



An Extended Guide · No. 1428

UPS and Pass-Through Mode Explained

Seamless backup for a computer,
router, or medical device

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✓ The best news first — this one is safe indoors

Here is the best news about a portable power station, and the reason it earns a place in your home: it is a big rechargeable battery in a case, not an engine. It burns no fuel, so it gives off no exhaust and no carbon monoxide — the invisible, deadly gas that makes a gas generator a strictly outdoors-only machine. That means a power station is safe to use right inside your home, in any room, with the windows closed — beside your chair, on the nightstand, next to a medical device. A few simple habits keep it that way: charge it with the cord it came with, give it a little air while it works (don't bury it under a blanket or shut it in a tight cabinet), keep it away from water and from baking heat, and never use one that is cracked, soaked, or swollen. That indoor safety is what makes these two features so handy — your computer, your internet, or a medical device can sit right beside you, guarded from every flicker, with no machine out in the yard.

Backup so smooth your devices never notice

There are two little features that turn a power station from a battery you reach for into a quiet guardian that's always on duty: pass-through and UPS mode. Together they let a station protect a computer, your internet, or a medical device so smoothly the device never even blinks. This guide explains both, in plain English.

I'm Bill, and I run Bill's Home Tech here in Portage County, Ohio. In 30-plus years of helping folks with the gear in their homes, I've found these two features sound far more technical than they really are. We'll go slowly, one plain idea at a time, the way I would at your kitchen table.

You don't need any background for this. If you've ever kept your phone plugged in while you used it, you already understand the heart of pass-through. The rest is just gentle detail, and we'll take it together.

★ Nothing to sell, just honest advice

I don't sell power stations and earn no commission, so this is just plain teaching. If you'd like help deciding whether these features matter for your home, call or text me at (330) 200-8042 and we'll talk it through — free.

The whole guide, on one page

If you remember only these things, you already understand what pass-through and UPS mode do and whether they're for you.

- ❑ Pass-through means using the station to power your devices while it charges at the same time — power in one side, power out the other.
- ❑ UPS mode goes a step further: the station sits between the wall and your device and switches to battery so fast the device never even blinks.
- ❑ That's a gift for a desktop computer, your internet, or a medical device — no reboot, no lost work, no interruption when the power flickers.
- ❑ The honest catch is transfer time: the switch is quick but not always instant. Makers measure it in milliseconds — check YOUR unit's number.
- ❑ For a sensitive medical device, confirm with the device's maker that the station's transfer time is fast enough before you rely on it.
- ❑ UPS mode is still just the battery — it guards a device for as long as the charge lasts, not forever, and it won't back up the whole house.

✓ One line to hold onto

Pass-through means charge and use at once. UPS mode means the battery catches your device the instant the grid drops — so smoothly it never notices the wall went dead.

Pass-through: using it while it charges

Pass-through is the simpler of the two ideas, and the name says it plainly: power passes right through the station, in one side and out the other.

Ordinarily you charge a station up, unplug it, and use it until it runs low. Pass-through lets you do both at once — the station stays plugged into the wall, filling its battery, while your devices draw power from its outlets at the same time. Power comes in from the wall and passes through to your gear.

It's handy in a lot of everyday ways. You can keep the station topped up in a convenient spot with a lamp or a router always plugged into it, ready to carry them along the instant the wall power fails. Or, on a long outage, you can recharge the station from your car or a solar panel while it keeps your essentials running — more on that later.

✓ The plain picture

Think of pass-through as a passing lane: power flows in from the wall and out to your devices at the same time, topping up the battery in between. Nothing has to stop while it fills.

UPS mode: backup that never blinks

UPS mode — you'll also see it called EPS on some units — is pass-through with a guardian added. It's the feature that makes a station a true safety net for a device you can't let switch off.

It sits in the middle

In UPS mode the station sits between the wall outlet and your device, like a little bridge. The wall keeps the station charged, and the station passes that power along to your device. So far, that's just pass-through.

If the power drops, it catches you

Here's the magic. The moment the wall power fails, the station switches to running your device from its own battery — and it does it so fast that the device never sees the gap. Your computer doesn't reboot, your router doesn't drop the internet, your medical device doesn't stop. The lights in the room may go out, but the thing plugged into the station just keeps humming along.

✓ UPS, in three letters

UPS stands for uninterruptible power supply — a fancy way of saying 'power that doesn't get interrupted.' The station catches your device before it can even notice the wall went dead.

Why a seamless hand-off matters

For most things, a two-second flicker is no bother — a lamp blinks, a fan pauses, and life goes on. But some devices hate any interruption, and that's where UPS mode earns its keep.

- **A desktop computer:** unlike a laptop, a desktop has no battery of its own, so a flicker shuts it off cold — losing your work and forcing a slow restart. UPS mode carries it through the blip.
- **Your internet:** a router and modem that lose power reboot and can take minutes to come back. UPS mode keeps you online without the wait — and keeps a medical-alert or cordless-phone base alive too.
- **A medical device:** for a machine you depend on, never seeing the gap can matter a great deal. UPS mode can bridge it through a flicker or a brief outage — with the honest caveat we'll cover next.

✓ It's the blips, not just the big outages

Short flickers — the kind that make the microwave clock blink — happen far more often than long outages. UPS mode quietly smooths those over, day in and day out.

The honest part: transfer time

I promised you straight talk, so here's the one catch with UPS mode, and it matters most for anything you truly depend on.

When the wall power fails, the station needs a split second to notice and switch to its battery. That tiny gap is called the transfer time. A top-tier 'online' UPS design carries the device on the battery all the time, so there's genuinely no gap at all — it's seamless. A more common 'standby' design has a brief switch-over when the power drops.

That switch is quick — makers measure it in milliseconds, thousandths of a second — and it's fast enough that most electronics, computers, and routers never notice. But 'most' isn't 'all.' The only way to know is to check the transfer-time number the maker prints for your unit, and match it against what your device needs.

! For a medical device, confirm it first

If you're counting on UPS mode for a sensitive medical device, don't assume it's fast enough — confirm with the device's maker that the station's transfer time is within what the device can tolerate. A power station is one helpful layer of a backup plan, never the whole plan for medical care. Our CPAP and oxygen guides go further.

Setting it up, step by step

Putting a station into UPS mode is refreshingly simple — usually just three steps and a button, plus a test.

- ❑ **Plug your device into the station.** Use the station's AC outlet, just as you'd use a wall socket.
- ❑ **Plug the station into the wall.** Now the wall keeps the station charged, and the station feeds your device.
- ❑ **Turn on UPS mode.** Many units have a setting or a button for it; some are always in UPS mode when plugged in. The manual tells you which.
- ❑ **Test it.** With everything running, unplug the station from the wall for a moment and watch — your device should carry right on with no hiccup.

✓ Try it before you count on it

That little test — pulling the wall plug on purpose while your device runs — is the whole ballgame. Do it once on a calm afternoon and you'll know exactly how your setup behaves before a real outage ever comes.

What UPS mode is wonderful for

UPS mode shines with the small, steady devices that hate interruption — the ones where a blink costs you time, work, or comfort.

- **A desktop PC and monitor:** no lost work, no cold reboot when the power flickers.
- **The internet gear:** the router and modem stay up, so your Wi-Fi, streaming, and internet calls don't drop.
- **Cordless-phone and alert bases:** the home phone and a medical-alert base keep working through a blip.
- **A CPAP overnight:** bridged through a brief outage so a night's sleep isn't broken — with the maker's transfer time confirmed.
- **A home network or a small server:** anything that's a headache to restart is a natural fit.

✓ The common thread

UPS mode loves small, steady devices you'd rather never switch off. Big, hungry, or occasional loads aren't what it's for.

What UPS mode is not

UPS mode is a wonderful safety net, but let's be clear about its edges so you're never caught out. Seamless is not the same as endless.

It is not a bottomless well of power. In UPS mode the station is still just a battery, and once the wall power is gone it runs your device from its charge — for as long as that charge lasts, and no longer. A big outage will eventually drain it, the same as any battery. It buys you a smooth hand-off and a stretch of runtime, not endless power.

And it is not whole-house protection. UPS mode guards whatever is plugged into the station — your computer, your router, your medical device — not your entire home. It's no substitute for a big standby generator's job. For heavy 240-volt loads or days of whole-house power, that's still a generator's territory, as our vs.-generator guide explains.

! Sized by the battery, not by magic

However fast the switch-over, UPS mode can only run what fits the station's output, and only for as long as its capacity allows. Plug in more than it can handle, or wait out a very long outage, and the battery still has the final say.

Two kinds of homes, two sets of needs

Whether UPS mode is a daily helper or an occasional one depends a good deal on where you live and on what your power does when the weather turns.

If you live in town or the suburbs

In town, in the suburbs, or in an apartment, outages tend to be short, and the more common nuisance is the quick flicker — the blink that resets clocks and reboots the router. That's exactly what UPS mode is built to smooth over.

- It keeps a home-office computer, the internet, and a cordless-phone base running straight through the flickers that happen most.
- For a bed-side medical device, it can bridge the brief outages a town home usually sees — with the maker's transfer time confirmed.
- City water keeps flowing, so you're protecting comfort and connection, not a pump — just what UPS mode does best.
- It sits quietly indoors, guarding a device around the clock, and recharges from the wall the whole time.

If you are out in the country on a well

Out in the country, UPS mode still smooths the flickers beautifully, but the outages run longer — and a battery guarding a device will eventually need refilling, and it can't take on the heavy loads.

- It bridges the flickers and brief drops seamlessly, but for a long rural outage you'll lean on solar or the car to refill the station as it protects your gear.
- Be honest about the well pump: it's almost always 240-volt with a big surge, and UPS mode or not, a portable station can't run it. That stays a generator's job.
- Store drinking water for the outage, since the pump may be down while the power's out.
- Let UPS mode guard the indoor essentials — computer, internet, medical device — while a generator handles the pump and the heavy 240-volt loads.

★ Rural or in town, let's set it up right

Whether you want a computer guarded through the flickers or a medical device bridged through an outage, I'll help you set UPS mode up and test it honestly, with nothing to sell. Call or text (330) 200-8042.

A kindness to the battery

Pass-through and UPS mode are handy, but there's a gentle word of care worth knowing so your battery stays healthy for years.

When a station charges and discharges at the same time, hour after hour, it works a little harder and makes a little more heat than it would just sitting charged. Some makers, for that reason, advise against leaving a unit in heavy charge-and-discharge for very long stretches, or they build in a mode that eases the wear. Heat, as always, is the thing a battery likes least.

None of this means UPS mode is bad for the battery — for guarding a small, steady load like a router or a computer, it's exactly what the feature is for. It simply means you should follow your maker's guidance in the manual, keep the unit in open air so it can shed heat, and not be alarmed if it runs its fan while it works both ends at once.

✓ Let the manual be your guide

Every maker tunes this differently, so the manual is the honest authority for your unit. If it gives a limit on continuous pass-through, follow it — and always give the station room to breathe while it works.

For a household with a medical device

This is one of the kindest uses for UPS mode, and also the one where I want you to be the most careful. Let's take it slowly.

For someone who depends on a device like a CPAP, having it bridged seamlessly through a flicker or a brief outage can mean an unbroken night's sleep instead of a jarring wake-up in the dark. The station sits quietly beside the bed, keeps the machine charged and running, and catches it the instant the wall power drops. That's a real comfort.

But hold onto two honest truths. First, UPS mode is one helpful layer of a backup plan, never the whole plan for medical care — keep whatever backup your provider recommends. Second, confirm the transfer time with the device's maker before you rely on it, so you know the switch-over is fast enough for that particular machine. Our CPAP and oxygen guides go deeper, and honestly, on both.

! One layer, confirmed — not the whole plan

For anything medical, please treat a power station as a helpful backup among others, not a replacement for the plan your doctor or supplier set up. Oxygen users in particular should always keep the no-power backup tanks their supplier provides.

For the home office

If you work or manage your affairs from a computer at home, UPS mode is close to a must-have — it turns a power flicker from a disaster into a non-event.

- **No lost work:** a desktop PC keeps running through a blip, so the document, email, or tax return you were in the middle of doesn't vanish.
- **No dropped calls:** your router and modem stay up, so a video call or an internet phone call carries right on.
- **Time to save and shut down:** even in a longer outage, UPS mode gives you calm minutes to save your work and power down properly, rather than a hard crash.
- **Peace for the whole setup:** plug the computer, monitor, router, and modem into the station and the entire little office rides out the flickers together.

✓ Save-and-shutdown is a win too

Even if an outage outlasts the battery, UPS mode's real gift is those calm minutes — enough to save everything and shut down gracefully, instead of losing it all in a sudden blackout.

Pairing UPS mode with solar

UPS mode and solar panels make a lovely team, especially for a longer outage: one guards your device, the other keeps the battery from running dry.

In a stretched-out outage, a station guarding your gear in UPS mode will slowly spend its charge. Portable solar panels let you pour power back in during daylight, so the station can keep protecting your computer or medical device far longer than its battery alone would allow. It's pass-through and solar working hand in hand.

Aim the panels at the sun, keep them clear of shade, and remember that real solar output is less than the panels' rated figure and stops at night. Our solar-panels and recharging guides cover the details, but the idea is simple: the sun refills the tank while UPS mode stands guard.

✓ Guard and refill at once

Think of solar as the slow, steady refill and UPS mode as the watchful guard. Together they let a station protect a device through a long outage its battery could never carry on its own.

Read the manual for the UPS details

Here's the honest truth a shiny box won't tell you: UPS features vary a great deal from one station to the next, so the manual is where the real answers live.

Not every power station has a true UPS mode at all, and among those that do, the transfer time, the way you switch it on, and any limits on continuous use differ from maker to maker. Some are always in UPS mode when plugged in; some need a setting turned on; a few label it EPS instead. Assuming your unit behaves like a friend's, or like an ad, is how folks get caught out.

So before you count on it, read the section on UPS or backup mode in your manual. Look for the transfer-time figure, how to enable the mode, and any guidance on how long it's happy running in pass-through. If the manual is unclear, the maker's support line can tell you — and so can I.

✓ The manual is the honest authority

For your specific unit, the manual beats any general guide, mine included, on the exact numbers and settings. Keep it with your other home papers, and don't be shy about calling the maker with a plain question.

A simple UPS setup checklist

Put it all together and setting up UPS mode is a short, calm routine. Here it is on one page.

- ❑ Confirm your station actually has a UPS or EPS mode — check the manual, not just the box.
- ❑ Find the transfer-time figure, and if a medical device is involved, confirm it with the device's maker.
- ❑ Plug your device into the station's outlet, then plug the station into the wall.
- ❑ Turn on UPS mode if your unit needs it switched on.
- ❑ Test it: pull the wall plug for a moment and make sure your device rides through without a hiccup.
- ❑ Give the station open air, and follow any manual limits on continuous pass-through.

✓ Six calm steps, once

Run through this once on a quiet afternoon and UPS mode stops being a mystery. You'll know it works, how fast it switches, and exactly what to expect when a real flicker comes.

Common mistakes people make

A few avoidable slip-ups account for most UPS-mode disappointment. Now you'll know them in advance.

- **Assuming every station is a true UPS.** Many aren't, and some switch too slowly for a fussy device. Check the manual and the transfer time.
- **Trusting it blindly for a medical device.** Never assume the switch-over is fast enough — confirm it with the device's maker first.
- **Overloading it.** UPS mode still can't run more than the station's output allows; plug in too much and it protects itself and shuts off.
- **Expecting whole-house protection.** It guards what's plugged into it, not the entire home. That's a standby generator's job.
- **Forgetting it's still a battery.** A long outage will drain it; plan to recharge from the car or the sun if you need to ride out more than its charge.

! The one to take to heart

The costly mistake is trusting UPS mode for something critical without ever testing it or checking its transfer time. Test it once, confirm the number for a medical device, and it becomes the reliable friend it's meant to be.

A couple of myths, cleared up

A couple of ideas about UPS mode come up so often they're worth naming outright and setting straight.

Q: 'In UPS mode, my device can never lose power.'

Not quite — and it's an important 'not quite.' UPS mode means the station catches your device the instant the wall power drops, so it doesn't blink. But it's still running on the battery after that, so it lasts only as long as the charge does. And the switch-over, while very fast, isn't always perfectly instant — which is why you check the transfer time for anything sensitive.

Q: 'UPS mode makes it a whole-house backup.'

No. UPS mode guards whatever is plugged into the station — a computer, a router, a medical device — not your entire home. For heavy loads or whole-house power, that's still a generator's job. Think of UPS mode as a careful bodyguard for a few important devices, not a shield over the whole house.

✓ When you're unsure, ask

There's no silly question about any of this. If a spec sheet or a salesperson leaves you unsure whether a unit's UPS mode fits your need, that's a fine reason to call me before you buy, not after.

A few questions to ask yourself

Before you rely on UPS mode, these plain questions point you to whether it fits your need — and which unit to look for.

- What am I really trying to protect — a computer, the internet, a medical device — and how badly would a flicker hurt it?
- Does the station I'm considering actually have a true UPS or EPS mode? (Not all do.)
- What's its transfer time, and if a medical device is involved, is that fast enough per the device's maker?
- How long would I need it to carry my device in a real outage, and could I refill it from the car or the sun?
- Have I left output to spare, so the station isn't running right at its limit while it guards my gear?

★ We can answer these together

If you're unsure how to answer even one, that's normal, and it's just what I'm here for. Tell me what you want to protect and I'll help you find a unit whose UPS mode truly fits. Call or text (330) 200-8042.

Putting it all together

UPS and pass-through mode turn a power station from a battery you reach for into a quiet guardian that's always on duty. Here's the whole idea in a breath.

Pass-through lets a station charge and power your devices at the same time. UPS mode adds a fast, automatic hand-off, so when the wall power drops, your computer, router, or medical device never sees the gap. It's wonderful for the small, steady loads that hate interruption, and it works quietly indoors, day and night.

Just hold onto the honest parts: it's still a battery, so it lasts as long as its charge and won't back up the whole house; the switch-over is fast but not always instant, so check the transfer time; and for anything medical, confirm that number with the maker and keep it as one layer of a fuller plan. Do that, and UPS mode is one of the most reassuring tricks a power station has.

✓ The whole guide in one line

Pass-through charges while it powers; UPS mode catches your device the instant the grid drops. Test it once, mind the transfer time, and let it stand guard.

Common Questions

The questions I hear most about UPS and pass-through mode, answered plainly.

Q: What's the difference between pass-through and UPS mode?

Pass-through means the station can charge and power your devices at the same time — power in one side, out the other. UPS mode adds an automatic, fast switch to battery the moment the wall power drops, so a device plugged into the station never sees the interruption. UPS mode is pass-through with a guardian added.

Q: Will UPS mode keep my desktop computer from shutting off in a flicker?

That's exactly what it's for. A desktop has no battery of its own, so a flicker normally shuts it off cold. In UPS mode the station carries it through the blip, so you don't lose your work or wait through a reboot. Test it once by pulling the wall plug to be sure.

Q: Is UPS mode safe and fast enough for a medical device?

It can bridge a device like a CPAP through a flicker or brief outage — but you must confirm the station's transfer time with the device's maker first, and treat it as one layer of a plan, never the whole plan. Our CPAP and oxygen guides cover this honestly.

Q: How long will it keep my device running in an outage?

As long as its battery lasts, no longer — UPS mode changes how smoothly it takes over, not how much energy it holds. A small, steady load like a router lasts a good while; you can stretch a long outage by recharging from the car or solar as it runs.

★ Still have a question?

That's what I'm here for, and there's never a silly one. Call or text me at (330) 200-8042 and I'll give you a straight, friendly answer.

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 UPS and pass-through mode 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.

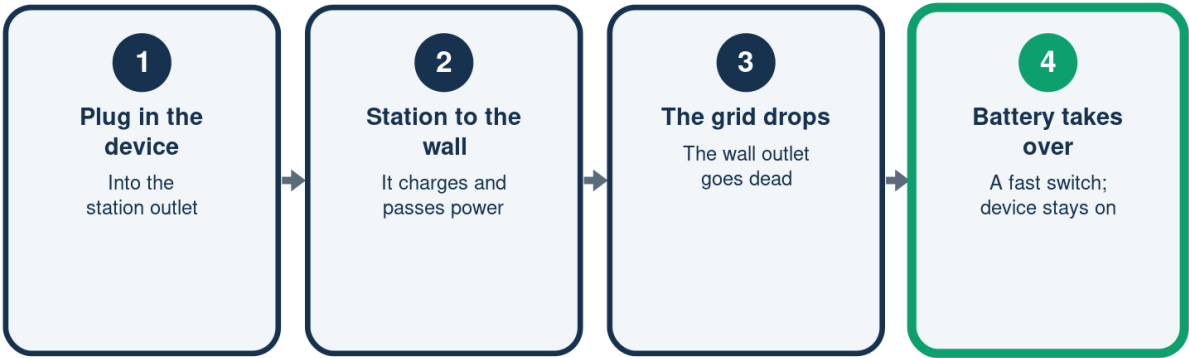
When you'd rather have a hand, that's exactly what I do. I come to your home, work at your pace, and never make you feel rushed or silly for asking. A first visit is a flat \$99, and for the parts that don't need me on-site I can often help right on your screen for \$49. Every visit comes with a 30-day,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

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How UPS Mode Works

Backup so quick the device never notices



A true online unit is seamless; check your maker's transfer time.

Pass-Through vs. UPS Mode

Two related features, side by side

	Pass-through	UPS mode
What it does	Charge while using	Seamless backup
If grid drops	Runs from battery	No blink, fast
Watch out for	Heat over time	Transfer time
Great for	Everyday power	PC, router, CPAP

UPS mode is pass-through with a fast guardian added.

Great For / Not For

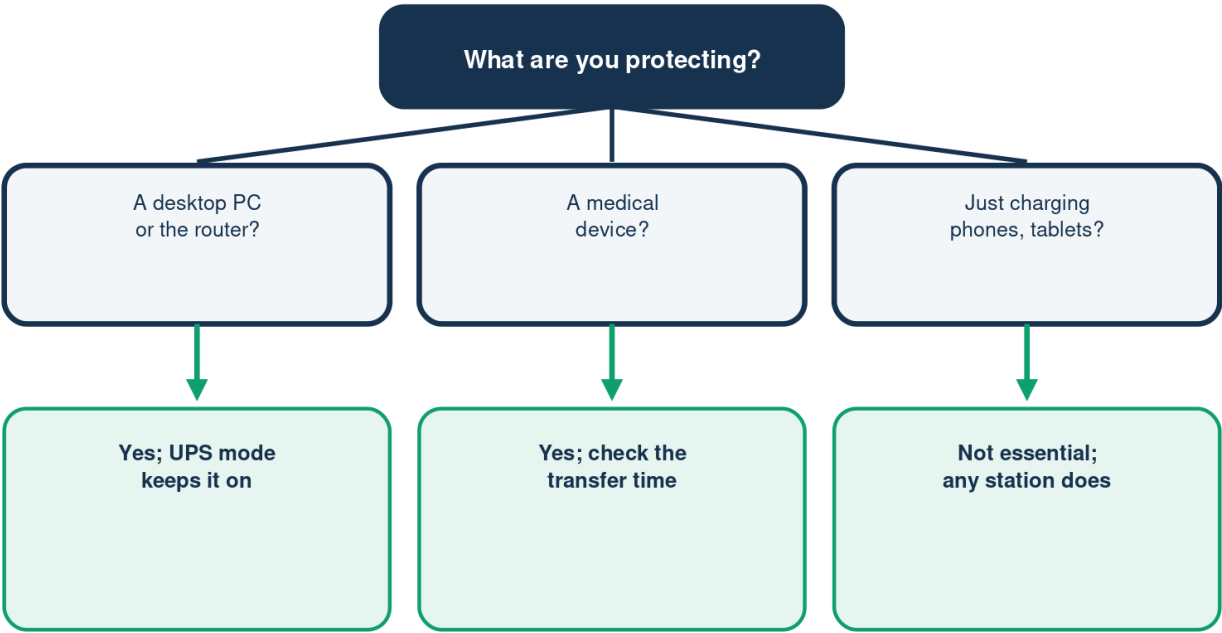
Where UPS mode helps, and where it doesn't

	Great for	Not for
Devices	PC, router, CPAP	A big AC unit
Outage type	Blips, flickers	Days-long outage
Its role	No-blink backup	Whole-house UPS
Power draw	Small, steady	Heavy heat loads

It guards a few devices; it is not whole-house backup.

Do You Need UPS Mode?

Let what you're protecting decide



For a sensitive medical device, confirm the transfer time with its maker.

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



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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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