



An Extended Guide · No. 1797

Battery-Backup vs Surge-Only Outlets

Which plug goes where on your UPS

Tech Made Simple — Service Made Personal

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! Read this first — what a UPS can and can't do

First, the honest picture, so a UPS never disappoints you. A UPS — an uninterruptible power supply — is a battery backup box. When the power blinks or goes out, it keeps small electronics like your computer, your modem and router, or a medical monitor running without a flicker. But it is a short bridge, not a whole-home generator: it buys you minutes, not hours — time to save your work and shut down gently, keep the internet up through a brief blip, or ride you over until a generator or a portable power station takes over. Plug only small electronics into the battery side. Never plug in a laser printer, a space heater, a hair dryer, a microwave, a sump pump, or anything that makes heat or has a big motor — they draw far too much and can overload or damage the unit. A UPS has a sealed battery inside, so set it where a little warmth can escape, not sealed in a cabinet, and keep it dry. That battery wears out every few years and gets swapped and recycled at a battery drop-off — never put it in the household trash. This guide sorts out the two kinds of outlet on a UPS, so your must-stay-on gear ends up in the right sockets.

Not every outlet on a UPS is the same

Here's a surprise for a lot of folks: the outlets on a UPS aren't all equal. Some give battery backup; some give surge protection only. Putting your gear in the right ones is half of setting up a UPS well.

I'm Bill, from Bill's Home Tech in Portage County, Ohio. I can't tell you how many times I've found a computer plugged into the surge-only side of a UPS — so when the power failed, it shut right off, and the owner wondered why their UPS 'didn't work.' It worked fine; the plug was just in the wrong hole.

This short guide makes sure that never happens to you. Once you can tell the two kinds of outlet apart, you'll set up any UPS correctly in a couple of minutes.

★ The plug in the wrong hole

If a UPS ever seems not to back up your gear, the first thing I check is whether it's in a battery outlet. Nine times in ten, that's the whole mystery. Call (330) 200-8042 if yours has you puzzled.

The whole idea, on one page

If you read nothing else, here's how the outlets work.

- ❑ A UPS usually splits its outlets into two banks: battery-backup and surge-only.
- ❑ Battery-backup outlets keep your gear running in an outage AND guard against surges.
- ❑ Surge-only outlets guard against surges but go dark when the power fails.
- ❑ Put must-stay-on gear (computer, internet) in the battery outlets.
- ❑ Put printers and chargers in the surge-only outlets.
- ❑ They're usually labeled, grouped, or a different color — look before you plug.

✓ Look before you plug

Ten seconds reading the labels on the back of the UPS saves you the frustration of gear that shuts off when it shouldn't.

The two banks, explained

Most home and office UPS units divide their outlets into two groups, each with a different job.

The battery-backup outlets do the headline job: when the power fails, the gear plugged into them keeps running on the battery. They also shield against surges. The surge-only outlets do just what the name says — they protect against power spikes, but they don't run on the battery, so anything plugged there goes dark the moment the power drops.

✓ Why not make them all battery?

Because the battery is precious. By keeping chargers and printers on the surge-only side, the battery's minutes are saved for the gear that truly needs to stay on.

How to tell them apart

The clues are right there on the back of the unit.

- **Read the labels** — outlets are usually marked 'Battery Backup' or 'Surge Only' near each group.
- **Look for a color** — many makers tint or shade the battery group differently from the surge group.
- **Look for a little battery icon** stamped beside the backup outlets.
- **Check the manual** — it maps every outlet, and it's the final word if the labels are worn.

✓ Snap a photo of the back

Send me a picture of the outlet side and I'll point out exactly which sockets are which. Easy to do, and it settles it for good.

What goes in the battery-backup outlets

Reserve these for the gear that absolutely must stay on.

- **Your desktop computer** and its monitor.
- **The modem and router** — so the internet stays up.
- **A network switch or mesh point** that carries your connection.
- **A security base or camera recorder**, so it keeps recording.
- **A NAS or small home server**, so files don't corrupt.

These are the things whose sudden shutdown would cost you — lost work, dropped internet, corrupted files. They earn the battery.

What goes in the surge-only outlets

These are for gear that wants surge protection but doesn't need to ride out an outage.

- **A printer** — especially a laser printer, which must stay off the battery anyway.
- **Phone and tablet chargers** — they hold their own batteries.
- **Desk speakers or a small lamp** — nice to protect, no need to back up.
- **A second monitor** you could do without during an outage.

✓ Surge-only still protects

Don't think of the surge outlets as second-class — they guard your gear from the spikes that fry electronics. They just don't spend battery on it.

Why the split exists at all

It's a thoughtful design, not a way to short-change you.

If every outlet ran on the battery, a charger or a printer left plugged in would quietly eat into the minutes meant for your computer and internet. By splitting the outlets, the maker lets you protect a lot of gear from surges while spending precious battery only on the essentials. It's a smart way to stretch your runtime.

★ The split is your runtime friend

Every non-essential you move to the surge side is a little more time for the gear that matters. Think of the two banks as 'must stay on' and 'nice to protect.'

A third kind: master and controlled outlets

Some UPS units add an energy-saving trick worth knowing about.

On certain models you'll see a 'master' outlet and a set of 'controlled' outlets. The idea is tidy: when the device in the master outlet (say, your computer) turns off, the UPS cuts power to the controlled outlets (your monitor, speakers, printer), so they don't sit there sipping power. It saves a little electricity without any effort from you.

✓ Handy, but know it's there

If your monitor mysteriously powers off when the computer does, you've likely got master/controlled outlets doing their job. It's a feature, not a fault. The manual shows which outlets are which.

Making room for big plug-in bricks

A small, practical tip that saves a lot of grumbling.

Some gear has a fat plug-in transformer — a 'wall wart' — that hogs space and can block the outlet next to it. Good UPS units space a few outlets farther apart for exactly this. Plug your bulky bricks into the roomy spots so you don't lose the use of a neighboring outlet.

✓ Plan the bricks first

Plug in your chunky transformers first, into the widely spaced outlets, then fit the slim plugs around them. You'll use every socket instead of blocking half of them.

Two kinds of homes, two sets of needs

The outlet rules are the same everywhere, but what you'll load into each bank shifts a little with where you live.

If you live in town or the suburbs

In town or the suburbs, a typical map is the computer and internet on the battery bank, the printer and chargers on the surge bank.

- Battery bank: desktop, monitor, modem, router — your everyday must-stay-on gear.
- Surge bank: laser printer, phone chargers, desk lamp.
- With short outages, this simple split is usually all you need.
- Master/controlled outlets are a nice bonus for trimming standby power.

If you are out in the country on a well

Out in the country on a private well, staying reachable matters most, so the internet and phone gear earn the battery bank first.

- Battery bank: modem, router, and the phone base, so you can call out the moment the lights flicker.
- Add the computer to the battery bank if the outlet count allows.
- Surge bank: printer and chargers, as always.
- Because outages run long, keep the battery bank lean — every extra device shortens the minutes you may really need.

★ Want me to map your outlets with you?

Send a photo of the back of your UPS and a list of your gear, and I'll tell you exactly what plugs where. Call or text (330) 200-8042.

Don't overload the battery bank

The outlets guide the runtime, so load the battery bank thoughtfully.

It's the total on the battery outlets that sets your runtime and whether the unit is comfortable or straining. Piling every device onto the battery bank — even gear that could live on the surge side — eats your minutes and can push the unit toward an overload. Keep the battery bank to true essentials.

! Full battery bank, empty promise

A battery bank crammed with chargers and extras gives your computer far fewer minutes than you think. Move the non-essentials to surge-only and watch your runtime grow.

Setting it up, step by step

Five easy steps and your outlets are sorted.

- ❑ Read the labels and find which outlets are battery and which are surge.
- ❑ Plug the UPS into its own wall outlet — never a power strip.
- ❑ Put must-stay-on gear (computer, internet) in the battery outlets.
- ❑ Put printers and chargers in the surge-only outlets.
- ❑ Plug bulky transformer bricks into the widely spaced sockets.

That's the whole job. If you'd like a hand the first time, it's a quick, friendly visit — and I'll label everything so it's obvious later.

Common outlet mistakes

The slip-ups that make a good UPS look bad.

- **Computer on the surge-only side** — it shuts off in an outage, and folks blame the UPS.
- **Everything on the battery bank**, draining runtime with chargers and printers.
- **A laser printer on the battery outlets** — an overload waiting to happen.
- **Blocking outlets with a fat plug** instead of using the roomy spaced sockets.

! The fix is always to check the labels

Before you decide a UPS is faulty, make sure each device is in the right kind of outlet. That's the answer far more often than a broken unit.

Reading the little icons and labels

Here's what the common markings mean.

Marking	What it means
Battery Backup	Stays on in an outage; surge-protected too
Surge Only	Surge-protected, but goes dark in an outage
Master	The device that controls the switched outlets
Controlled / Switched	Cuts power when the master turns off
Coax or Ethernet jack	Surge protection for that line

If a marking on your unit isn't here, the manual spells it out — or send me a photo and I'll translate it in a message.

The surge-only outlets earn their keep

Don't overlook the value of the surge side.

Power surges — from lightning, or from the grid switching around — can quietly damage electronics over time or fry them in one bad strike. The surge-only outlets stand guard against that for whatever you plug there, day in and day out. That protection is real and worth using, even without the battery behind it.

✓ Use every outlet

There's no reason to leave surge outlets empty. Fill them with the gear that deserves surge protection but doesn't need backup — you're getting protection you already paid for.

What if all the outlets are battery?

Some small, simple UPS units skip the split — and that's fine.

A few compact models — often the little ones meant just for a modem and router — make every outlet a battery outlet. There's nothing wrong with that; it just means you have to be extra careful about what you plug in, since everything draws on the battery. Keep such a unit to its intended small load and you're golden.

★ Simple units, simple rule

If your UPS has no surge-only bank, treat every outlet like a battery outlet: essentials only, nothing hot or motorized, and don't pile it high.

Those coax and network jacks on the back

Many UPS units include a couple of jacks that aren't power outlets at all.

You'll often find a pair of coax (cable-TV) or Ethernet jacks on the back of a UPS. These pass your cable or network line through the unit so it can guard that line against surges too — a nice touch, since a spike can ride in on the cable line just as it can on the power line. Run your cable or network cable in one jack and out the other if you want that protection.

✓ Optional, but easy protection

You don't have to use these jacks, but if a storm ever sent a surge down your cable line, you'd be glad you did. It's a two-minute addition when you set up.

Common Questions

The outlet questions I hear most.

Q: Why did my computer shut off when the power went out?

It's almost certainly plugged into a surge-only outlet instead of a battery-backup one. Move it to a battery outlet and it'll ride out the next outage.

Q: How do I tell which outlets are which?

Read the labels on the back — they'll say 'Battery Backup' or 'Surge Only,' often with a color or a battery icon. The manual maps them all if the labels are worn.

Q: Can I put everything on the battery outlets?

You can, but you shouldn't — chargers and printers there just drain the minutes meant for your essentials. Keep the battery bank lean.

Q: What are the 'controlled' outlets for?

They're an energy saver: when the master device (like your computer) turns off, the UPS cuts power to the controlled outlets so they don't waste standby power.

Q: What are the coax or Ethernet jacks?

They pass your cable or network line through the UPS so it can guard that line against surges, the same as it guards the power. Optional, but nice.

★ Puzzled by your outlets?

Send a photo of the back of your UPS and I'll label every socket for you in a reply. Call or text (330) 200-8042.

Draw yourself a quick outlet map

A two-minute habit that pays off for years.

Once you've sorted the outlets, jot a little map on a scrap of tape and stick it on top of the UPS: which sockets are battery, which are surge, and what's plugged into each. Next time you add or move gear, you won't have to crawl behind the desk to remember.

- ☐ Mark the battery outlets and what's in them.
- ☐ Mark the surge outlets and what's in them.
- ☐ Note which is the master outlet, if you have one.
- ☐ Stick the map where you can see it.

A simple outlet checklist

Everything from this guide, in one list.

- ❑ Find the battery-backup and surge-only banks by their labels.
- ❑ Must-stay-on gear goes in the battery outlets.
- ❑ Printers and chargers go in the surge-only outlets.
- ❑ Keep the battery bank lean to protect your runtime.
- ❑ Use the coax/Ethernet jacks if a storm could reach your lines.
- ❑ Give the UPS its own wall outlet — never a strip.

✓ Look before you plug — every time

The whole guide comes down to those four words. A glance at the labels prevents nearly every outlet mistake.

Where to go next

You've got the outlets down — here's what pairs with this guide.

- What actually belongs on each side? See 'what to plug into a UPS.'
- Worried about overloading the battery bank? See our 'sizing' guide.
- Curious how the surge protection works? See 'UPS and surge protection.'
- Setting one up for the internet? See 'keep your internet up.'

Follow whichever question is on your mind. Each guide stands on its own.

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 the battery and surge outlets on a UPS 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.

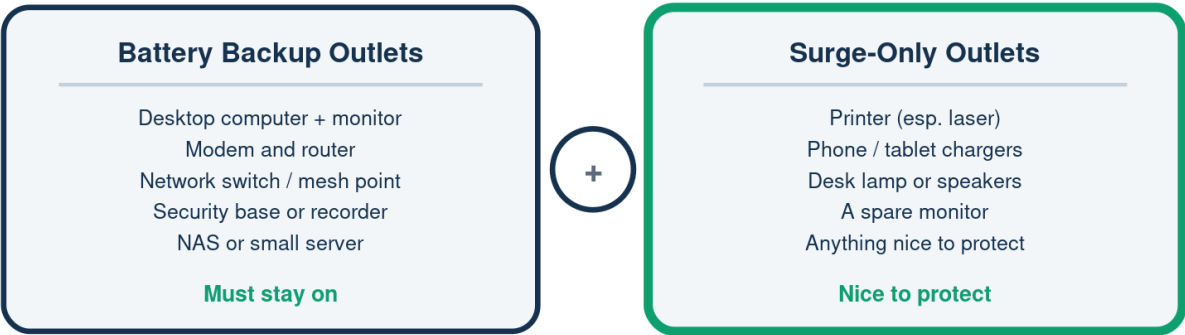
When you'd rather have a hand, that's exactly what I do. I come to your home, work at your pace, and never make you feel rushed or silly for asking. A first visit is a flat \$99, and for the parts that don't need me on-site I can often help right on your screen for \$49. Every visit comes with a 30-day,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

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The Two Outlet Banks

Which plug goes where

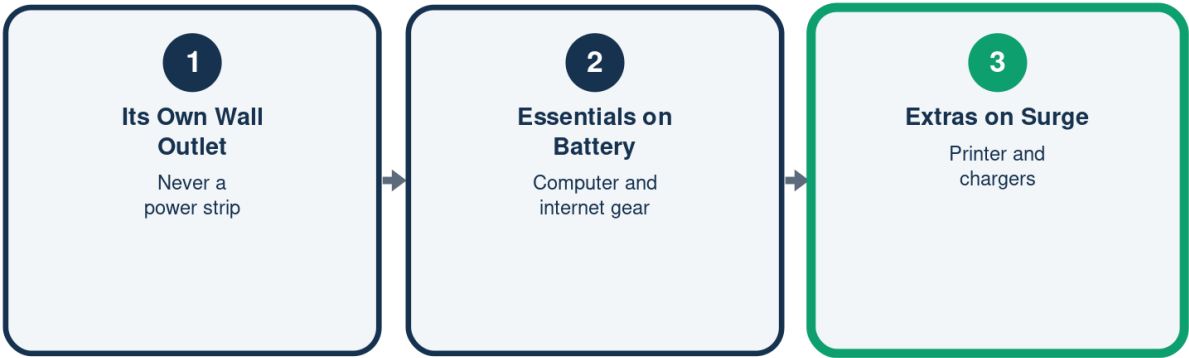


Battery for essentials; surge for the rest.

Illustration - a schematic, not to scale. Your setup may differ.

Plugging In, in Order

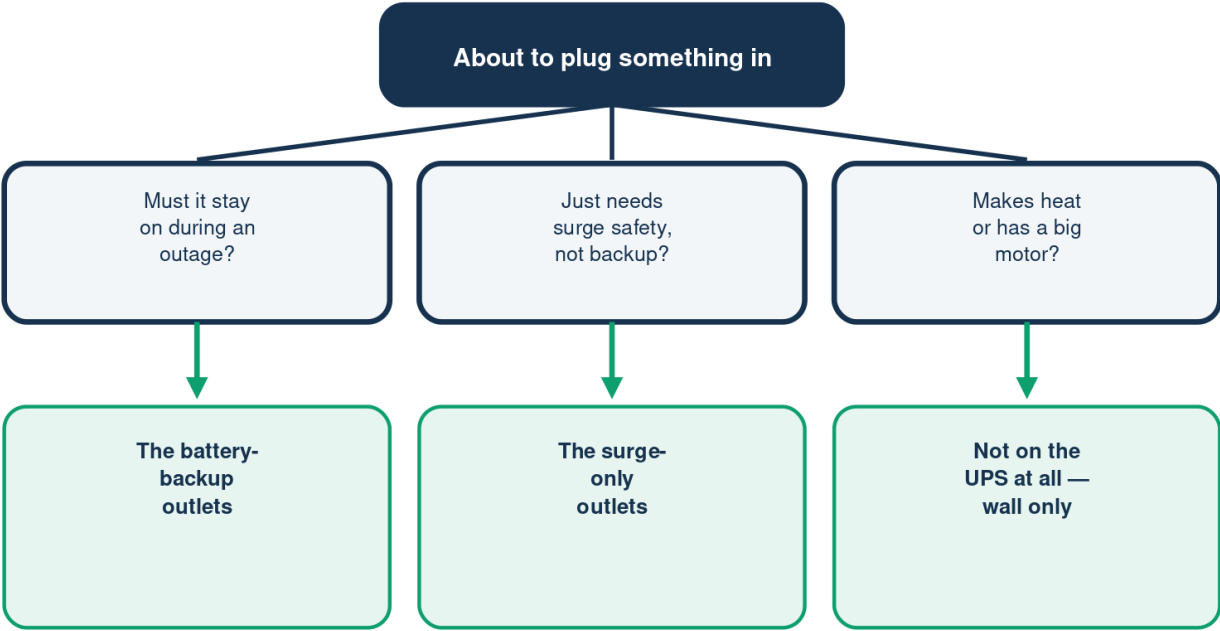
A tidy way to set up the outlets



Then tuck bulky plug bricks into the widely spaced sockets.

Which Bank Does It Go In?

A starting point, not the final word



If a device shut off in an outage, it was on a surge-only outlet.

Illustration - a schematic, not to scale. Your setup may differ.

Reading the Outlet Markings

What each label means

What it means	
Battery Backup	Stays on in an outage
Surge Only	Protected, no backup
Master	Controls the switched set
Controlled	Cuts power to save energy
Coax / Ethernet	Surge-guards that line

The manual maps every outlet if the labels are worn.



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A Note From Bill

A quick note from Bill.

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