



An Extended Guide · No. 1644

CO Alarms: Where and How to Place Them

Your early warning, done right

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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. This guide is about those alarms — the backstop that warns you when carbon monoxide drifts toward the house, even after the generator is placed exactly right.

Your early warning on the wall

A carbon monoxide alarm is the one thing in your home that keeps watch while you sleep. Placement keeps the gas away; an alarm is what speaks up on the rare night something goes wrong anyway — and getting it set up right is simpler than most folks fear.

I'm Bill. For 30-plus years I've helped folks around Portage County set up the gear in their homes, and carbon monoxide alarms are some of the most important — and most misunderstood — devices I run into. Wrong type, wrong spot, dead battery, or expired unit: any of those turns a lifesaver into a decoration.

So this guide walks through choosing the right alarms, putting them in the right places, and keeping them working — all in plain English, at a kitchen-table pace. Where the generator itself goes is our guide on carbon monoxide safety and the 20-foot rule; this one is about the alarms that back that placement up.

★ You don't have to memorize all of it

The core idea is short — battery-powered alarms, on every level and outside the bedrooms, tested and in date — and the rest just fills that in. If you'd like a hand choosing and placing yours, that's an easy, worthwhile visit. Call or text me at (330) 200-8042.

The 60-second version

If you read nothing else in this guide, read this page.

- ❑ Choose battery or battery-backup CO alarms — a plug-in-only alarm goes dark during the very outage you're running the generator for.
- ❑ Put one on every level of the home, including the basement, and one outside every sleeping area, close enough to wake a sleeper.
- ❑ Follow the manufacturer's instructions for the exact mounting height and spacing.
- ❑ Don't lean on a single alarm to cover a large or multi-story home.
- ❑ Test every alarm monthly, change batteries when it chirps, and replace the whole alarm by the date printed on it.
- ❑ If anyone is hard of hearing, ask the maker about louder, strobe, or bed-shaker alarms.

! This page is worth reading twice

Everything else in this guide expands on these six lines. An alarm plan this simple, set up once, quietly protects your household every night after.

Why you need alarms even with perfect placement

You might reasonably ask: if I run the generator outdoors and well away, why do I need alarms at all? Here's the honest answer.

Good placement is your first and best defense, and it does most of the work. But the real world has a way of surprising us. The wind shifts overnight and pushes exhaust back toward a window. A cord won't quite reach, so the generator creeps a few feet closer than it should. A vent you forgot about pulls air in from just the wrong spot. Any of those can send carbon monoxide toward the house even when you did your best.

An alarm is what catches that. It doesn't care how careful you were — it simply watches the air and sounds off if carbon monoxide climbs, day or night, awake or asleep. That's a job no amount of good planning can do on its own, because you can't watch the air while you sleep. The alarm can.

! One honest mistake is all it takes

Nobody plans to get placement wrong. But carbon monoxide is unforgiving of a single off night, and an alarm is the layer that forgives it for you — warning you in time to act.

Choosing the right kind of alarm

There's one choice here that matters more than any other, and it trips up a lot of well-meaning folks.

Carbon monoxide alarms come powered a few ways. Some run entirely on batteries. Some plug into the wall with a battery for backup. And some plug into the wall only, with no battery at all. For generator safety, that last kind is the problem: you run a generator because the power is out, which means a plug-in-only alarm is dark and silent at the exact moment you need it most.

So choose battery-powered or battery-backup alarms. A battery-powered unit works no matter what the power is doing. A battery-backup unit runs on the wall normally but keeps going on its battery when the power drops. Either one keeps watch through an outage — which is the whole point.

! Plug-in only is the one to avoid

If your alarm has a battery it can fall back on, you're in good shape. If it plugs in with no battery at all, it will not protect you during an outage — replace it before you ever need the generator.

Combination smoke and CO alarms

You'll see alarms that handle both smoke and carbon monoxide in one unit. They're a convenient option, with one thing worth understanding.

A combination alarm is a genuinely handy choice — one device, one spot on the ceiling or wall, two protections. For many homes it's a tidy way to cover both dangers without doubling the number of units on the wall.

The thing to keep clear is that smoke and carbon monoxide are two different dangers, sensed in different ways. A smoke alarm alone does not detect carbon monoxide, and a CO alarm alone does not detect smoke. A combination unit simply puts both jobs in one housing — so if you already have smoke alarms, you still need carbon monoxide coverage, whether that's separate CO alarms or combination units.

✓ Two jobs, however you cover them

Whether you choose separate alarms or combination units is up to you and your budget — just make sure every part of the home is covered for carbon monoxide, not smoke alone.

Where the alarms go

Coverage is the goal: no floor left out, and no sleeping person too far to be woken. Here's the plain layout.

- One on every level of the home, including the basement.
- One outside every sleeping area, close enough to wake a sleeping person through a closed door.
- Near an attached garage is worth covering too, since carbon monoxide can drift in from there.
- Spread them out so a large or spread-out floor isn't leaning on a single unit.

The idea is simple: carbon monoxide can come from a generator outside, a car in the garage, a furnace in the basement, or a blocked vent — so you want the whole home watched, top to bottom, with extra care around where people sleep. That's when you're least able to notice trouble yourself.

✓ Think 'every floor, every sleeper'

If you can say your home has an alarm on each level and one that could wake each person sleeping, you've got the shape of it right. The next pages fine-tune the details.

Follow the manufacturer for exact placement

The 'every floor, outside the bedrooms' rule gives you the spots. For the exact height and position within a spot, the alarm's own instructions are the boss.

Different alarms are designed to sit in different places — some on the ceiling, some high on a wall, some at a particular distance from corners, vents, or fuel-burning appliances. Rather than guess or repeat a rule of thumb that may not fit your unit, read the little instruction sheet in the box and follow it. That's the height and spacing the maker tested the alarm for.

It's also worth mounting each alarm where you can actually reach it to test it and change its battery without a wobbly stool. An alarm that's a chore to reach is an alarm that quietly goes untested — so pick a reachable spot that still follows the maker's guidance.

✓ The instruction sheet is your friend

I know it's tempting to toss the paperwork, but the placement sheet is the one to keep. If it's long gone, the maker's website usually has it, or I'm glad to help you find it on a visit.

Why one alarm isn't enough for most homes

A single alarm by the bedroom is far better than none — but for most homes it leaves real gaps.

Carbon monoxide doesn't fill a house evenly and instantly. A single alarm can only sense the air right around it, so a unit on the main floor may not catch a problem building in the basement, and one at the bedroom end of a long house may be slow to notice trouble at the far end. The bigger or more spread-out the home, the more this matters.

That's the reasoning behind one on every level and outside every sleeping area. It isn't about selling you more alarms — it's that coverage, not a single well-placed unit, is what actually protects a whole home. A two-story house with a basement, for instance, wants coverage on all three levels, not just the floor you sleep on.

! Don't let one alarm lull you

Having 'a CO alarm' can feel like the box is checked, but a single unit in a multi-level home leaves floors unwatched. Think in terms of covering the whole house, not owning one device.

Interconnected alarms — when one sounds, all sound

Here's a feature that's genuinely worth knowing about, especially for larger or multi-story homes.

Interconnected alarms are linked together, so when any one of them detects a problem, every alarm in the home sounds at once. That means an alarm going off in the basement will also wake you in an upstairs bedroom — which a lone basement alarm, two floors away, might never do on its own.

Some systems link with wires, and many newer ones link wirelessly without any rewiring. It's an optional upgrade, not a requirement, but it's a nice one for a bigger home or for anyone who sleeps soundly. As always, follow the maker's instructions to set it up, and make sure every linked unit still has working battery power for outages.

✓ A whole-home alert, not a single beep

If you like the idea of the whole house hearing about a problem the instant any one alarm senses it, interconnected alarms are worth a look. I'm happy to talk through whether they fit your home.

Testing, batteries, and that midnight chirp

An alarm only protects you if it's working, and keeping it working takes just a few minutes a month.

- ❑ Press the test button on each alarm about once a month to confirm it sounds.
- ❑ Learn the difference between the loud, urgent alarm and the occasional single chirp — a chirp usually means a low battery.
- ❑ Change batteries as soon as an alarm chirps for them, or on whatever schedule the maker suggests.
- ❑ Keep a few spare batteries on hand so a 2 a.m. chirp doesn't leave you pulling the battery out to get some sleep.

! Never pull the battery to silence a chirp for good

A chirping alarm in the middle of the night is annoying, but pulling the battery and forgetting to replace it is how homes end up unprotected. Swap the battery instead — that's all it's asking for.

Carbon monoxide alarms wear out — replace them on time

This is the step almost everyone misses: even a perfectly good alarm has an expiration date, and a fresh battery doesn't reset it.

The sensor inside a carbon monoxide alarm slowly wears out over years of use, whether or not it has ever gone off. Because of that, manufacturers print a replacement date — or a 'replace by' date — right on the unit. After that date, the alarm may no longer sense carbon monoxide reliably, even if the test button still beeps.

So when the date comes due, replace the whole alarm, not just the battery. It helps to find that date on each of your alarms now and jot it on your calendar, so an out-of-date unit isn't quietly failing on the wall while you assume you're covered.

! A test beep is not the same as working

The test button checks the horn and the electronics — it does not prove the CO sensor still works. That's why the printed replacement date matters: past it, retire the unit no matter how healthy it sounds.

Two kinds of homes, two sets of needs

Where you live shapes how many alarms you need and how they're best linked — even though the every-floor, outside-the-bedrooms rule never changes.

If you live in town or the suburbs

In town or the suburbs, homes are often taller than they are wide — two stories over a basement is common — so the challenge is covering every level and making sure an alarm downstairs can still wake someone upstairs.

- Cover each floor — a basement, a main floor, and an upstairs each need their own alarm.
- Interconnected alarms shine here, so a basement alert still wakes a second-floor bedroom.
- Near an attached garage, add coverage — a car or generator there can send CO indoors.
- In a shared or attached building, remember a neighbor's air can affect yours, so good coverage protects more than one household.

If you are out in the country on a well

Out in the country, homes tend to spread out across one or two levels with a bigger footprint, plus outbuildings — and help is farther away if an alarm ever does sound.

- A long, spread-out floor may need more than one alarm so no far corner goes unwatched.
- Cover any outbuilding or shop where an engine or heater runs and someone might linger.
- Longer rural outages mean more overnight running — put fresh batteries in before the season, not after.
- With EMS farther off, an alarm that wakes you early buys the extra minutes that matter most out here.

★ Let's map out your coverage together

Whether it's a tall in-town house or a spread-out place in the country, I'm glad to walk through how many alarms you need and where they go. Call (330) 200-8042.

If someone in the home is hard of hearing

A standard alarm protects by being loud. If a loud horn isn't enough to wake or reach someone, there are alarms designed for exactly that.

For household members who are deaf or hard of hearing, makers offer alarms that do more than beep. Some sound at a lower, more noticeable pitch. Some add a bright flashing strobe light. And some come with a bed-shaker — a pad that goes under the mattress or pillow and vibrates hard enough to wake a sound sleeper — so the warning reaches the person even if the sound doesn't.

Which option fits depends on the person and the home, so check what each maker offers and, importantly, test it with the actual person it's meant to protect. An alarm that wakes you may not wake them, and the only way to know is to try it while everyone's awake and safe.

★ Let's make sure it reaches everyone

Getting an alarm that genuinely wakes every person in the house is worth doing right. If you'd like help choosing and testing the correct kind, that's a visit I'm always glad to make. Call (330) 200-8042.

What to do when an alarm sounds

Setting the alarms up is most of this guide's job. What to do in the moment one goes off has its own guide, but here's the short version so no one is caught flat-footed.

Treat every carbon monoxide alarm as real, even if nobody feels sick. Get everyone — and every pet — outside into fresh air first, then call 911 from outside, and don't go back in until emergency responders say it's safe. An alarm sounding is not the moment to hunt for the cause or air out the house from inside.

That's the heart of it. Our guide on what to do if the CO alarm sounds walks the whole moment through step by step, and our guide on how carbon monoxide poisoning happens covers the symptoms to know. This guide's job is to make sure the alarm is there, working, and loud enough to be heard when that moment comes.

! An alarm is a 'get out now,' not a 'check on it'

The alarm exists to give you time. Spend that time getting into fresh air and calling for help — not standing under the alarm wondering whether it's a false one. Out first, always.

Building an alarm plan everyone knows

Alarms on the wall are only half of it. Everyone under your roof knowing what they mean is the other half.

- ❑ An alarm on every level and outside every sleeping area, all battery-powered or battery-backup.
- ❑ Every alarm tested this month and within its printed replacement date.
- ❑ Everyone in the house knows the sound and knows it means: outside first, then call 911.
- ❑ An agreed outdoor meeting spot, well away from the house, so you can count heads.
- ❑ Anyone hard of hearing has an alarm proven to wake them, and spare batteries are on hand.

✓ Walk it through once, calmly

On an ordinary day, press a test button so everyone hears the sound, point out the alarms, and name the meeting spot. Five calm minutes now means no confusion during a real alert.

Common alarm mistakes to avoid

Almost every gap I find comes down to a handful of easy, understandable slips. Knowing them helps you dodge them.

- **Relying on plug-in-only alarms**, which go dark in the very outage the generator is running through.
- **Owning a single alarm** in a multi-level home and assuming the whole house is covered.
- **Pulling a battery to stop a chirp** and never putting a fresh one back in.
- **Never checking the replacement date**, so an expired alarm hangs on the wall giving false comfort.
- **Assuming a smoke alarm covers carbon monoxide** — it doesn't; they sense different dangers.
- **Mounting an alarm where it can't be heard** from the bedrooms through a closed door.

! Most gaps are quiet ones

None of these announce themselves — an expired or battery-less alarm looks just like a working one on the wall. A yearly once-over is how you catch them before they matter.

Myths people believe — and the truth

A few mistaken beliefs about alarms come up again and again. Here's the honest version of each.

Myth	Fact
'One alarm covers the house.'	One unit senses only nearby air. Cover every level.
'My smoke alarm covers CO.'	Smoke and CO are different dangers. You need CO coverage too.
'A plug-in alarm is fine.'	Plug-in only goes dark in an outage. Choose battery power.
'It beeped, so the sensor's good.'	The test checks the horn, not the sensor. Mind the replace date.
'New alarms never wear out.'	The sensor expires in years. Replace the whole unit when due.

! A belief doesn't have to be true to feel true

Every myth above sounds reasonable, which is exactly why they persist. When something you've heard doesn't match this guide, trust the rule, not the rumor.

Questions worth asking

A few plain questions that clear up most of the confusion I hear about carbon monoxide alarms.

Q: How many alarms do I really need?

At least one on every level, including the basement, plus one outside each sleeping area. A larger or spread-out home may need more so no area is left unwatched.

Q: Battery or battery-backup — does it matter which?

Either is fine for generator safety, because both keep working during an outage. What you want to avoid is a plug-in-only alarm, which won't.

Q: How often should I test them and change batteries?

Test about once a month, and change batteries when the alarm chirps for them or on the maker's suggested schedule. Keep a few spares handy.

Q: How do I know when to replace the whole alarm?

Look for the replacement date printed on the unit. When it's due, swap the entire alarm — a fresh battery won't renew a worn-out sensor.

★ There's no silly question here

If you're unsure how many alarms you need or where they go, I'd rather you ask than guess. Reach me at (330) 200-8042 any time.

Common Questions

The questions I hear most from folks working through this guide, answered plainly.

Q: Do I need CO alarms if I already have smoke alarms?

Yes — they detect different dangers. You can add separate CO alarms or use combination smoke-and-CO units, but smoke alarms alone do not sense carbon monoxide.

Q: Can I use a plug-in CO alarm if it has a battery in it?

Yes — a plug-in alarm with a battery backup keeps working during an outage, so it's fine. It's the plug-in-only kind, with no battery, that leaves you unprotected.

Q: Where exactly on the wall or ceiling should an alarm go?

Follow the instruction sheet that comes with your specific alarm for the exact height and position — different models are designed for different placements.

Q: Are interconnected alarms worth it?

They're a nice upgrade, especially for a larger or multi-story home, because when one sounds they all sound. They're optional, not required.

! Read it again if it's been a while

This guide is worth revisiting once a year — a good moment to test every alarm, check its replacement date, and refresh the batteries.

Bringing it all together

A good alarm plan comes down to four plain ideas: the right type, in the right places, tested, and in date.

Choose battery or battery-backup alarms so they work when the power is out. Put one on every level and outside every sleeping area, following the maker's placement sheet. Test them monthly, mind the battery chirp, and replace each whole unit by its printed date. That's the entire job, and it quietly protects your household every night.

Alarms are one layer of three. Keeping the generator outdoors and well away is covered in our guide on the 20-foot rule, and recognizing the symptoms of carbon monoxide is covered in our guide on how carbon monoxide poisoning happens. Together, placement, alarms, and knowing the signs keep your family safe.

★ Let's get your alarms right

On a visit I can help you pick the right alarms, place them where they'll be heard, check the dates on any you already have, and make sure everyone knows the plan. Call or text me at (330) 200-8042.

If you remember only one thing

Out of everything in this guide, one idea matters most.

Put battery-powered or battery-backup carbon monoxide alarms on every level of your home and outside every sleeping area, test them monthly, and replace each whole unit by the date printed on it. That one habit turns the alarms on your wall from decorations into the early warning that can wake your family in time.

! Say it back to yourself

Battery power. Every level. Outside the bedrooms. Tested monthly. Replaced on time. That's the whole alarm plan — and it's the layer that keeps watch while you sleep.

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 placing and maintaining carbon-monoxide alarms 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

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Which CO Alarm Type?

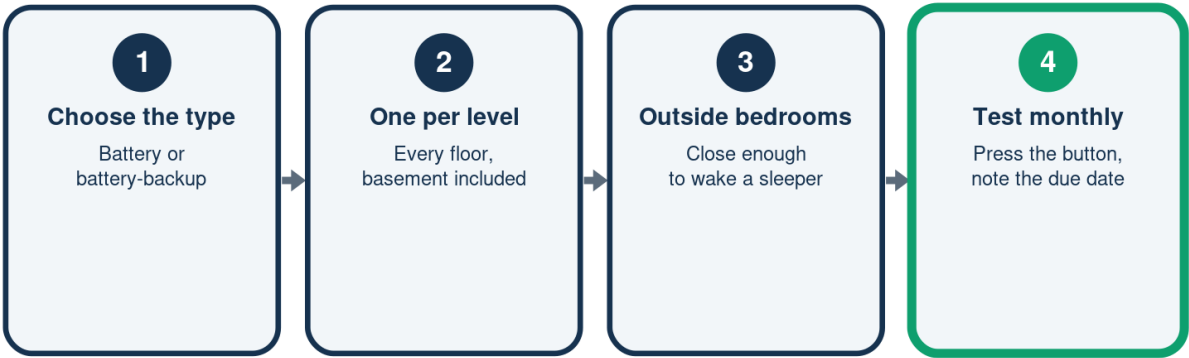
Only some keep working when the power is out

	Good for backup?	Why
Battery only	Yes	Works in an outage
Battery-backup	Yes	Best of both
Plug-in only	No	Dark in an outage
Combo smoke/CO	If battery type	Two jobs, one unit

Running a generator means the power is out -- pick an alarm that runs on a battery.

Setting Up Your Alarms

Four steps to real coverage



Right type, every level, outside the bedrooms, tested -- that's full coverage.

Where CO Alarms Go

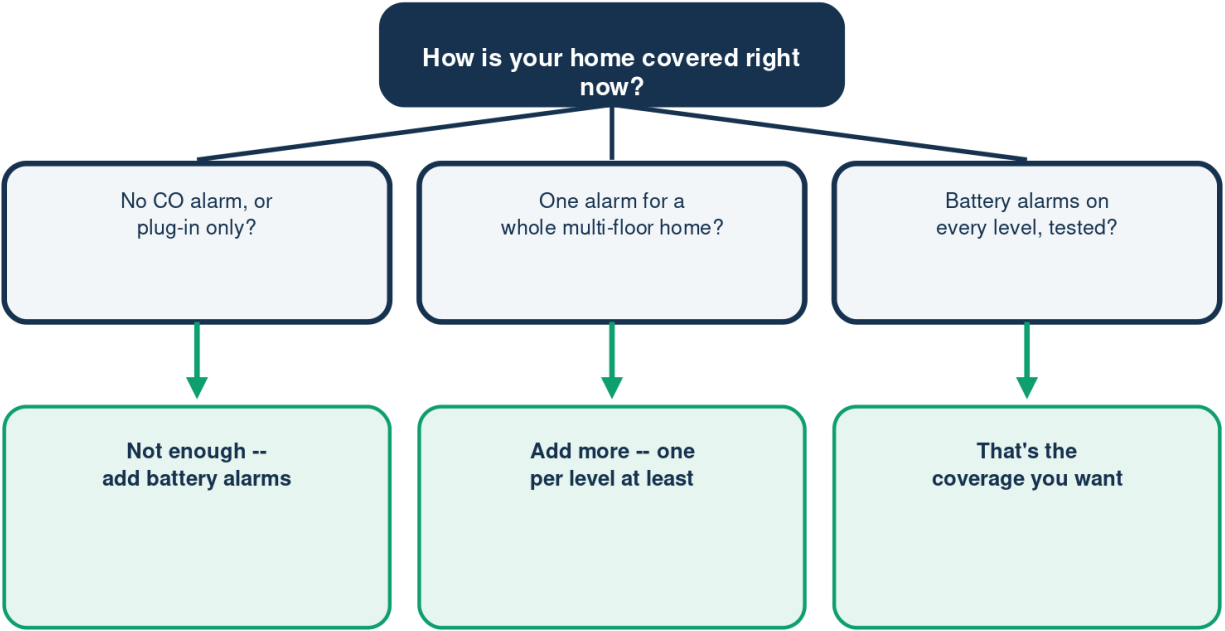
Full coverage leaves no floor and no sleeper out

	Put one here?	Why
On every level	Yes	No floor missed
Outside bedrooms	Yes	Wakes you asleep
In the basement	Yes	Furnaces run there
Near attached garage	Yes	CO can drift in

Follow the maker's instructions for exact height and spacing in each spot.

Is Your Alarm Coverage Enough?

A quick, honest check of your home



An alarm you never test is just decoration -- press the button monthly.

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



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A Note From Bill

A quick note from Bill.

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— *Bill*



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