



An Extended Guide · No. 1409

Backing Up a Well Pump on Battery

The 240-volt surge, and
what a battery can really do

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! Read this first — this is a licensed electrician's job

A whole-home battery ties into your home's main electrical panel, and that makes the installation real electrical work — a job for a licensed electrician, done with a permit, and often with your utility's approval before it is switched on. It is not a do-it-yourself project. The happy news, and one of a battery's real advantages, is that once it is installed it runs silently and gives off no exhaust and no carbon monoxide, so unlike a generator it is safe indoors or in the garage. But the battery still stores a great deal of energy, so leave the wiring, the mounting, and any service to the pros, and follow the installer's and maker's instructions. I help you plan it and line up a trustworthy licensed electrician — I do not do the wiring myself. A well pump runs on a heavy 240-volt circuit, so wiring a battery in to back it up is squarely part of that licensed, permitted panel work — never a wire to splice yourself.

Let's talk honestly about backing up your well

If your water comes from a well, an outage doesn't just dim the lights — it stops your water. This guide explains, in plain English, what it really takes for a home battery to keep a well pump going, and where the honest limits are.

I'm Bill, and I run Bill's Home Tech here in Portage County, Ohio. A great many of my neighbors are on a private well, so this is a question I hear often. I'll walk you through it patiently, the way I would at your kitchen table, with nothing to sell you.

A well pump is one of the most demanding things a battery can be asked to run, so this is a guide where honesty matters more than optimism. We'll cover what's possible, what isn't, and how to find out for your own well.

★ No sales pitch, just straight talk

If you want a second opinion on whether a battery can carry your well, call or text me at (330) 200-8042. I don't sell batteries and earn no commission — I'll just tell you what I honestly think.

The whole guide, on one page

If you remember only these things, you already understand the heart of backing up a well pump.

- ❑ Most home wells use a 240-volt submersible pump — a heavy, demanding load, not a gentle one like a lamp or a fridge.
- ❑ A pump draws a big jolt of power the instant it starts, often around three times what it uses while running. That surge is the hurdle.
- ❑ A battery must do two separate things: swing that starting surge, and then hold enough charge to cycle the pump through the outage.
- ❑ A battery alone may not be able to restart a big pump without enough inverter surge — this is the honest catch, and it's a job for the pro.
- ❑ Stacking more than one battery unit can raise the surge muscle and the capacity; many well homes also pair a battery with a generator.
- ❑ When the power's out, the well is out. Always keep drinking water stored, no matter what backup you have.

✓ The one-sentence version

A battery can back up a well pump, but only if it's sized to swing the pump's big starting surge — so let a licensed installer size it, and store water either way.

What it takes to run a well

Before we talk batteries, let's picture the pump itself, because a well is unlike almost anything else in your home.

Most homes on a well use what's called a submersible pump — a sealed motor sitting deep down in the well, pushing water up to a pressure tank in your basement or utility room. That tank holds a little water under pressure, which is why the tap still runs for a short while after the power quits. Once the tank is drawn down, though, the pump has to run again — and with no power, it can't.

These pumps almost always run on 240 volts, the same heavy circuit as a clothes dryer or an electric range. That already tells you a well pump is in the demanding category, not the gentle one.

! No power means no water

This is the piece town neighbors never think about: when the grid goes down, a well stops. No water for drinking, cooking, washing, flushing, or animals — until either the power returns or something backs the pump up.

The starting surge — the whole story

If you understand one thing about well pumps and batteries, make it this. The trouble isn't the running; it's the starting.

A pump motor doesn't sip power evenly. At the very instant it kicks on, it grabs a big jolt of electricity to get the motor turning — often around three times the power it settles down to while running. That jolt lasts only a moment, but it is very real, and the battery has to be able to deliver it all at once.

Think of pushing a heavy wheelbarrow. Getting it rolling from a dead stop takes a big shove; keeping it rolling is easy. A pump motor is just like that — the hard part is the first shove.

✓ Two numbers, not one

A pump has how much power it needs to run, and a much bigger jolt it needs to start. A battery can easily have enough for the running and still fall short on that starting jolt. That gap is the thing to watch.

A battery has two separate jobs here

Backing up a well pump asks two different things of a battery, and it helps to keep them apart in your mind.

Job one: swing the surge (output)

First, the battery and its inverter must be able to deliver that big starting jolt the moment the pump calls for it. This is about how much power the system can push out at once — what an installer calls its output or surge capacity. If it can't meet the surge, the pump simply won't start, no matter how full the battery is.

Job two: keep it cycling (capacity)

Second, once the pump can start, the battery must hold enough stored energy to let it run again and again through the outage, every time your pressure tank calls for more water. This is about how much the battery holds overall.

✓ Clear one hurdle, and you still face the other

A battery can be big enough to run the pump for a good while yet still be unable to start it, or able to start it yet run low quickly. Both hurdles have to be cleared, and that's exactly what a proper sizing sorts out.

The honest catch, said plainly

I'd rather be honest with you than sell you a happy story, so here is the caveat at the center of this whole guide.

A home battery, on its own, may not be able to restart a big 240-volt well pump. If the pump's starting surge is larger than what the battery and inverter can push out in that instant, the pump won't come back on — even though the battery still shows plenty of charge. This catches folks by surprise, and I don't want it to catch you.

This isn't a reason to give up on the idea. It's a reason to size it carefully with a professional, and to know the answer before you buy rather than after. The fixes are real — more output, stacked units, sometimes a device that softens the surge — but they belong to the installer's plan.

! Never assume it will just work

Please don't assume a battery will start your well pump simply because its stored capacity looks generous. The starting surge is a separate hurdle. Ask the installer to confirm, in plain words, that the system is sized to start your specific pump.

What decides whether a battery can start your pump

The answer comes down to your particular pump and the particular system you're pairing it with. Here's what actually matters.

- **Your pump's size:** a bigger, deeper, more powerful pump draws a bigger starting surge — and so needs more from the battery.
- **The inverter's output:** how much power the system can push out in that first instant is what has to meet the surge.
- **How many battery units:** stacking more than one can raise both the surge muscle and the stored capacity.
- **Soft-start help:** sometimes a device that eases a motor into starting can shrink the surge the battery has to swing.
- **Your must-run list:** whether the pump is running alongside other loads changes how hard the whole job is.

✓ This is why there's no one-size answer

Two homes can get completely different answers depending on their pump and their setup. That's not a dodge — it's the honest reason a real load calculation, done by a licensed installer, is the only reliable way to know.

Getting to know your own pump

You don't need to be an electrician, but a few facts about your pump will make every conversation with an installer go smoother.

The most useful thing to find is your pump's horsepower — its size. Often it's printed on a small metal nameplate on the pressure tank, the pump's control box, or your well paperwork. If you can't find it, your well company will have it on record; a quick call is all it takes. I won't guess a figure for you, because guessing here helps no one.

Jot down what you find, along with the make of your pressure system if it's handy. Bring those notes to the installer. It's a small bit of homework that saves time and leads to a more honest quote.

★ I'm happy to help you hunt it down

If you're not sure where to look or what you're looking at, that's an easy thing for me to help with on a visit. We'll find the pump's details together and write down what the installer will want. Call (330) 200-8042.

When one unit isn't enough: stacking

If a single battery can't swing your pump's surge, there's often a straightforward answer — more than one unit.

Many battery systems are built to be stacked, meaning you add a second or third unit that works together with the first. Stacking raises both the power the system can push out at once — helpful for that starting surge — and the total energy it holds, so the pump can cycle longer.

That's a bigger investment, of course, and whether it's the right call depends on your pump and your goals. Some folks find a single unit plus a generator makes more sense than a tall stack of batteries. Our sizing guide walks through capacity honestly, and our stacking guide goes deeper if you'd like the fuller picture.

✓ More muscle solves the surge, at a price

Adding units is the clean fix for a stubborn surge, but it isn't the only one. A good installer will lay out the trade-offs — more battery versus a generator versus a soft-start device — so you can choose with open eyes.

Two kinds of homes, two sets of needs

A well pump is the whole reason this guide exists — and it lands very differently for a home on city water than for one that draws its own from the ground.

If you live in town or the suburbs

In town or the suburbs, most homes are on municipal water, so the surgiest, heaviest load of all — a well pump — simply isn't yours to worry about. That makes a battery's job much easier and much cheaper.

- City water keeps flowing during an outage, so your backup can focus on food, warmth, comfort, and devices — gentler loads a battery carries well.
- Without a pump surge to swing, a modest battery often goes a lot further than it would out in the country.
- If you do have a booster or irrigation pump, mention it — even a smaller pump has a starting surge worth sizing for.
- Short, common town outages are exactly where a battery shines, no generator required.

If you are out in the country on a well

Out in the country, the well pump is the load that dominates everything. It's a heavy 240-volt motor with a big starting surge, and losing it means losing your water, so the stakes are higher and the sizing is harder.

- The pump's starting surge often sets the muscle your whole system needs; a battery alone may not restart a big pump — one for the installer.
- Rural outages tend to run longer, so many well homes pair a battery with a generator, or lean on the generator for the long haul.
- Store drinking water no matter what: when the well is down, stored water is your bridge until power or a backup brings the pump back.
- A battery still earns its keep — running gentler essentials silently and bridging the quiet seconds before a generator starts.

★ On a well and not sure where to start?

Tell me your pump's size if you know it and how long your outages usually run, and I'll help you picture the honest options before you spend a dollar. Call (330) 200-8042.

Store water — the simplest, surest backup of all

Whatever you decide about a battery, this one habit costs almost nothing and protects you every single time the power blinks.

Because a well stops the instant the power does, a supply of stored water is the most reliable backup a well home can have. Keep drinking water set aside for each person, and a little for pets or animals. Many folks also keep a few jugs of plain water for flushing, which needs no special quality at all.

This isn't gloomy prepping — it's the same good sense as keeping a flashlight in a drawer. A battery or a generator may keep your pump running, but stored water keeps you comfortable even in the gap while you get a backup started, or if a backup ever falls short.

✓ A gentle rule of thumb

Set aside a comfortable supply of drinking water, rotate it now and then so it stays fresh, and keep some extra just for flushing. It's the cheapest peace of mind a well home can buy.

When a battery and a generator work together

For many well homes, the calm answer isn't a battery or a generator — it's both, each doing what it does best.

A generator makes power from fuel, so it can run as long as it's fed — ideal for the long rural outages when a battery's charge would run out. It also has the muscle to swing a pump's starting surge and can recharge the battery while it runs.

The battery, meanwhile, gives you silent, instant power for the gentle hours — overnight, say, when you'd rather not listen to an engine — and it bridges the few seconds before a generator senses the outage and starts. Together they cover both the short blips and the long hauls. Our battery-vs-generator guide lays out the pairing in friendly detail.

✓ The best of both

A battery handles the quiet, common outages and the seamless handoff; the generator carries the long ones and swings the big surges. For a well home worried about days without power, that partnership is often the honest sweet spot.

Softening the surge, when it helps

Sometimes the fix for a stubborn starting surge isn't more battery — it's helping the pump start more gently in the first place.

There are devices, generally called soft starters, that ease a motor into turning instead of letting it grab its full jolt all at once. When one suits your pump, it can shrink the surge the battery has to swing, which sometimes lets a system start a pump it otherwise couldn't.

Whether a soft start makes sense for your particular pump is a question for the installer, not a gadget to order on your own. I mention it only so you know the toolbox has more than one tool — and so you can ask about it if a first quote says your surge is a problem.

✓ A question worth asking

If an installer tells you the pump's surge is the sticking point, it's fair to ask: would a soft starter help here, or is more output the better path? A good pro will weigh both for your setup.

Why I won't quote you a size

This is the part where honest help means declining to guess. I'd rather point you to the right answer than invent a tidy one.

Whether a battery can start and carry your well pump depends on your pump's surge, your inverter's output, how many units you have, and what else is running. Those come together in a proper load calculation done by a qualified installer — not in a number I could responsibly toss out from my chair.

The same goes for price. It varies far too much by pump, by home, and by how much backup you want. Anyone who promises your well is covered before seeing your pump's details is guessing, and you deserve better than a guess.

★ What I can do is get you ready

I'll help you find your pump's details, write down your must-run list, and understand the quotes you get, so you can compare installers fairly and pick with confidence. Then I'll help you line up a licensed pro I trust. Call (330) 200-8042.

Questions worth asking before you buy

Whether you're talking to a salesperson or to me, these questions keep a well-pump conversation honest.

Q: Is this system sized to actually start my pump?

Ask it in plain words. Stored capacity isn't the same as the output needed to swing the starting surge. You want a clear yes tied to your pump's size, not a vague reassurance.

Q: What happens when the battery runs low mid-outage?

For a long outage, ask how the pump keeps cycling once the charge dips — whether that means solar by day, a generator, or simply planning for stored water.

Q: Would stacking a unit or a soft starter help?

If the surge is the sticking point, a good installer can compare adding battery output against easing the pump's start, and tell you which fits your home better.

Q: Who pulls the permit and handles the utility?

Backing a pump into your panel is licensed work. The answer should be a confident 'we handle the permit,' with a clear grasp of your utility's process. Vagueness here is a red flag.

✓ There's no silly question

Your water is at stake, so ask until you're sure. A good salesperson, or I, will welcome every single question — especially the blunt one about whether it can truly start your pump.

What an outage feels like on a backed-up well

It helps to picture the actual rhythm of an outage once a battery is looking after your pump, so nothing feels strange when it happens.

When the grid drops, a well-sized battery carries your home over quietly. Your water keeps working, but the pump only runs in bursts — kicking on when the pressure tank calls for water, then resting. Each of those starts asks for the surge, and each run sips from the battery's charge.

That's why habits help. Spreading out heavy water use — not running the washing machine, a long shower, and the dishwasher all at once — means the pump cycles less and the battery lasts longer. Our multi-day-outage guide covers stretching a battery when the wait drags on.

✓ Go easy on the water, stretch the charge

In a long outage, treat water like the precious thing it is: shorter showers, fuller loads run less often, taps off when you don't need them. Gentle use means fewer pump starts and a battery that lasts.

A few myths, cleared up

Some very common beliefs about wells and batteries just aren't so. Let's clear the air gently.

- **'If the battery is big enough, it'll start any pump.'** Not necessarily — starting is about surge output, a separate hurdle from how much energy is stored.
- **'My pump is small, so it's no trouble.'** Even a smaller 240-volt pump has a real starting surge worth sizing for. Don't assume; confirm.
- **'A battery means I don't need to store water.'** Always store water. Any backup can fall short, and stored water costs almost nothing.
- **'I can wire the pump backup in myself.'** It's a 240-volt circuit tied into your main panel — licensed work with a permit, not a weekend project.

✓ When a pitch sounds too easy, ask the plain question

Will this actually start my specific pump, every time, on battery alone? A good installer welcomes that question and answers it straight. So do I.

Why this is never a do-it-yourself job

A well pump backup touches two things that both demand respect: a heavy electrical circuit and the water your household depends on.

The pump runs on 240 volts and ties into your main electrical panel, the same as any major appliance circuit. Wiring a battery and inverter into that safely — so it starts the pump, switches over cleanly, and never backfeeds the utility lines — is genuine licensed electrical work, done under a permit and inspected. The pump and its wiring down the well are a specialist's world too.

None of that lands on you. Your part is choosing what to back up, finding your pump's details, and picking a good installer. I'll gladly help you line up a trustworthy licensed electrician and, if needed, your well company — I don't do the wiring myself.

! Two trades, both licensed

Leave the panel and inverter to a licensed electrician, and leave the pump and well to your well company or a licensed pump professional. Between them, the job gets done safely and to code. I'm glad to help you coordinate the two.

A sensible plan for a well home

Pulling it together, here's the calm, honest path for a home that draws its own water.

- ❑ Find your pump's size from the nameplate or your well company, and write it down.
- ❑ Decide what else you'd want running, so the installer sees the whole picture, not just the pump.
- ❑ Ask a licensed installer point-blank whether a battery can start and carry your specific pump, and what it would take.
- ❑ Weigh the honest options: a bigger or stacked battery, a soft starter, a paired generator, or a mix.
- ❑ Store drinking water regardless — the cheapest, surest backup of all.
- ❑ Let me help you gather details, compare quotes, and line up the licensed pros, so the choice is yours and well informed.

★ One step at a time

You don't have to sort all of this out today. Start with your pump's size and a jug of stored water, and call me when you'd like a hand with the rest. (330) 200-8042.

Common Questions

The questions I hear most from folks on a well, answered plainly.

Q: Will a home battery start my well pump?

Only if the system's output can meet the pump's big starting surge — a separate hurdle from how much energy is stored. A battery alone may not restart a big 240-volt pump, so have an installer confirm it for your pump.

Q: Why does the surge matter so much?

A pump grabs a big jolt of power to start — often around three times its running power. If the battery can't push that out in an instant, the pump won't start, even with plenty of charge left.

Q: Should I get a bigger battery or a generator?

It depends on how long your outages run. Batteries shine on short ones; generators carry the long, heavy ones. Many well homes pair the two, and an installer can size the honest mix.

Q: Do I still need to store water?

Yes, always. When the power's out, the well is out until a backup runs the pump. Stored drinking water is cheap, simple, and covers you even if a backup ever falls short.

Q: Can I install the pump backup myself to save money?

No — it's a 240-volt circuit tied into your main panel, which is licensed electrician's work done under a permit. The pump itself is a specialist's job too. It's not a DIY project.

★ Still have questions? That's what I'm here for

Getting your water sorted before an outage hits is exactly what I love to help with. Call or text me at (330) 200-8042 and let's talk it through, no pressure.

Is backing up your well worth it?

There's no single right answer, but these patterns hold up well. See which one sounds like your home.

- **Short, occasional outages, a modest pump:** a well-sized battery may carry your water quietly and simply.
- **Long rural outages, or a big pump:** lean toward a generator, or a battery paired with one, and size the surge carefully.
- **You value silence at night:** a battery covers the gentle hours; a generator can take the long daytime haul.
- **You're unsure of your pump:** start by finding its size and storing water, then get a real load calculation.
- **Above all:** keep water stored — it's the backup that never fails and never runs out of charge.

★ Let's figure out your well together

Tell me about your pump, your outages, and what you'd want running, and I'll help you see honestly whether a battery, a generator, or both makes sense — with nothing to sell you. Call (330) 200-8042.

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 backing up your well pump 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

Starting a Well Pump vs Running It

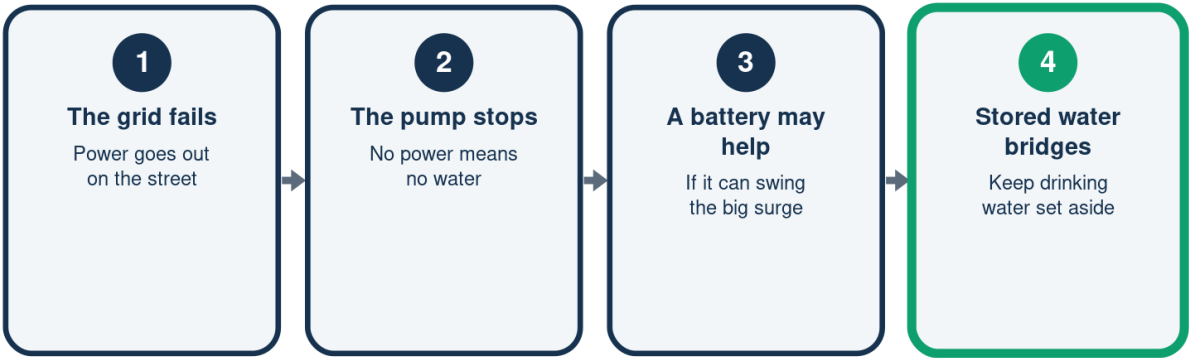
Two different hurdles

	To start it	To keep going
What it tests	Surge output	Stored charge
Power drawn	A big jolt	Steady, less
Lasts	A split second	The whole outage
If it falls short	Won't start	Runs, then quits

A pump can clear one hurdle and trip on the other.

What Happens to Your Well in an Outage

Why stored water matters



When the well is down, stored water is your backup.

A Battery Alone vs a Battery and Generator

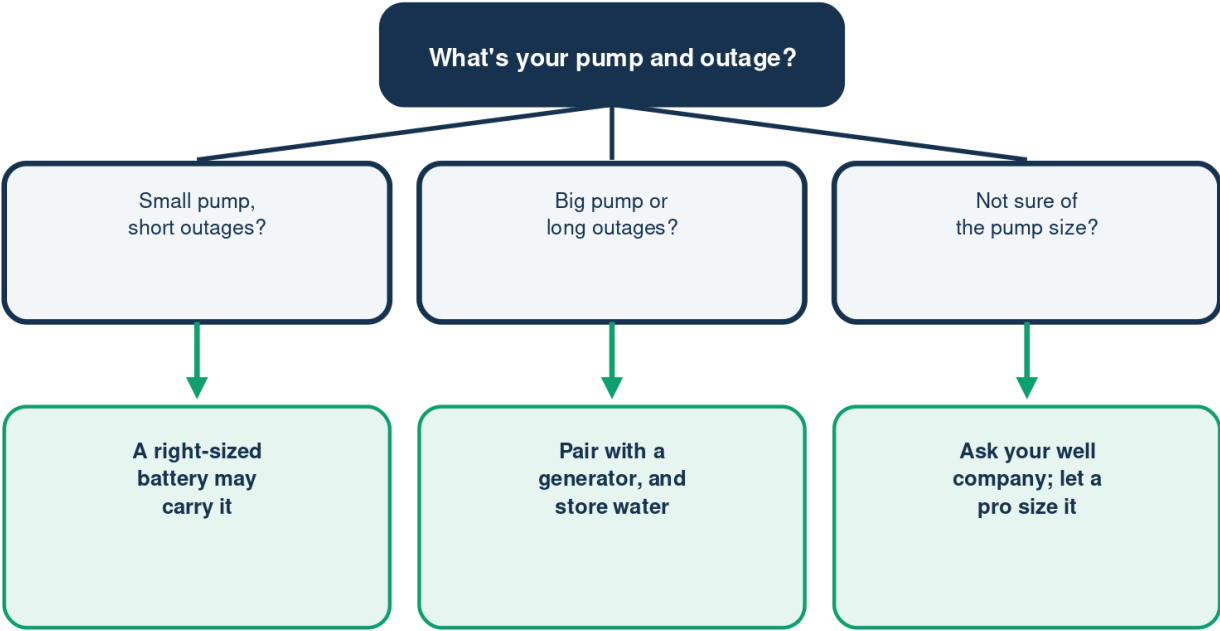
For a demanding well pump

	Battery alone	Battery and generator
Start the pump	If surge fits	Yes, with muscle
Long outage	Charge runs out	Keeps going
Silent running	Always	The battery part
Refills from	Grid or sun	Generator too

Many well homes lean on both.

Can a Battery Back Up Your Well?

Let your pump and outages point the way



A battery alone may not restart a big well pump without enough inverter surge.

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



Need a Real Person?

You do not have to remember all of it.
You just have to remember you can call.
Friendly, in-home tech help -- I come to you.

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Prefer help without a visit?

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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