the photos you want (or all of them), and follow the prompts to import.

Prefer to do it by hand? Open the card in File Explorer, open the **DCIM** folder, and copy the photos into your **Pictures** folder as in Chapter 14.

Mac: the Photos app

1. Put the card in the Mac's slot or a reader.
2. Open **Photos**. If the card isn't shown right away, click it under **Devices** in the sidebar.
3. To import every new photo, click **Import**. To pick just some, click the ones you want, then click **Import Selected**.
4. Leave the **Delete items** box unticked if you'd like the photos to stay on the card too.
5. Tick **Open Photos** if you'd like Photos to open by itself next time you put a card in.

iPhone or iPad

With a card reader attached, the **Photos** app offers to import the pictures. Open Photos and look for the **Import** option, pick the photos you want or import them all, and choose whether to keep or delete them from the card afterward. You can also open the card in the **Files** app and copy the photos from there (Chapter 12).

FROM BILL

Keep the card until the copy is safe twice

Don't erase a camera card the moment the photos are on the computer. Wait until they're also in your backup or the cloud. Cards are inexpensive; your daughter's wedding pictures are not.

TIP

Then clear the card in the camera

Once the photos are safe, clear the card using the camera's own menu (look for **Format** in the camera's settings). That's the gentlest way to keep a camera card healthy.

CHAPTER 16

Getting Photos Off Your Phone

There are two easy ways to put phone photos onto a drive: plug the drive into the phone (Chapter 12 and Chapter 13), or connect the phone to a computer and copy from there. If your photos already back up to iCloud or Google Photos, Bill's **Managing Phone Photos** manual shows how to download them from there instead.

Android phone to a computer by cable

1. Unlock your phone and connect it to the computer with a USB cable that can carry files.
2. On the phone, tap the **Charging this device via USB** notification.
3. Under **Use USB for**, choose **File Transfer**.
4. On a Windows PC, the phone appears in File Explorer. On a Chromebook, the Files app opens.
5. Open the phone, then **DCIM**, then **Camera**, and copy the photos you want.
6. When you're done, eject the phone on the computer and unplug the cable.

iPhone to a Windows PC by cable

1. Unlock your iPhone and connect it to the PC with its cable.
2. If the iPhone asks whether to trust or allow this computer, tap **Trust** or **Allow**.
3. Open the **Photos** app on the PC and select **Import**.
4. Pick your iPhone, choose the photos, and import them.

iPhone to a Mac

Connect the iPhone, unlock it, and open **Photos** on the Mac. Click the iPhone under **Devices** in the sidebar and import, just as with a camera card (Chapter 15).

GOOD TO KNOW

HEIC photos

Newer iPhones save photos in a space-saving format called HEIC. Windows 11 and Macs open them. If an older computer or a print shop can't, ask a family member or me to help convert a copy.

CHAPTER 17

Unplugging Safely: Eject on Every Device

"Ejecting" a drive tells your device to finish anything it's writing and let go of the drive, so it's safe to unplug. Pulling a drive out in the middle of a copy is the most common way files get damaged. Ejecting takes two seconds and protects your work.

Windows 11

1. Make sure any copy has finished and close files you opened from the drive.
2. Look at the right end of the taskbar for the **Safely Remove Hardware and Eject Media** icon (a small USB plug). If you don't see it, click the small up-arrow, **Show hidden icons**.
3. Click the icon and choose your drive.
4. Wait for the **Safe To Remove Hardware** message, then unplug.

Another way: in File Explorer, right-click the drive under **This PC** and choose **Eject**.

> GOOD TO KNOW
> **Can I just pull it out on Windows?**
> Microsoft has set flash drives and most external drives to **Quick removal** by default since 2018. That means you can usually unplug once nothing is copying. Ejecting first is still the safest habit, especially with a hard drive.

Mac

Apple gives three ways; use whichever is easiest:

- In the Finder sidebar, click the **Eject** symbol next to the drive's name.
- Select the drive, then choose **File** > **Eject** from the menu bar.
- On the desktop, drag the drive's icon to the Trash.

If the Mac says the drive can't be ejected, an app is still using a file on it. Close that app and try again.

Chromebook

In the **Files** app, select **Eject** next to the drive's name on the left, then unplug it.

iPhone, iPad and Android

Phones and tablets don't make a fuss about ejecting. Wait until the copy has completely finished, close the Files app, and then unplug. If your Android phone shows an **Eject** or **Unmount** choice for the drive in **Settings** > **Storage**, using it is a nice extra bit of care.

TIP

The one rule that matters

Whatever the device: **never unplug while a copy is still running.** If you see a progress bar or a light blinking on the drive, wait.

PART 4

Formatting Without Fear

What formatting really means, which format to pick, and what to do when a message suddenly asks you to format a drive that has your photos on it.

CHAPTER 18

What Formatting Means, and Which Format to Pick

Think of a new drive as an empty bookcase. Before you can put books on it, someone has to put in the shelves and a little card catalog so you can find things later. **Formatting** does that: it sets up the drive so a computer can store files on it. The "shape" of those shelves is called the drive's **format** or **file system**.

The catch is that formatting starts with an empty bookcase. **Formatting erases everything on the drive.** That's why this button deserves respect.

The four formats you'll see, in plain terms

Format	What it's good for
exFAT	The good all-rounder. Works on Windows, Mac, Chromebook, iPhone, iPad and Android, and holds big files. Most large SD cards and many flash drives come this way. **The best choice for a drive you'll share between different kinds of devices.**
FAT32 (MS-DOS FAT on a Mac)	The old all-rounder. Works almost everywhere, including older cameras and car stereos, but can't hold any single file bigger than 4 GB. Fine for small flash drives and cards of 32 GB or less.
NTFS	Windows' own format. Great for a drive that only ever plugs into Windows PCs, such as a Windows backup drive. Macs and iPhones don't fully work with it.
APFS	The Mac's own format, made for modern Macs and SSDs. Best for a Time Machine backup drive or a drive only used with Macs. Windows PCs can't read it without extra software.

Apple's own guidance agrees: use **MS-DOS (FAT)** for drives to share with Windows that are 32 GB or less, **ExFAT** for ones over 32 GB, and **APFS** for Mac-only drives. You may also see **Mac OS Extended**, the older Mac format that came before APFS.

TIP

If you're not sure, choose exFAT

For a flash drive or card you'll use to carry photos and documents between different computers and phones, exFAT is almost always the right answer.

GOOD TO KNOW

A new drive is already formatted

Drives and cards come out of the box ready to use. Following the SD Association's standard, SDHC cards come as FAT32 and SDXC cards as exFAT; external drives usually come as exFAT, or NTFS for some sold for Windows. You only need to format one if you want to change how it's set up, or wipe it.

CHAPTER 19

"You Need to Format This Disk" — Don't Click It Blindly

Sooner or later you'll plug in a drive or card and, instead of opening, the computer says something like: *"You need to format the disk in drive E: before you can use it. Do you want to format it?"* On a Mac it may say the disk isn't readable and offer to **Initialize** it. On a phone or tablet it may say the card is "unsupported" or "damaged" and offer to format it.

STAY SAFE

Stop. Don't click Format.

That message doesn't mean your files are gone. It means the computer can't make sense of the drive *right now*. Clicking **Format**, **Initialize** or **Erase** is what actually wipes it. Choose the button that leaves the drive alone, such as **Cancel**, **Ignore** or **Eject**, and work through the list below.

Common reasons it happens

- **The drive was set up on a different kind of computer.** A Mac-formatted drive plugged into a Windows PC is the classic case. The files are fine; this computer just can't read that format.
- **It was pulled out in the middle of a copy,** so its little card catalog got muddled.
- **The connection is loose or the cable is poor,** or a big drive isn't getting enough power.
- **The card is from a device that uses its own format,** such as some security cameras or dash cams.
- **The drive or card is failing,** or it's a fake that has run out of real space (Chapter 28).

What to do instead

1. Click **Cancel** on Windows. On a Mac, choose the button that leaves the drive alone (such as **Ignore** or **Eject**). On a phone, simply back out.
2. Unplug the drive, wait a moment, and plug it into a different port, with a different cable or card reader if you have one.
3. Try the drive on the computer it came from, or the device that made it, such as the camera. If it opens there, copy your files off it there.
4. If it was set up on a Mac and you're on Windows (or the other way around), plug it into the right kind of computer and copy the files onto a drive formatted as exFAT.

5. If none of that works and the drive holds anything you care about, **stop and get help**. Every extra try can make recovery harder.

FROM BILL

This is a call worth making

A drive that suddenly "needs formatting" often still has every file on it. Getting them back is careful work, and the first rule is to stop writing anything to the drive. If it holds family photos, put it in an envelope and call me at **(330) 200-8042** before anyone clicks anything.

CHAPTER 20

How to Format a Drive or Card

Formatting on purpose is quick and useful: to set up a drive for a different kind of computer, to clean up a card for reuse, or to wipe a drive before giving it away (Chapter 27).

STAY SAFE

Before you format: three checks

1. Is anything on this drive that isn't also somewhere else? Copy it off first. **2.** Is this definitely the right drive? Check the name and size. Never format the computer's own main drive (C: on Windows, Macintosh HD on a Mac). **3.** Does everyone in the house agree it's empty? A spouse's drive can look a lot like yours.

Windows 11

1. Open **File Explorer** and click **This PC**.
2. Right-click the drive and choose **Format**.
3. Under **File system**, pick **exFAT** for sharing, or **NTFS** for a Windows-only drive.
4. Type a name under **Volume label** if you like, such as PHOTOS.
5. Leave **Quick Format** ticked for everyday use. Click **Start**, then **OK** to confirm.

GOOD TO KNOW

Why Windows won't offer FAT32 on a big drive

Windows' normal Format window won't make a FAT32 drive larger than 32 GB, and FAT32 can't hold a file over 4 GB. For big drives, choose exFAT.

Mac: Disk Utility

1. Open **Disk Utility**: press **Command** and the **Space bar** together to open Spotlight search, type **Disk Utility**, and press Return.
2. Choose **View** > **Show All Devices** from the menu bar.
3. In the sidebar, select the external drive itself (the top line for that drive).
4. Click **Erase** in the toolbar.
5. Choose **Scheme**: **GUID Partition Map**. Choose **Format**: **ExFAT** for sharing, or **APFS** for a Mac-only drive. Type a **Name**.

6. Click **Erase**, then **Done**.

Chromebook

1. Open **Files**.
2. On the left, right-click the drive and choose **Format device**.
3. Give it a name, choose a format (exFAT is a good all-round choice), and confirm.

iPhone or iPad with USB-C

1. Open **Files** and tap **Browse**.
2. Under **Locations**, touch and hold the drive, then tap **Erase**.
3. Choose a format, such as **ExFAT**, give it a name, and tap **Erase** again.

Apple says this works on iPhone and iPad models with a USB-C port.

SD cards: the camera or the official formatter

For a camera card, the camera's own **Format** menu is the simplest choice, because it sets the card up exactly the way that camera likes. On a computer, the SD Association strongly recommends its free **SD Memory Card Formatter** program (for Windows and Mac, from sdcard.org) rather than the computer's own format tool, which they say may leave the card slower.

PART 5

When Things Go Wrong

A drive that won't show up, a card that says it's locked, copies that crawl, and files that are "too large." Most fixes take a minute.

CHAPTER 21

The Drive Won't Show Up

You've plugged it in and nothing appears. Don't worry; this is usually something simple. Work down this list in order.

The quick checks (all devices)

1. **Wait ten seconds.** Big drives can take a moment to wake up.
2. **Push it all the way in.** Check the card is fully seated in the reader, label side the right way.
3. **Try another port.** Ports wear out, and front ports on desktop computers are sometimes weaker.
4. **Try another cable or reader.** Cables fail more often than drives do.
5. **Skip the hub or adapter.** Plug straight into the computer if you can.
6. **Give a big drive more power.** If a desktop drive has a power adapter, make sure it's plugged in and switched on.
7. **Restart the computer** with the drive unplugged, then plug it in again.
8. **Try another computer.** If it shows up there, the problem is the first computer, not the drive.

Windows 11: look in Disk Management

Sometimes Windows sees the drive but doesn't show it in File Explorer. To check:

1. Right-click the **Start** button and choose **Disk Management**.
2. Look down the list at the bottom for a disk the size of your drive.
3. If it says **Offline**, right-click the disk's name on the left and choose **Online**.

> HEADS UP
>
> **Don't initialize, delete or format here**
>
> Disk Management also offers buttons to **Initialize** a disk, delete volumes and format. Those erase the drive. If you see a drive marked **Not Initialized** or **Unallocated** and it should have files on it, stop and call. If it's a brand-new, empty drive, initializing it is the normal way to get it ready.

Mac: look in Disk Utility

1. Open **Disk Utility** and choose **View** > **Show All Devices**.
2. If the drive is listed but looks dimmed, or isn't "mounted" (connected for use), select it and click **Mount** in the toolbar.
3. If it mounts, it appears in the Finder. If not, try **First Aid**, which checks the drive for errors and repairs what it can.

Phones and tablets

- **iPhone and iPad:** check the format (Chapter 12). NTFS drives don't appear. A hard drive may need a powered hub.
- **Android:** open **Files by Google** and look under **Storage devices**. Some phones need you to tap the USB notification and allow access.

FROM BILL

When it's still missing

If a drive with irreplaceable photos won't show up anywhere, stop trying. Unplug it, keep it somewhere safe, and give me a call. Whether it's worth sending to a professional recovery service is a decision we can make together, honestly, with the cost on the table.

CHAPTER 22

Locked, Read-Only, or "Too Much Power"

"The disk is write-protected" or "cannot be modified"

Full-size SD cards have a tiny sliding switch on the left side. Slide it toward the end with the metal contacts to unlock the card; slid the other way, the card can be read but not changed. Apple gives the same fix: if you're told the card cannot be modified, move the lock slider.

- Take the card out, check the switch, and put it back.
- If you're using a microSD card in a full-size adapter, the switch is on the adapter.
- Switches sometimes wiggle loose as the card goes in. Slide the card in gently and straight.

Mac can't change a Windows drive

If a Mac opens a drive but won't let you copy anything *onto* it, the drive is probably formatted as NTFS for Windows. Copy what you need off it, or, once everything is safely elsewhere, reformat it as exFAT (Chapter 20).

"This accessory requires too much power"

iPhones, iPads and some laptops can't power a large hard drive by themselves. Apple notes that external hard drives often need their own power source. Use a drive with its own power adapter, plug the drive into a powered USB hub (one that plugs into the wall), or use a flash drive or SSD instead.

CHAPTER 23

Slow Copies and "File Too Large"

"The file is too large for the destination file system"

This means the drive is formatted as **FAT32**, which can't hold any single file larger than 4 GB. Long videos are the usual culprit. The drive isn't full; it just can't take that one file.

1. Copy everything that's on the drive somewhere safe.
2. Reformat the drive as **exFAT** (Chapter 20).
3. Copy your things back, and the big video too.

Copies that crawl

- **Lots of small files take longer than one big one.** Ten thousand photos copy more slowly than a single movie of the same size. That's normal.
- **Check the port.** Older USB-A ports and old adapters can slow a fast drive to a crawl (Chapter 3).
- **Inexpensive flash drives and cards are often slow to save,** even if they open files quickly. A U3 or V30 card or a portable SSD is much faster.
- **A full drive slows down.** Leave some room free.
- **A drive that suddenly gets much slower than it used to** may be wearing out. Copy what matters off it soon (Chapter 26).

TIP

Start big copies before lunch

Copying a whole photo collection can take an hour or more. Start it, leave the computer plugged in and awake, and come back later. Don't unplug until the progress window has closed.

PART 6

Backups, Passwords and Long Life

Using a drive as an automatic backup, locking it with a password, keeping it healthy for years, and wiping it before it leaves the house.

CHAPTER 24

Using a Drive for Backups

An external drive makes a wonderful automatic backup: a copy of your computer that updates itself while the drive is plugged in. This chapter covers just the drive side. For the whole backup plan, phones and the cloud included, see Bill's **Backing Up Everything** manual.

Windows 11: File History

File History is Windows' built-in way to back up to an external drive. Microsoft says it automatically backs up all your libraries, including **Documents**, **Pictures**, **Videos** and **Music**, and keeps older versions so you can go back in time.

1. Plug in the external drive you'll use for backups.
2. Click the search box on the taskbar, type **File History**, and open it. (It lives in the Control Panel.)
3. If it offers your drive, choose **Turn on**. If not, choose **Select drive** and pick it.
4. Leave the drive plugged in, or plug it in regularly, and File History keeps your copy up to date.

> GOOD TO KNOW
>
> **File History vs. Windows Backup**
>
> Windows 11 also has an app called **Windows Backup**. That one copies your Desktop, Documents, Pictures, Videos and Music folders to **OneDrive**, Microsoft's cloud, not to an external drive. A free Microsoft account includes 5 GB of OneDrive space. The two can work side by side: one copy in the cloud, one in your hand.

Mac: Time Machine

Time Machine is the Mac's built-in backup. Apple suggests a drive with at least twice the storage of your Mac, used only for backups.

1. Plug in the external drive.
2. Choose the Apple menu, then **System Settings**, then **General**, then **Time Machine**.
3. Click **Add Backup Disk** (or the **+** button), select the drive, and click **Set Up Disk**.
4. Your Mac may ask whether to erase the drive. Say yes only if there's nothing on it you need.

From then on, while the drive is connected, Time Machine keeps hourly backups for the past 24 hours, daily backups for the past month, and weekly backups for all previous months. When the drive fills up, the oldest backups are deleted to make room. Eject the drive before you unplug it.

WHAT THIS DOES FOR YOU

A bad day, not a heartbreak

If your computer is lost, stolen or simply wears out, an up-to-date backup drive means your photos and papers walk right onto the new one. It's the difference between a bad day and a heartbreak.

TIP

A backup drive does its best work when it's plugged in

A backup drive in a drawer doesn't back anything up. Either leave it plugged in, or set a reminder to plug it in once a week. Then put a second copy, or the cloud, somewhere else, in case of fire or theft.

CHAPTER 25

Locking a Drive with a Password

A flash drive is easy to lose. If it holds tax returns, medical papers or scanned IDs, you can lock it with a password, so anyone who finds it sees only scrambled data. This is called **encryption**.

STAY SAFE

Lose the password, lose the files

There's no back door. If you forget the password (and the recovery key, on Windows), nobody can open the drive, not even Microsoft, Apple, or me. Write the password down and keep it with your important papers before you start.

Windows: BitLocker To Go

Microsoft's **BitLocker To Go** locks removable drives. Microsoft says BitLocker is available on Windows 11 **Pro**, **Enterprise** and **Education**, not on Home. To check which you have, open **Settings** > **System** > **About** and look at **Edition**.

1. Plug in the drive.
2. Type **BitLocker** into the taskbar search box and open **Manage BitLocker** (BitLocker Drive Encryption in Control Panel).
3. Under **Removable data drives - BitLocker To Go**, find your drive and choose **Turn on BitLocker**.
4. Choose to use a password, type it twice, and follow the steps to save the recovery key somewhere safe.
5. Wait until it finishes before unplugging.

After that, the drive asks for its password whenever it's plugged into a Windows PC.

Mac: Encrypt in the Finder

1. Plug in the drive and open a Finder window.
2. In the sidebar, hold the **Control** key and click the drive.
3. Choose **Encrypt** followed by the drive's name.
4. Create a password, type it again, add a hint if you like, and click **Encrypt Disk**.

Apple notes that encrypting converts the drive to the APFS format, so it will only open on Macs, and you'll need the password each time you connect it.

GOOD TO KNOW

Is it worth it?

For a backup drive that never leaves the house, most people don't bother. For a flash drive that goes in a pocket or a purse with sensitive papers on it, it's a smart five-minute job. If you're not sure, the simpler choice is often to keep sensitive papers off flash drives altogether.

CHAPTER 26

How Long Drives Last, and How to Store Them

No drive lasts forever. They're dependable, but every kind eventually wears out, and some fail without warning. The answer isn't to worry; it's to keep more than one copy and check on them now and then.

What wears drives out

- **Hard drives** have moving parts that wear over time, and they dislike drops, bumps and heat.
- **Flash drives, SSDs and memory cards** have no moving parts, but their memory chips wear slowly with use, and cheap ones can fail early.
- **All drives** dislike damp, heat, strong magnets near hard drives, and being stepped on or bent.

Good storage habits

- Keep drives somewhere cool, dry and indoors: a desk drawer, not a hot car, damp basement or garage.
- Use the cap, a small case, or a zip bag for flash drives and cards. Cards are easy to snap or lose.
- Store hard drives flat and still, with the cable unplugged.
- Label each drive with what's on it and the date you last updated it.
- Keep one copy away from the house, such as with a family member, or in the cloud, in case of fire or flood.

A once-a-year checkup

1. Plug each drive in and make sure it opens.
2. Open a few photos and documents from different years to be sure they're readable.
3. Add anything new from the past year.
4. If a drive is slow, noisy, clicking, or throws errors, copy everything to a new drive right away.

FROM BILL

The drive is cheaper than the memories

When a backup drive starts to act up, I'd always rather see someone spend money on a new drive than take a chance. Copying to a fresh drive every several years is a sensible habit.

CHAPTER 27

Wiping and Disposing of an Old Drive

Before you give away, sell, recycle or throw out a drive, card or old computer, make sure your personal files go with you and not with it. Simply deleting files, or a quick format, leaves them recoverable with the right tools.

The safe order

1. **Copy off anything you want to keep** to another drive or the cloud, and check the copy opens.
2. **Erase the drive properly** using the steps below.
3. **Recycle it responsibly.** Electronics don't belong in the household trash. The FTC points to the EPA's electronics donation and recycling information, and many stores and county recycling programs take old electronics.

Windows 11: a full format

In the Format window (Chapter 20), **untick Quick Format** before clicking Start. Microsoft explains that a full format writes zeros over the whole drive, while a Quick Format does not. A full format takes much longer, sometimes hours on a big drive.

Mac: Disk Utility

Erase the drive in Disk Utility (Chapter 20). For some hard drives, the Erase window has **Security Options** that write over the old data more thoroughly. Apple notes these aren't offered for SSDs.

> **TIP**
>
> **For a small, cheap drive or card, destruction is fine**
>
> If an old flash drive or memory card held sensitive papers and isn't worth reusing, erase it and then keep it, or cut a memory card through with heavy scissors before throwing it away. Wear safety glasses and take care; never try to smash a drive with a hammer near your eyes or hands.

GOOD TO KNOW

Old computers too

The FTC's advice for old computers is the same: back up, then use the computer's built-in reset to erase it before passing it on. Bill's **Windows 11** and **Mac (macOS)** manuals cover the reset steps.

PART 7

Staying Safe and Getting Help

Fake drives sold online, mystery flash drives that turn up in parking lots, a quick-fix table, and how to reach me.

CHAPTER 28

Fake-Capacity Drives and Cards

This one surprises people. Online marketplaces sometimes sell flash drives and memory cards that claim an enormous size, such as "2 TB" or more, for a price far below what a real one costs. Many are fakes. They've been rigged to *tell* the computer they're huge, when the real memory inside is tiny.

Why it matters

A fake drive seems to work at first. You copy your photos, the computer says the copy finished, and you put the drive in a drawer. But once the small real memory fills up, everything after that is quietly lost or scrambled. You often don't find out until you need those photos.

SCAM ALERT

If the price is too good, it's a fake

A big-name brand drive or card selling for a fraction of the price at regular stores, an unknown brand promising huge sizes, or a seller with a name made of random letters are all warning signs. Real storage costs real money.

How to protect yourself

- **Buy from a store or the maker's own shop,** or a marketplace listing sold directly by the retailer itself, not a third-party seller you've never heard of.
- **Stick to well-known brands** and to sizes and prices that look like what other stores charge.
- **Be wary of "2 TB" or "16 TB" flash drives** at bargain prices. Real ones are rare and expensive.
- **Test a new drive before trusting it:** copy a big batch of photos onto it, until it's nearly full, then open some of the last ones you copied. If they're broken or won't open, return the drive.
- **Keep the receipt and packaging** until you've tested it, and report fakes to the marketplace.

FROM BILL

Not sure about a drive you bought?

If you suspect a drive or card isn't what it claims, stop using it for anything important and call me. There are proper test programs that check every bit of a drive, and it's a quick job to run one.

CHAPTER 29

Found a USB Drive? Don't Plug It In

It's natural to be curious about a flash drive found in a parking lot, left on a library table, or mailed to you out of the blue. Please resist. A drive from a stranger can carry harmful software, and some are left out on purpose for someone curious to plug in.

SCAM ALERT

A free drive in the mail or the parking lot isn't a gift

A flash drive dressed up as a gift, a prize or a message from a well-known company can be a trick to get you to plug it in. If you didn't ask for it and don't know exactly where it came from, don't plug it into your computer.

What to do instead

- **Found at a store, library, bank or workplace?** Hand it to the staff or lost-and-found.
- **Came in the mail unexpectedly?** Don't plug it in. If it claims to be from a company, contact that company using a phone number you already have, not one in the package.
- **Found at home?** Ask the family first. If nobody claims it, set it aside or ask me to look at it safely.

Everyday good habits

- Keep your own drives labeled, so a stray one stands out.
- Keep Windows Security (or your security software) turned on and up to date.
- Be careful plugging your drive into a public computer, such as at a hotel or print shop; copy what you need and remove it promptly.
- If your computer acts strangely after plugging in an unfamiliar drive, unplug it, shut down, and call for help.

CHAPTER 30

Common Problems and Quick Fixes

A quick reference for the drive troubles you're most likely to meet:

What you see	What to try
Drive doesn't appear at all	Wait, reseat, try another port, cable and computer (Chapter 21).
"You need to format the disk"	Click Cancel. Don't format. Try it on the computer or camera that made it (Chapter 19).
Mac says the disk isn't readable	Leave the drive alone; don't initialize it (Chapter 19).
Can open but not copy onto it	A locked SD card, or an NTFS drive on a Mac (Chapter 22).
"File too large"	The drive is FAT32; reformat as exFAT after copying things off (Chapter 23).
iPhone or iPad says too much power	Use a powered hub or a drive with its own power (Chapter 22).
Drive doesn't show on iPhone or iPad	Check the format; NTFS isn't supported (Chapter 12).
Copying is very slow	Old port or adapter, cheap card, or lots of small files (Chapter 23).
Drive won't eject	Close any app using a file on it and try again (Chapter 17).
Photos on a new big drive won't open	Possibly a fake-capacity drive (Chapter 28).
Drive clicks, buzzes or is very slow	It may be failing. Copy things off now and call (Chapter 26).

TIP

Most drive troubles are the plug, the format, or the drive itself

Try a different port and cable first. Then think about format: was it made on a different kind of computer? Only then suspect the drive. And never format a drive that has the only copy of something you love.

CHAPTER 31

When to Call Bill

This guide is meant to make you confident with drives and cards, and most days it will. But you should never feel you have to wrestle alone with something frustrating, especially when precious photos are involved.

Good reasons to call

- A drive or card holding family photos that suddenly won't open or "needs formatting."
- Setting up File History or Time Machine so backups happen without you thinking about it.
- Moving a whole photo collection from an old computer to a new one, or onto a drive for the family.
- Choosing the right drive or card for your camera, computer or phone before you buy.
- Testing a drive you suspect is a fake, or wiping old drives before they leave the house.
- Any time a pop-up, email or caller pressures you about your computer or your files. Stop and call me instead.

SCAM ALERT

Real help never cold-calls or demands remote access

No real computer company will call you out of the blue, claim your files are infected or your drive is failing, demand payment, or insist on remote access to your computer. Those are scams aimed at older folks. If anyone pressures you like that, hang up or close the window and call me at **(330) 200-8042**. I'd much rather take a two-minute "is this real?" call than help undo a scam later.

How to reach me

I'm Bill, and I help folks right here in **Portage County, Ohio**. Call or text **(330) 200-8042**, or book online at **billshometech.com/book**. If you call the main line and reach my assistant **Sophie**, she can answer simple questions and get you on my schedule. My help is **$49 remote · $99 in your home**. With 30+ years of professional experience, there's very little about drives and memory cards I haven't seen, and no question too small to ask.

— Bill

CHAPTER 32

Your Drives & SD Cards Cheat-Sheet

Print this page and keep it handy. It's the whole guide boiled down to the moves you'll use most.

Everyday moves

I want to…	Do this
Find a drive on Windows	File Explorer, then This PC, then the drive (Chapter 9).
Find a drive on a Mac	Finder sidebar, under Locations (Chapter 10).
Find a drive on a Chromebook	Launcher, then Files, then the drive on the left (Chapter 11).
Find a drive on iPhone or iPad	Files app, then Browse, then Locations (Chapter 12).
Find a drive on Android	Files by Google, then Browse, then Storage devices (Chapter 13).
Import camera photos	Photos app, then Import (Chapter 15).
Unplug safely	Eject first; wait for any copy to finish (Chapter 17).
Share between Windows and Mac	Format the drive as exFAT (Chapter 18 and Chapter 20).
"Format this disk?"	Cancel. Don't format a drive with your files on it (Chapter 19).
Automatic backup	File History on Windows, Time Machine on a Mac (Chapter 24).

Three rules worth remembering

1. **Never keep just one copy** of anything you'd hate to lose.
2. **Eject before you unplug,** and never unplug in the middle of a copy.
3. **Never click Format, Erase or Initialize** on a drive that might hold something you care about.

Write these down

Keep handy	Fill in
My backup drive (name and size)	_____
Where my second copy lives	_____
Encrypted drive password kept at	_____

Keep handy	Fill in
Date of last backup checkup	_____
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FROM BILL

You've got this

Drives and cards are simple once you know the few rules: copy, check, eject, and never format in a hurry. Keep this guide nearby, and remember I'm one phone call away for the rest. You can't break anything by exploring. — Bill, (330) 200-8042