



An Extended Guide · No. 1648

Transfer Switch vs. Interlock: Which Hookup Is Right?

Two safe ways to wire
in a generator, compared

Tech Made Simple — Service Made Personal

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! Read this first — carbon monoxide is the real danger

A running generator's exhaust contains carbon monoxide — an invisible, odorless gas that can kill in minutes. Never run a generator indoors, in a garage, in a shed, or on a porch, not even with the door open and a fan going. Run it outside only, well away from the house — the safety agencies say at least 20 feet — with the exhaust pointed away from every window, door, and vent. Put battery-backup carbon-monoxide alarms on each floor and outside the bedrooms. If an alarm sounds, or anyone feels dizzy, sick, or sleepy, get everyone into fresh air first and ask questions later. And whichever one you choose, it changes only how power reaches your panel — the generator itself still runs outdoors, at least 20 feet from the house, every single time.

Two safe ways to wire in a generator

Once you've decided you want whole circuits during an outage — not just a few cords — there are two proper ways to connect a generator to your panel. Both are safe. This guide helps you pick the one that fits your home.

I'm Bill. If you've read our backfeeding guide, you already know the dangerous shortcut to avoid and that there are three honest ways to power a home. This guide zooms in on the two that feed your panel: a manual transfer switch and an interlock kit. Neither is a do-it-yourself job — both are a licensed electrician's work, usually with a permit.

The choice between them isn't about safety — both keep your generator and the utility safely apart. It's about budget, how many circuits you want, whether you have any 240-volt loads like a well pump, and how hands-on you'd like to be. We'll walk through all of it, calmly.

★ I'll help you decide — and line up the pro

Deciding between a transfer switch and an interlock kit is exactly the kind of thing I love to talk through, with nothing to sell you. Call or text me at (330) 200-8042 and tell me what's on your must-run list.

The whole guide, on one page

If you remember only these things, you already understand the heart of the choice.

- ❑ Both a transfer switch and an interlock kit safely connect a generator to your panel, and both are a licensed electrician's job, usually with a permit.
- ❑ A transfer switch is a separate box of labeled switches that hands chosen circuits between utility and generator power, physically isolating the two.
- ❑ An interlock kit is a UL-listed metal plate on your existing panel that mechanically stops the main and generator breakers from ever being on together.
- ❑ The transfer switch is the cleanest and often uses one heavy 240-volt cord; the interlock kit is more affordable and uses your existing breakers, so you can power more circuits.
- ❑ Extension cords are the third, no-wiring option — but they can't reach hardwired 240-volt loads like a well pump.
- ❑ Both panel hookups need an inlet box on your outside wall, and I'm glad to help you choose and line up the electrician.

✓ It's a fit decision, not a safety one

Neither hookup is safer than the other — both keep generator and utility power apart by design. Pick the one that fits your budget, your circuits, and how you like to do things.

Both are safe — and both need a licensed electrician

Before we compare them, let's put the most important thing first: this is a choice between two safe options, and either way a professional does the work.

A transfer switch and an interlock kit both do the same core safety job — they make sure your generator's power and the utility's power can never meet. Our backfeeding guide explains why that isolation matters so much; here, just know that both hookups provide it, by design.

Both also mean opening your electrical panel, which is where a tech helper like me steps back and a licensed electrician steps in. In most areas each needs a permit and an inspection, which confirms the work was done correctly. That's not red tape — it's the safeguard that makes the whole thing trustworthy.

★ My job is helping you decide and coordinate

I don't do panel work myself — that's not my license. What I do is help you choose the hookup that fits, line up an electrician I trust, and make sure it's tested with you afterward. Reach me at (330) 200-8042.

The manual transfer switch

Think of a small, tidy box of labeled switches mounted next to your panel — one switch per circuit you chose to back up.

Each switch flips a circuit between two sources: utility power for everyday life, and generator power for an outage. Because a circuit is only ever connected to one source at a time, the generator is physically isolated from the utility — the electrical code, NEC 702.5, requires transfer equipment to prevent the two from ever being connected together. This is the cleanest, most polished of the hookups.

It usually uses one heavy cord — often 240-volt — running from the generator to an inlet box outside, and you decide in advance which circuits the switch covers. During an outage you flip from utility to generator and turn on your chosen circuits one at a time, with clear labels so there's no guessing at 2 a.m.

✓ Labels make it foolproof

Every switch is labeled with the circuit it controls — 'Furnace,' 'Kitchen fridge,' and so on. That means anyone in the house can find the right one without hunting through the main panel.

The interlock kit

A simpler, more affordable piece of hardware that does the same safety job in a different way.

An interlock kit is a UL-listed metal plate a licensed electrician fits to your existing panel, along with a dedicated generator breaker. The plate mechanically prevents the main breaker and the generator breaker from ever being switched on at the same time — you can have one on or the other, never both. That's what keeps generator and utility power from ever meeting.

Because it works through your existing breakers rather than a separate box, it's usually more affordable, and you can power any circuit in your panel — not just a pre-chosen few — which often means more circuits available to you. The trade-off is that you manage those breakers by hand each time, so a clear, labeled plan matters.

! It has to be the right kit for your panel

An interlock kit must be the specific model made for your panel's brand and layout, installed by a licensed electrician. A mismatched or forced plate can defeat the very protection it's there to provide — this is not a universal part.

The third way: extension cords

Before we go deeper on the two panel hookups, it's worth naming the third honest option, because for some homes it's all they need.

Outdoor-rated extension cords run straight from the generator to individual appliances — no wiring, no electrician, no permit. It's the simplest safe hookup, and there's nothing second-rate about it if your needs are modest.

The limit is that a cord can only reach something with a plug. Anything hardwired into your walls — a well pump, an electric water heater, central air — is out of reach, which is exactly where a panel hookup earns its keep. Our extension-cords guide covers the cord option in full, and our backfeeding guide covers why a cord must never be used to feed the panel through an outlet.

✓ Cords and a panel hookup can coexist

Plenty of folks start with cords and add a panel hookup later, or keep cords on hand as a simple backup. Choosing a transfer switch or interlock kit doesn't mean throwing the cords away.

Both need an inlet box outside

Whichever panel hookup you choose, the generator connects to the house the same way — through a weatherproof inlet on your outside wall.

Your electrician mounts a power inlet box on the exterior, wired to the transfer switch or the generator breaker inside. During an outage, one heavy cord runs from the generator — sitting safely outside, well away from the house — to that inlet. No cords through a cracked window or door.

The inlet and cord are matched to your generator's outlet during installation, so the connection is snug and weatherproof when its cover is closed. Our inlet-box guide covers that piece in detail — where it goes, how it's rated, and how to keep it clear.

✓ One connection, made once

For anyone who's wrestled several cords through a window in the rain, this is the everyday convenience both panel hookups share — one heavy cord, one inlet, and you're done fussing for the rest of the outage.

How to choose between them

Since both are safe, the decision comes down to a handful of honest questions about your home and how you like to do things.

- **Budget.** An interlock kit is usually the more affordable hardware; a transfer switch typically costs more. For real numbers, get a quote from a licensed electrician.
- **How many circuits.** An interlock kit can reach any breaker in your panel; a transfer switch covers the specific circuits it was wired for.
- **240-volt loads.** A well pump or the like points you firmly toward a panel hookup, sized right — more on that next page.
- **Panel space.** Your panel needs room and the right layout; an electrician confirms what fits during an evaluation.
- **Appearance and resale.** A neat, labeled transfer switch can feel more finished to some buyers; an interlock kit keeps everything within your existing panel.

★ Bring me your must-run list

Once you know roughly what you'd want running in an outage, text it to me at (330) 200-8042 and I'll help you weigh these questions honestly, then line up the electrician.

Circuits: how many, and how you'll manage them

This is the difference people feel most day to day, so it's worth understanding clearly.

A transfer switch covers the circuits it was specifically wired for — flip a labeled switch and that circuit is on generator power. It's tidy and hard to get wrong, but adding a circuit later usually means another electrician visit. You choose your must-run circuits in advance, and those are your set.

An interlock kit lets you use any breaker in your existing panel, so you can choose differently each outage depending on what matters that day — often more circuits within reach. The trade-off is that you manage those breakers yourself and have to stay within what your generator can deliver, which makes a written, labeled plan important.

✓ Label your panel either way

Whether you go with a transfer switch's built-in labels or your own on the main panel, big, clear labels made in good light beat trying to remember which breaker is which during a storm.

The 240-volt question — and the well pump

For a lot of homes, especially rural ones, one load settles the whole decision.

Hardwired 240-volt loads — a well pump most of all, plus an electric water heater or central air — can't be reached by a cord, because there's no plug. If any of these are on your must-run list, you need a panel hookup, and a generator with a 240-volt outlet and enough starting surge to match. That's true whether you choose a transfer switch or an interlock kit.

For a home on a well, this is usually decisive: no power to the pump means no water at all, for drinking, cooking, flushing, or animals. That makes a panel hookup essentially required, and either hookup can handle it when it's sized correctly. How the pump's big starting surge shapes the generator you need is a sizing question our other guides cover without guessing at numbers.

! A well pump means a panel hookup, not a cord

There's no safe cord or adapter that powers a hardwired 240-volt pump. If you're on a well, plan on a transfer switch or interlock kit with a 240-volt-capable generator from the start.

What I do, and what I leave to the electrician

Worth repeating plainly, since it shapes how I can help.

- **What I help with:** deciding between a transfer switch and an interlock kit, building your must-run and circuit list, lining up a licensed electrician I trust, and walking through the finished setup with you.
- **What only a licensed electrician can do:** evaluate and open your panel, install the switch or interlock and the outdoor inlet, and pull the permit.
- **What I never do:** panel work or 240-volt wiring myself — that's not my license, and your safety deserves the real thing.

★ Call while you're still deciding

The most useful time to reach me is before anything's installed, while the choice is still open. Call or text me at (330) 200-8042 and we'll find the hookup that fits your home.

Two kinds of homes, two sets of needs

Which hookup fits often comes down to where you live — what's on your must-run list in town looks different from a rural home on a well.

If you live in town or the suburbs

In town or the suburbs, city water keeps flowing and outages tend to be shorter, so the must-run list is often lighter — the fridge, some lights, the furnace. That opens up more options, from cords for the essentials to a modest transfer switch or an interlock kit.

- A lighter list is easy to manage, so an interlock kit's hands-on breakers are rarely a burden.
- If you want the tidiest, most foolproof setup, a small transfer switch covering a few circuits is a comfortable choice.
- Cords alone may even be enough if your list is all plug-in items — see our extension-cords guide.
- Close neighbors mean placing the generator and its one cord thoughtfully, whichever hookup you pick.

If you are out in the country on a well

Out on a well, the decision tightens up. A well pump is a hardwired 240-volt load, so a panel hookup is essentially required — and longer, more frequent rural outages mean you'll lean on it often.

- A 240-volt well pump rules out cords for that load and calls for a 240-volt-capable generator, sized right.
- Either hookup works — a transfer switch's labeled circuits ease a stressful multi-day outage; an interlock kit stretches your budget further.
- A demanding rural must-run list — pump, furnace, fridge, sump pump — often favors the flexibility of reaching any breaker.
- Our other guides cover how the pump's surge shapes the generator you'll pair with either hookup.

★ Not sure which camp you're in?

Plenty of homes sit in between. Tell me your must-run list and whether you're on a well, and I'll help you land on the hookup that actually fits. Call (330) 200-8042.

The honest cost picture

Money is usually part of this decision, so let's be straight about it — without pretending I can quote your job.

As a rule, an interlock kit is the more affordable hardware, and a transfer switch costs more, because it's a separate labeled box with more to install. Both add a licensed electrician's visit and usually a permit on top of the hardware itself. I won't guess a number, because every panel, home, and electrician's rates differ too much for that to be honest — get a quote from a licensed electrician rather than trusting a figure from the internet.

It's worth thinking a little past today, too. Adding circuits to a transfer switch later usually means another visit, so if your needs might grow, mention that up front. A right-sized hookup, chosen once and installed properly, serves for many years.

★ I'll help you plan the whole cost, not just the hardware

I don't sell hookups or earn a commission, so my advice is just advice. Tell me your home and your list, and I'll help you map out the full picture before you commit.

Appearance, resale, and peace of mind

Beyond dollars and circuits, a few softer factors sway some folks — and they're worth naming.

A transfer switch is a neat, clearly labeled box that some buyers and home inspectors read as a finished, professional setup. An interlock kit keeps everything inside your existing panel, so there's little to see — which some people prefer and others find less obviously done. Neither is right or wrong; it's a matter of taste.

For resale and insurance alike, the thing that matters most is that whichever you choose was installed by a licensed electrician, with the permit and inspection to show for it. A properly permitted hookup is a selling point; an unpermitted one can become a problem at closing or a claim.

✓ Keep your paperwork

Whichever hookup you pick, hang onto the permit and inspection records with your home papers. They prove the work was done right, which helps at resale and if you ever file a claim.

What installation day looks like

Knowing roughly what to expect takes the mystery out of it, whichever hookup you chose.

- ❑ The electrician evaluates your panel and confirms your chosen hookup fits it.
- ❑ For an interlock kit, a dedicated generator breaker is added and the plate installed; for a transfer switch, the switch box is mounted and wired.
- ❑ A weatherproof inlet box is mounted outside and wired in.
- ❑ The permit and any required inspection are scheduled or completed.
- ❑ The electrician tests the setup with a generator connected before calling it done.
- ❑ You get a hands-on walk-through — ask for it — so you can use it confidently later.

★ I like to be there for testing

Whenever I can, I join for testing day so I learn your specific setup alongside you — which switch or breaker is which, and in what order. Then I can walk you through it again anytime you'd like a refresher.

Living with each, season to season

Both hookups mostly wait quietly between outages. A little attention keeps either one ready.

For both, keep the outdoor inlet box's cover free of leaves, snow, and spiderwebs, and check that it still closes snugly. Exercise the generator itself now and then under some load, and keep its fuel fresh — our other guides cover that part in detail.

With an interlock kit, also check now and then that the plate still slides freely and your breaker labels are legible. With a transfer switch, make sure its labels stay clear. If a switch or plate ever feels stiff, sticky, or behaves oddly, that's a call to your electrician, not a do-it-yourself fix.

✓ An annual practice run

Once a year, in daylight, run through the full switch-over and switch-back with the whole household watching. It keeps everyone — not just you — comfortable with the steps, whichever hookup you have.

Common mistakes people make

A handful of avoidable slip-ups cover most of the regret I hear about after a hookup goes in.

- **Buying the generator before deciding the hookup**, then finding it lacks the 240-volt outlet a panel hookup needs.
- **Choosing more circuits than the generator can comfortably handle** — size the two together before you finalize the list.
- **Assuming an interlock kit limits your load for you** — it doesn't; staying within the generator's capacity is on you.
- **Skipping the permit or inspection** to save time, and never confirming the isolation was wired correctly.
- **Never practicing** until the night it's actually needed, in the dark, under stress.

! Don't skip the test

A hookup you've never actually used with the generator running is an unknown, not a safety net. Test it, with a walk-through, before you ever need it.

Questions to ask your electrician

These get you to a hookup you understand and trust, not just one that's installed.

Q: Which hookup fits my panel, and does it have room?

Ask up front — some panels need extra work or, rarely, an upgrade before a transfer switch or interlock kit can go in. A quick evaluation answers it.

Q: How many circuits will I be able to run, and can it grow later?

Worth asking especially for a transfer switch, since adding circuits later usually means another visit. An interlock kit reaches any breaker, within your generator's limit.

Q: What size inlet and cord do I need for my generator?

Bring your generator's information so the inlet, cord, breaker, and switch all agree with each other.

Q: Will I need a permit and inspection, and how long will it take?

Ask about the timeline in your area so you're not caught mid-project during an actual outage, and so you keep the records for resale.

✓ There's no silly question

A good electrician expects these and welcomes them. If one seems bothered by a plain question, that's worth noting, not ignoring.

Common Questions

The questions I hear most about choosing between these two hookups, answered plainly.

Q: Is a transfer switch safer than an interlock kit?

No — both are genuinely safe when installed by a licensed electrician, because both keep generator and utility power from ever meeting. The choice is about convenience, cost, and fit, not safety.

Q: Which lets me power more circuits?

An interlock kit usually does, because it works through every breaker in your existing panel. A transfer switch covers only the circuits it was wired for, though you choose those in advance.

Q: Do I really need either one, or will cords do?

If your must-run list is all plug-in items, cords may be all you need. If it includes a furnace, a well pump, or whole circuits, you want a panel hookup — see our extension-cords guide to compare.

Q: Can I start with an interlock kit and upgrade to a transfer switch later?

Often, yes, though it's usually treated as a new installation rather than a simple swap. Ask your electrician about your specific panel if that's a road you might take someday.

★ Ready to talk it through?

Call or text me at (330) 200-8042 with your must-run list, and let's figure out whether a transfer switch or an interlock kit is the better fit for your home.

Bringing it all together

Two safe ways to wire in a generator, one honest way to choose between them: fit, not fear.

A transfer switch gives you clean, labeled, dedicated switches; an interlock kit does the same core safety job for less, using your existing breakers. Both are a licensed electrician's job with a permit, both need an inlet box outside, and both keep your generator safely isolated from the utility — the danger our backfeeding guide warns about.

From here, our manual-transfer-switch overview and our interlock-kit overview each go deeper on their own hookup, our inlet-box guide covers the outdoor connection they share, and our backfeeding guide covers the shortcut to never take. Whichever you choose, the generator still runs outside, well away from the house.

★ Let's find your fit together

Call or text me at (330) 200-8042 with your must-run list and whether you're on a well, and I'll help you choose the hookup that fits and line up the electrician — free, with nothing to sell you.

If you remember only one thing

Out of everything in this guide, one idea makes the choice easy.

Both a transfer switch and an interlock kit are safe — so choose on fit, not fear. Pick the transfer switch for the cleanest, most labeled experience, or the interlock kit to save money and reach more circuits. Either way, it's a licensed electrician's job with a permit, and either way the generator still runs outside, at least 20 feet from the house.

! The rule that doesn't change

However you connect it, a clean electrical hookup never changes the carbon monoxide danger. The generator runs outdoors, well away, exhaust pointed away from windows and doors — keep your CO alarms tested and in place.

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 choosing between a transfer switch and an interlock kit 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 or gas 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

Transfer Switch vs. Interlock

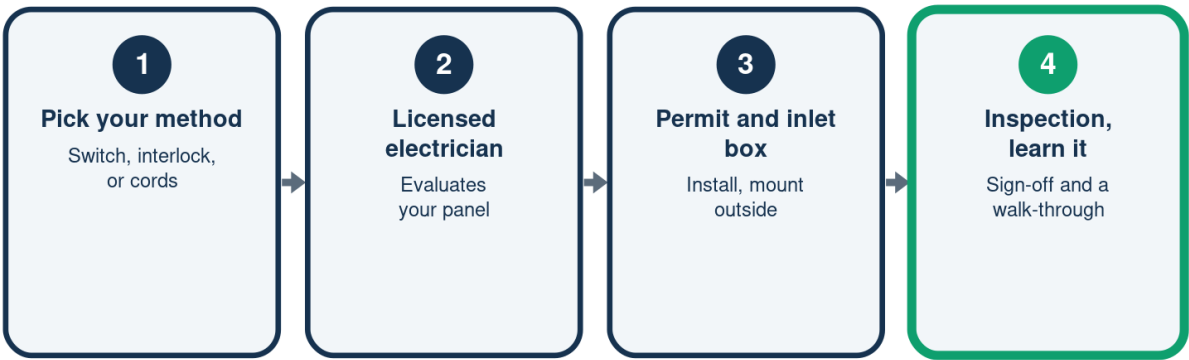
Two safe panel hookups, point by point

	Transfer switch	Interlock
What it is	Own switch box	Plate on panel
Cost	Usually more	Usually less
Circuits	The ones wired in	Any breaker
Isolation	Built-in, physical	Plate blocks both
Who installs	Licensed pro	Licensed pro

Both are safe and both need a licensed electrician – this is about fit.

Getting Either One Installed

The same calm path, whichever you pick



Either panel hookup is a licensed electrician's job, usually with a permit.

Which Fits You?

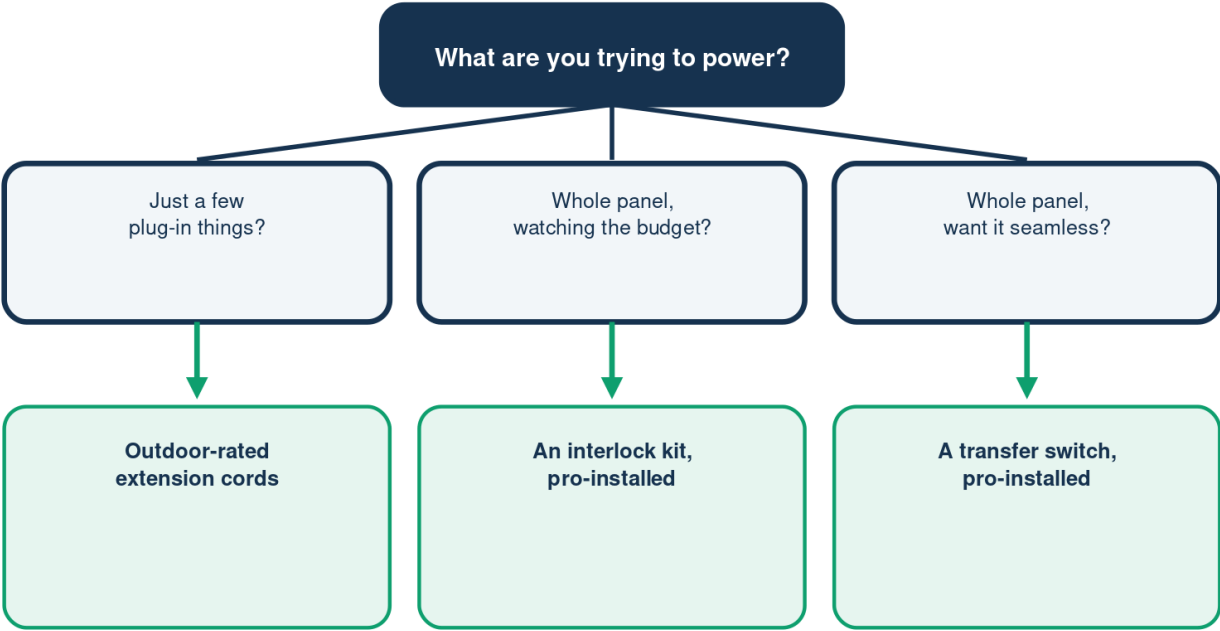
A quick read on where you lean

	If you...	Lean toward
Budget	Watch every dollar	Interlock kit
Simplicity	Want it foolproof	Transfer switch
Well pump	Run a 240V pump	Either, sized right
Many circuits	Want lots on hand	Interlock kit

Both are safe -- choose the one that fits your home and budget.

Cords, Interlock, or Transfer Switch?

Let your must-run list point the way



On a well? A 240V pump needs a panel hookup, not cords.

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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