



An Extended Guide · No. 1748

Protecting Your Computer and Network Gear

Your desktop, modem,
router — and the data lines

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! Read this first — two kinds of protection, one safety rule

There are two kinds of surge protection in this guide, and they are not the same job. A whole-home surge protector wires into your electrical panel, where the power is always live and a mistake can be deadly — that is strictly a licensed electrician's work, almost always with a permit, and never a do-it-yourself project. (It isn't something I do myself, either; I help you understand it, choose wisely, and line up a trustworthy local pro.) The other kind — the surge-protector strips and plug-in units you use at the wall — are perfectly safe for you to set up on your own. One honest note either way: no surge protector is a lightning rod or an iron-clad guarantee, so in a violent electrical storm, unplugging a treasured device is still the surest protection of all. For your computer and network gear, nearly everything here is the easy, plug-in kind you can do yourself — and the surest habit of all is simply keeping a copy of your files, so a bad day never becomes a lost year of photos.

Let's keep your computer and internet safe and steady

Your computer holds your photos, your letters, your bank records, and a lot of your day. Let's protect it from surges and the little power hiccups that cause lost work — in plain English, no jargon.

I'm Bill, and I run Bill's Home Tech here in Portage County. Helping folks with their computers and internet is a big part of my week, and a surge or a power blink is one of the quiet ways good gear — and good work — gets lost. A little protection prevents a lot of heartache.

Two ideas carry this whole guide. First, a computer likes steady, clean power, so a battery backup does even more for it than a plain protector. Second, surges love the data lines — the internet and phone wires — so we guard those too. Simple, and you don't have to memorize a thing.

★ There's no silly question here

If any of this feels over your head, it isn't — it's just unfamiliar. Call or text me at (330) 200-8042 and I'll explain it as many times as it takes, with nothing to sell you.

The whole guide, on one page

If you remember only these few things, your computer and internet are already far better protected than most.

- ❑ A computer and its network gear are delicate electronics — prime targets for a surge.
- ❑ For a desktop, a battery backup (a UPS) is the sweet spot: it stops spikes, rides out blinks, and lets you shut down safely.
- ❑ Protect the modem and router, and the incoming data line — coax, DSL, or phone — because surges travel those too.
- ❑ A laptop has some cushion from its own battery, but a good surge protector still helps it.
- ❑ Plug protectors straight into a grounded wall outlet, and never daisy-chain one strip into another.
- ❑ Back up your important files no matter what — no protector replaces a good backup.

✓ One picture to hold onto

Think of a battery backup as a shock absorber for your computer. It smooths out the bumps in your power so your machine — and your unsaved work — glides over them instead of hitting them.

Why computers and network gear are worth protecting

It isn't only the cost of the machine. It's what's on it, and how much of your day runs through it.

A desktop or laptop, a modem, and a router are all packed with delicate computer chips — exactly what a surge can harm, either all at once or a little at a time. Lose the modem or router and your whole home goes offline; lose the computer and you may lose files that matter.

How much risk	What's in this group
Most at risk	Desktop, modem, router
Also at risk	Laptop, printer, drives
What's precious	Your photos and papers

✓ **The files are the real treasure**

A computer can be replaced in an afternoon. Twenty years of family photos cannot. That's why we protect the machine and keep a backup of the files — belt and suspenders.

Meet the UPS: a battery backup with surge protection built in

This is the one piece of gear that does the most for a computer, so let's get to know it in plain terms.

A UPS — that stands for uninterruptible power supply, a mouthful for 'battery backup' — is a box with a battery inside. It sits between the wall and your computer. When the power dips, blinks, or goes out entirely, the battery takes over for a while, so your machine never skips a beat.

Here's the part folks love: **most battery backups include surge protection too.** So one unit does both jobs — it stops the spikes and it carries you through the blinks. For a desktop, that combination is hard to beat.

✓ Two jobs, one box

A surge protector stops spikes but goes dark the instant the power does. A battery backup keeps the lights on long enough to save your work and shut down properly. Our battery-backup guide covers UPS units in full.

The desktop: a battery backup is the sweet spot

A desktop computer has no battery of its own, so a power blink hits it hard. That's exactly what a UPS is for.

Without a backup, even a half-second blink shuts a desktop off cold — and any work you hadn't saved is simply gone, along with the small risk of a scrambled file. A battery backup gives you a calm minute or two to save everything and shut down the right way.

- ❑ Plug the desktop's computer tower into the battery-backup side of the UPS.
- ❑ Plug the monitor in too, so you can see to save and shut down.
- ❑ Printers and speakers don't need the battery — a surge-only outlet, or the UPS's surge-only side, is fine for those.
- ❑ When a blink or outage hits, save your work first, then shut down calmly.

✓ It pays for itself the first time

The first time a storm knocks the power out mid-letter and your computer just keeps going while you save and shut down, you'll understand why I recommend a battery backup for every desktop.

The laptop: some cushion, but still worth guarding

A laptop already has a battery, which changes the picture a little — but not as much as you'd think.

Because a laptop runs on its own battery, a power blink won't shut it off the way it would a desktop — the built-in battery carries it through. That's a real advantage. But the laptop's power adapter still plugs into the wall, and a surge can travel right up that cord into the machine.

So a laptop still benefits from a good surge protector on its charger, and from having its data lines guarded like any other computer. The battery handles outages; the protector handles spikes. Different problems, both worth covering.

✓ The charger is the weak point

Plug the laptop's charger into a surge protector rather than straight into the wall. It's a small habit that guards a machine you probably carry your whole life around on.

The modem, the router, and the line coming in

Your internet equipment is easy to forget, tucked away on a shelf — but it's a favorite target, and losing it takes the whole house offline.

The modem is the box where the internet enters your home; the router is what shares that internet around, by Wi-Fi and by cable. Both are delicate electronics, and both deserve a good surge protector — ideally one that also has a jack for the incoming data line. That same router feeds your streaming TV and your smart-home gadgets, so keeping it protected pays off all over the house — our TV-and-home-theater and smart-home guides cover those.

- Plug the modem and router into a real surge protector, not a plain strip.
- If your protector has a coax, phone, or network (ethernet) jack, run the incoming line through it.
- A small battery backup on the modem and router keeps your internet alive through a brief blink — handy for a home phone that runs over the internet.

! Surges love the data lines

This is the part folks miss most: a surge can ride in on the very wire that brings your internet, sailing right past a power-only protector. Guarding that incoming line matters every bit as much as the power cord.

Guarding the data lines, one by one

Different homes have different wires coming in. Here's the plain rundown of each, so you know which to guard.

The line	Should you guard it?
Power cord	Yes, always
Coax or DSL line in	Yes — surges ride it
Ethernet (network)	If it's long or runs outdoors
Phone line	Yes, if you use one

The idea is the same for every one of them: run the line through a surge protector that has the right jack, so a spike on that wire is caught before it reaches your gear. A short network cable between two boxes in the same room is low risk; a long run, or one that goes outside, is worth guarding.

✓ **When in doubt, guard it**

If you're not sure whether a particular line needs protection, guarding it does no harm. And if it all feels like alphabet soup — coax, DSL, ethernet — that's fine; I'm glad to sort out which wires you actually have.

Back up your files, no matter what

I'll say this gently but firmly, because it's the most important page in the guide: protection guards the machine, but only a backup guards your memories.

Even the best surge protection can't promise a computer will never fail — gear wears out, drives die, accidents happen. A backup is simply a second copy of your files kept somewhere else, so that if the worst comes, your photos and papers are safe and sound.

- ❑ Keep a copy of your important files somewhere besides the computer itself.
- ❑ A simple external drive you plug in, or a trusted online backup, both work well.
- ❑ Set it to happen automatically if you can, so you never have to remember.
- ❑ Check now and then that the backup is actually running and up to date.

★ I'll set up a backup that runs itself

This is one of my favorite things to set up, because it lets folks stop worrying. I'll get an automatic backup going so your treasures are safe without you lifting a finger. Call (330) 200-8042.

Two kinds of homes, two sets of needs

Where you live shapes how your internet arrives and how much surge risk it faces — and a country home on a well sees a different picture than a place in town.

If you live in town or the suburbs

In town or the suburbs, the lines feeding your home are often shorter, and sometimes buried, so nearby lightning has fewer chances to jump on. Your internet likely comes in by cable or fiber, and outages tend to be shorter.

- A battery backup on the desktop and the modem or router covers most of what matters.
- Guard the incoming cable line through a protector with the right jack.
- Everyday spikes from your own furnace and fridge still reach the computer, so keep protection in place year-round.
- A whole-home protector at the panel is a fine, affordable backstop — an electrician's job.

If you are out in the country on a well

Out in the country, long overhead lines run for miles, giving lightning far more chances to put a surge on your power and data lines. Many rural homes get internet over a DSL or phone line, and outages tend to run longer.

- That longer, more exposed line makes guarding the incoming data line especially worth doing.
- A DSL or phone line carrying your internet deserves the same guarding as a coax line — a spike travels it just the same.
- Longer outages make a battery backup on the computer and the internet gear a real comfort, not just a convenience.
- A whole-home protector at the panel is an especially smart first layer out here — have a licensed electrician handle it, with a permit.

★ Not sure which picture is yours?

Plenty of homes fall somewhere in between. Tell me how your internet comes in and how your power behaves in a storm, and I'll help you sort out what's worth doing. No pressure — call (330) 200-8042.

A few wiring do's and don'ts

These simple habits keep your setup both safe and truly protected — and they cost nothing.

- **Do** plug protectors and battery backups straight into a properly grounded three-prong wall outlet.
- **Don't** daisy-chain — never plug one strip or protector into another one.
- **Don't** run a computer's battery backup through a separate power strip; give it its own wall outlet.
- **Don't** use a 'cheater' adapter to force a three-prong plug into an old two-prong outlet; it defeats the protection.
- **Do** label the cords so you know which plug is the computer, which is the modem, and so on.

! A good ground is the whole point

Surge protection works by shunting extra energy safely to ground. Without a real ground — a genuine risk in older homes — a protector can't do its job. Our grounding guide explains how to check this simply, and an electrician can confirm it.

Set it where you can see it and reach it

Your protection only helps if you can read it and reach it, so let's place it with your comfort in mind.

- ❑ Keep the indicator lights in view, so a glance tells you the protection is still on the job.
- ❑ Put the battery backup where you can reach its switch and hear its beep if it ever sounds.
- ❑ Give the computer's tower a little breathing room — these boxes like air around them.
- ❑ Leave slack in the cords so nothing is pulled tight behind the desk.
- ❑ Tuck the modem and router where they're ventilated but not buried out of sight.

✓ A battery backup will beep

When the power goes out, a battery backup often beeps to tell you it's running on battery — that's your cue to save and shut down. It isn't an alarm to fear; it's the box doing exactly its job.

What a battery backup really buys you

The point of the battery isn't to keep working through a long blackout — it's to give you a calm, safe landing.

When the power quits, a battery backup gives you a short window — usually a few minutes — of steady power. That's plenty of time to finish your sentence, save your work, and shut the computer down properly instead of it dropping dead mid-task.

A clean shutdown matters more than folks realize. Yanking the power from a computer over and over can, in time, scramble files or wear on the machine. The battery lets every shutdown be a gentle one, even when the grid isn't cooperating.

✓ Save early, save often

Even with a battery backup, the oldest computer habit is still the best one: save your work often. That way an unexpected blink is never more than a small inconvenience.

Storms and outages: unplug, then restore

A battery backup handles the everyday blinks. A violent storm calls for one extra, old-fashioned step.

No plug-in protector reliably survives a direct lightning strike. When a severe storm is right overhead, the surest protection for your computer is still to shut it down and unplug it — power cord and the incoming data line both. And when a long outage ends, the power can return with a jolt.

- ❑ In a violent storm, save, shut down, and unplug the computer — power and data line both.
- ❑ During a long outage, unplug the computer and network gear.
- ❑ When power returns, give it a few minutes to steady, then plug back in.
- ❑ After the storm, glance at your protectors' lights to be sure they're still protecting.

! Your safety comes first

Don't fuss with cords while lightning is right on top of you, and stay away from wired devices and plumbing during the worst of it. A computer can be replaced; you cannot.

Protectors wear out — and so do backup batteries

Two things in this setup have a lifespan, and it's worth knowing the signs before they surprise you.

A surge protector is sacrificial: its protective parts wear down with each surge and with age, until they can't protect anymore. The tricky part is that a worn-out protector still powers your gear — so watch the indicator light. If 'protected' is out while the strip still has power, replace the unit, even though everything still turns on.

A battery backup has a battery that also ages, usually over a handful of years. When the battery gets weak, the unit will often beep or show a warning, and it may only hold power for a few seconds. Batteries can be replaced or the whole unit swapped — don't just ignore the warning and assume you're still covered.

✓ When in doubt, replace it

Both a protector and a backup battery are the cheap part of the equation. If you're ever unsure whether one still has life in it, replace it — it's inexpensive peace of mind for a pricey computer.

A simple shopping checklist

Keep this handy when you shop, in the store or online. It's all you really need to look for.

- ❑ For a desktop: a battery backup (UPS) that also lists surge protection.
- ❑ For a laptop or printer: a real surge protector — it says 'surge protector,' not just 'power strip.'
- ❑ An indicator light, ideally both 'protected' and 'grounded.'
- ❑ The right jacks for your data lines — coax, phone, or network — if you want to guard those through it.
- ❑ Enough well-spaced outlets, and a UL-listed safety mark.

✓ Don't chase a single number

You'll see 'joule' ratings — a rough measure of how much a protector can soak up over its life, where higher generally lasts longer. Glance at it, but don't obsess. Our choosing-a-protector and battery-backup guides walk through the details.

Common mistakes people make

Knowing the usual slip-ups ahead of time saves you the trouble of learning them the hard way.

- **Trusting a plain power strip** to protect a computer — it only adds outlets, nothing more.
- **Guarding the computer but forgetting the modem and router** — and the data line coming into them.
- **Skipping a battery backup on the desktop** and losing work at every blink.
- **Never backing up files** and trusting the machine to live forever.
- **Daisy-chaining strips** or forcing a plug into an ungrounded two-prong outlet with a cheater adapter.

! The backup you don't have

Every so often someone loses a computer full of irreplaceable photos, and there was no backup. Protection makes that far less likely — but a backup is what makes it survivable. Please don't skip it.

A few myths, cleared up

Computers and surges attract some tall tales. Here are the ones I hear most, set straight.

- **'A power strip protects my computer.'** No — a plain strip just adds outlets. You need a real surge protector.
- **'A surge protector keeps my computer on during an outage.'** No — that's a battery backup's job. A protector only stops spikes.
- **'Only the power cord can carry a surge.'** No — the data lines carry them too, so guard the modem's incoming line.
- **'My laptop's battery means I need no protection.'** The battery helps with blinks, but a surge can still travel up the charger.
- **'Protection means I don't need a backup.'** No — they solve different problems. You want both.

✓ There's a whole guide on the myths

If any of these surprised you, that's the point. Our 'common myths' guide and the 'protector versus power strip' guide untangle each one in friendly detail.

Where to begin, without overthinking it

You don't have to do everything at once. Here's a calm order that fits most homes.

First, get an automatic backup running for your files — that's the one that protects what you can never replace, and it's the step I'd do before anything else. Then put a battery backup on the desktop, or a good surge protector on the laptop's charger.

Then, guard the modem and router and their incoming data line, and when you're ready, ask a licensed electrician about a whole-home protector at the panel to back it all up. There's no rush; each layer you add is a real gain.

★ A plan that fits your budget

No need to spend it all at once. Tell me what you've got and what you'd hate to lose, and I'll help you put it in a sensible order — starting with the easy, inexpensive wins. Call or text (330) 200-8042.

How I can help

Setting up a computer's protection and backup is exactly the sort of practical job I love to take off your plate.

I'll come to your home, set up the right battery backup on your desktop or a good protector on your laptop, guard the modem, router, and the incoming data line, and manage the cords so nothing's a hazard. Then I'll get an automatic backup running so your photos and papers are always safe.

For a whole-home protector at the panel, I don't do the electrical work myself — that's a licensed electrician's job. But I'll help you understand it and line up a trustworthy local pro, so you never have to navigate that alone.

★ Real help, close to home

A first in-home visit is a flat \$99, and for the simple things I can often help right over a screen-share for \$49. Every visit comes with a 30-day, come-back-free guarantee. Call or text (330) 200-8042.

Common Questions

The questions I hear most about protecting a computer and internet gear, answered plainly.

Q: Do I really need a battery backup, or is a surge protector enough?

For a desktop, a battery backup is well worth it — it stops spikes AND carries you through a blink so you can save and shut down. For a laptop, which has its own battery, a good surge protector is usually plenty.

Q: Why protect the modem's line and not just its power?

Because a surge can ride right down the incoming cable, DSL, or phone line and into the modem, past a power-only protector. Run that line through a protector with the right jack.

Q: Is a battery backup the same as a surge protector?

Not quite. A surge protector only stops spikes. A battery backup does that AND keeps a device running briefly during an outage. Most battery backups include surge protection built in, so you get both.

Q: If I have protection, do I still need to back up my files?

Yes — always. Protection guards the machine from surges, but drives still fail and accidents still happen. A backup is a second copy of your files kept elsewhere, so your memories survive no matter what.

Q: Does my laptop need anything if it already has a battery?

The battery handles power blinks, which is a real help. But a surge can still travel up the charger, so plug the charger into a surge protector, and guard the data lines like any other computer.

Q: What should I do in a bad storm?

If you can do it safely, save your work, shut the computer down, and unplug it — power cord and data line both. Plug back in a few minutes after the power is steady again.

★ Still have a question?

That's what I'm here for. Call or text me at (330) 200-8042 and ask away — there's truly no such thing as a silly question about this.

You don't have to do this alone

You just have to remember that a friendly, patient person is one call away.

I hope this guide made protecting your computer and network gear feel a little less daunting and a lot more doable. Keep it in a drawer with your other home papers, come back to a page whenever you need it, and don't worry about memorizing anything.

When you'd rather have a hand, that's exactly what I do. I come to your home, work at your pace, and never make you feel rushed or silly for asking. A first visit is a flat \$99, and for the parts that don't need me on-site I can often help right on your screen for \$49. Every visit comes with a 30-day, come-back-free guarantee. I don't do the licensed electrical work myself — for that I'll help you line up a trustworthy local pro.

★ Bill's Home Tech — real help, close to home

Call or text me at (330) 200-8042, or visit BillsHomeTech.com. Serving Atwater and all of Portage County. 30+ years of patient, plain-English tech help — and if you're ever not 100% happy with a visit, I'll make it right or refund it. That's a promise. — Bill

What Each Device Needs

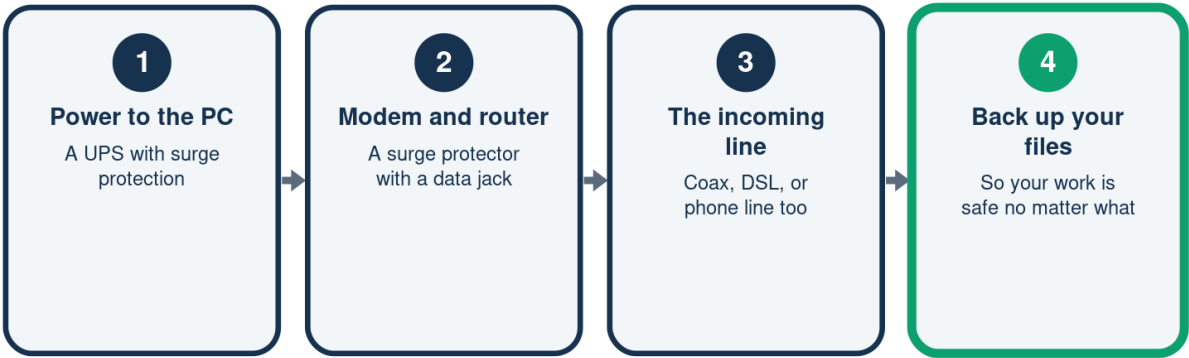
A quick guide, device by device

Best protection	
Desktop PC	A UPS with surge
Modem / router	Surge and a jack
Laptop	A surge protector
Printer	A surge protector

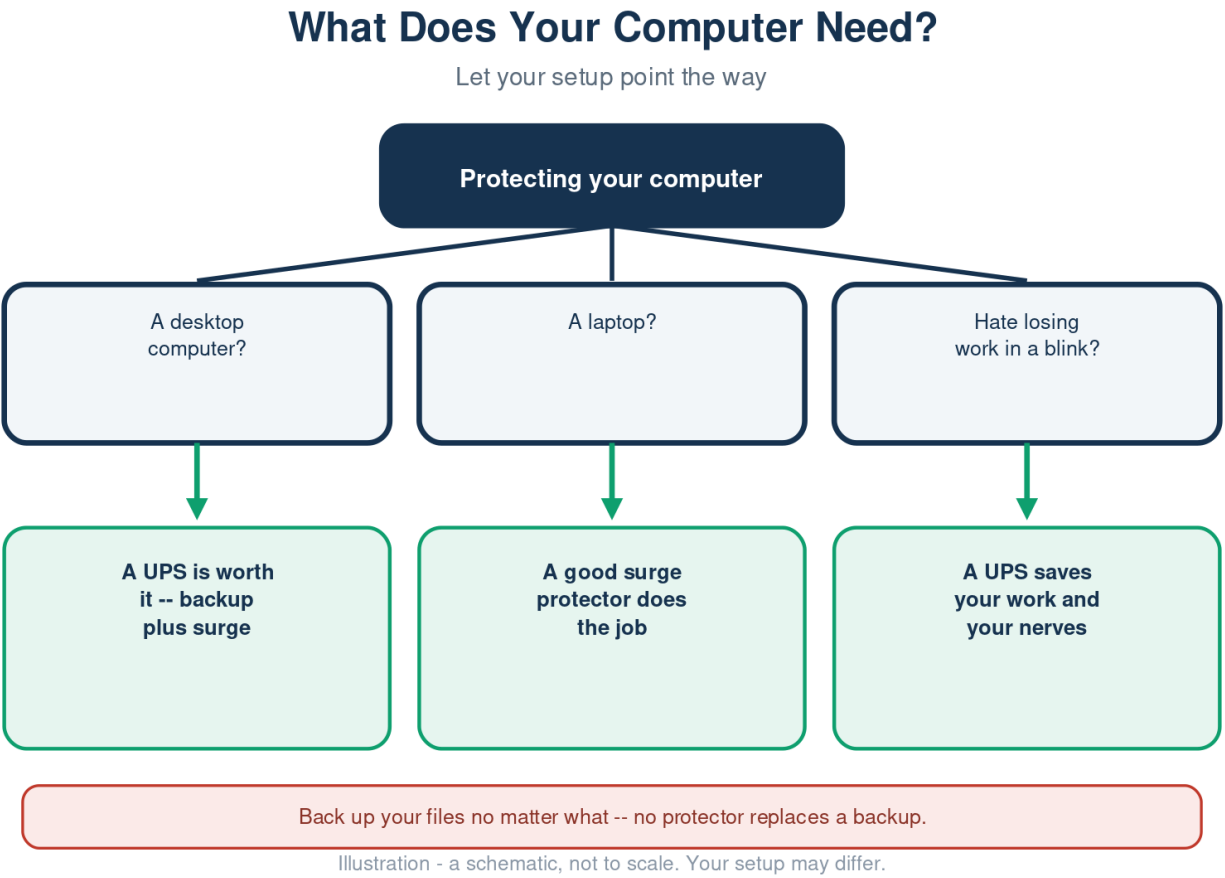
A desktop gains most from a battery backup with surge built in.

Guard the Whole Path

From the wall to your work



Guard the power, the gear, the data line -- and keep a backup.



Which Lines to Guard

Surges travel the data lines too

Protect it?	
Power cord	Yes
Coax or DSL in	Yes
Ethernet	If long/outdoor
Phone line	Yes

A surge on the incoming line reaches your gear just like the power.



Need a Real Person?

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Bill can screen-share and fix many things remotely — a flat \$49, free for Support Plan members.



A Note From Bill

A quick note from Bill.

I write these guides to make home tech a little less frustrating, and I do my best to keep every step accurate and up to date. Still, every home, device, and setup is a bit different, so I can't promise a guide will match yours exactly or fix your particular problem. These guides are for general information only — they're not professional, legal, or financial advice, and they don't replace your device's own manual or the manufacturer's instructions. Please go slow, use your own good judgment, and use everything here at your own risk. If a step involves electrical wiring, a gas appliance, a water heater, plumbing, or climbing a ladder — or if anything just doesn't feel safe — please stop and call a licensed professional (or give me a call at 330-200-8042). Bill's Home Tech and Bill Davis can't be responsible for any damage, data loss, or injury that comes from using these guides. Thanks for reading, and stay safe out there.

— *Bill*



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