

DRAFT

nest[®]

Nest Protect Wired 120V ~ 60Hz
Detects smoke and carbon monoxide (CO)

User's Guide

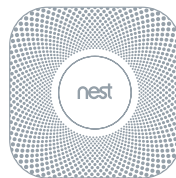
Please read carefully and save this user's guide in a safe place.

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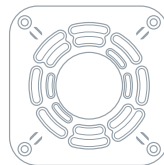
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Meet your Nest Protect

Inside the box you'll find:



Nest Protect



Backplate



Four mounting screws



Three wire nuts



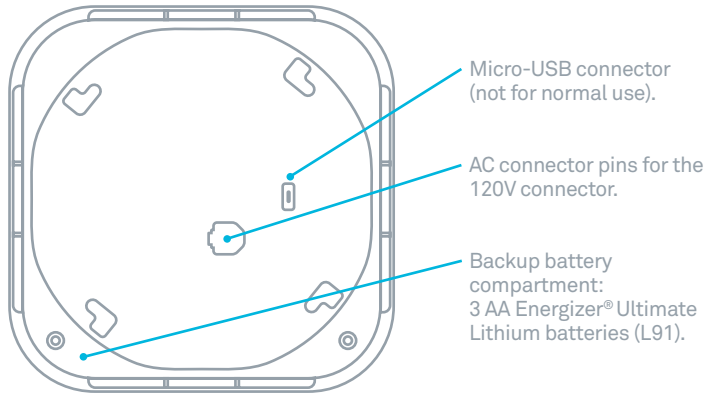
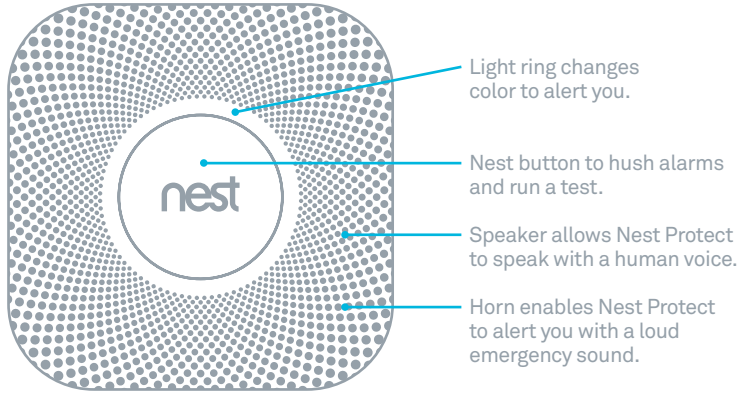
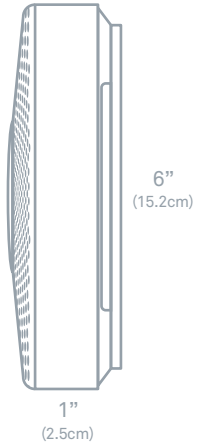
120V connector

Nest Protect is designed to detect smoke and carbon monoxide in a residential environment. Its eight sensors work together to understand what's happening in your home. Its photoelectric sensor detects slow, smoldering fires. Nest Protect can be used as a single station or multiple station alarm.

This guide covers the installation of Nest Protect Wired - Model number O5C.

Requirements

Wi-Fi, iOS or Android smartphone or tablet, and a free Nest account are required for wireless interconnect, room names, mobile notifications and software updates. After all the Nest Protects in your home have been connected with one another, they can communicate with each other without Wi-Fi.



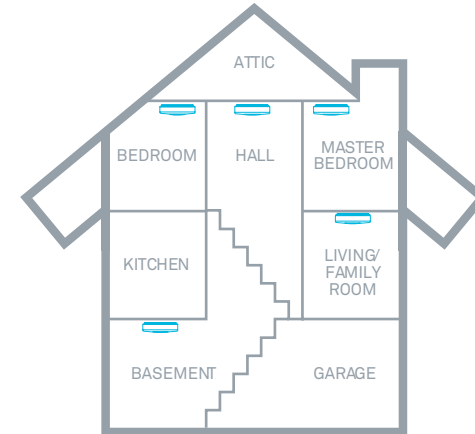
Location in your home.

The National Fire Protection Association recommends installing a smoke alarm in the following areas:

- On every floor, including finished attics and basements.
- Inside and outside every sleeping area.
- At the top of the first-to-second floor stairway and on the basement ceiling near the entry of the stairs.
- In homes with more than 1,000 square feet on one level, additional alarms may be required.

If you'd like, you can install Nest Protect closer to cooking appliances than conventional smoke alarms, but we recommend it be at least 5 feet (1.5 meters) away, preferably 10 feet (3 meters) from cooktops or cooking appliances.

Nest Protect should NOT be installed in unfinished attics or garages.



Placement on the ceiling or wall.

Installing on the ceiling is recommended. Mark where the screws will go using the base as a guide. Make sure you're at least 4 inches (10 cm) away from the wall.

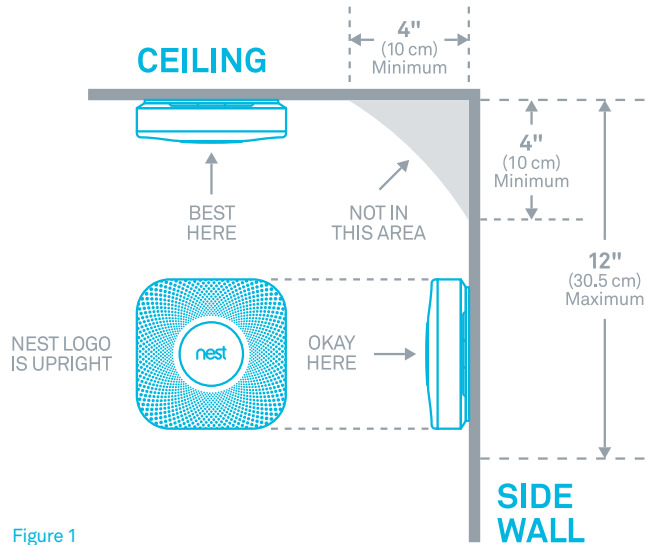


Figure 1

Placement on a sloped ceiling.

If you have a sloped, peaked or cathedral ceiling, Nest Protect should be 4 inches to 3 feet (10cm-1m) from the highest point.

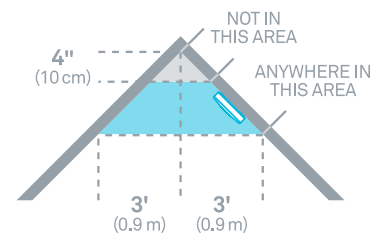


Figure 2

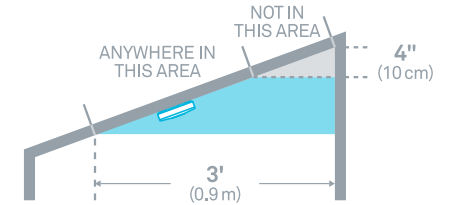


Figure 3

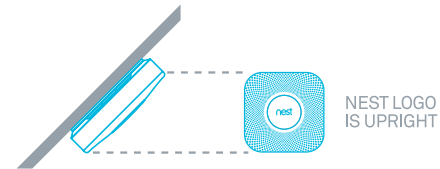


Figure 4

SETUP AND INSTALLATION

(Professional installation recommended)

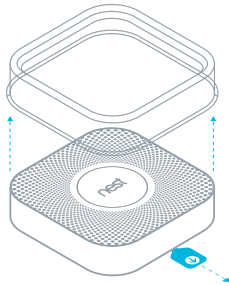
The installation of a smoke/CO alarm should be made by a qualified technician, and all wiring used to install this alarm should be made in accordance with articles 210, and 300.3B of the National Electrical Code ANSI/NFPA 70, NFPA 72, and/or applicable codes in your local jurisdiction.

For a complete set of instructions and warnings, refer page 22.

Tip: Lay everything out on a table for an easy installation.

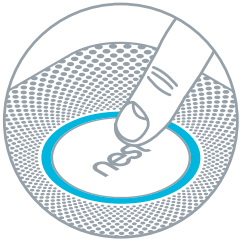
1. Wake it up

Remove the dust cover and pull out the battery tab to wake up your Nest Protect.



2. Press the Nest button

Nest Protect will glow blue when it's awake.



3. Get the Nest Mobile app

You'll use the Nest Mobile app to get Nest Protect connected to your Wi-Fi, to the Internet, and to additional Nest Protects in your home.



4. Set up Nest Protect

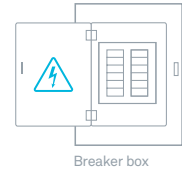
The video at nest.com/protect-setup shows how.

The app will guide you through making a free Nest account, pairing your Nest Protect securely, and telling Nest Protect which room it's in.



5. Turn off power

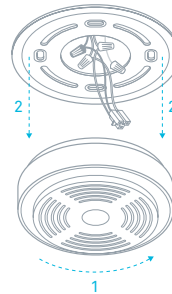
Protect yourself and avoid blowing a fuse. Switch off the correct circuit breaker or remove the fuse from the fuse box.



! WARNING
ELECTRICAL SHOCK HAZARD
Failure to turn off the power may result in serious electrical shock, injury and death.

6. Remove your old smoke alarm

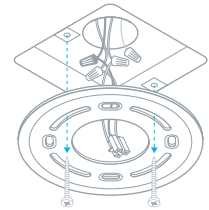
Make sure the green LED on the old alarm is off then pull your old smoke alarm off its base, and disconnect its power wires.



Your old smoke alarm might make a really loud noise when you disconnect it.

7. Remove the old base

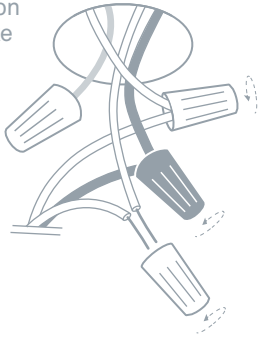
Unscrew the base plate from the electrical box. Save the screws for later.



8. Prepare the wires

Unscrew the wire nuts to detach the electrical connection from your old smoke alarm.

Make sure the exposed wires coming out of the ceiling are clean and straight.

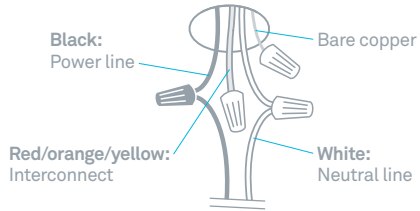


3/8"

The exposed wire should be straight.

9. Attach the 120V connector

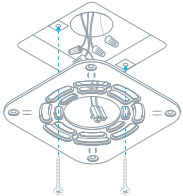
Just match the wires - white to white and black to black. Press the wires together, cap them with a wire nut and twist clockwise. Tighten until it is secured. Nest Protect interconnects wirelessly. There is no need for the red/orange/yellow wire. Cap it with a wire nut.



10. Install backplate

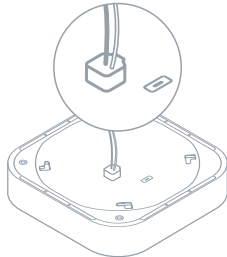
Screw the backplate to the wall or ceiling using the included screws. You can use two or four screws in any open slot on the backplate. Make sure the backplate is squared-up with the wall.

Refer to the diagrams on pages 6 and 7 for proper placement of your Nest Protect.



11. Connect power

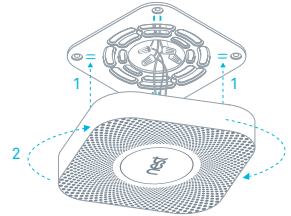
Plug the 120V connector into the back of your Nest Protect.



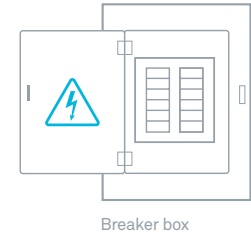
12. Mount your Nest Protect

First, tuck any excess wiring into the electrical box and line up Nest Protect with the backplate.

Second, give it a slight twist clockwise. It'll **CLICK** into place.

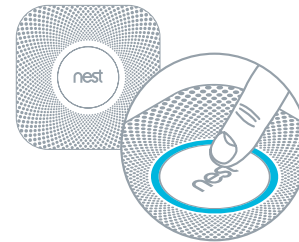


13. Switch power back on or replace the fuse



14. Press to test

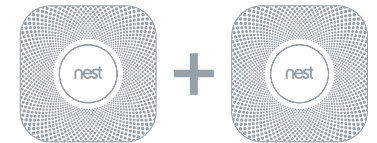
Press the Nest button. Your Nest Protect will run a test and tell you when it's done.



15. Have more smoke alarms?

Repeat steps 1-14 to install more Nest Protects. The Nest app will help you connect them to Wi-Fi and add them to your Nest Account.







Test that all your Nest Protects are wirelessly connected by pushing the Nest button twice on one Nest Protect. If they're connected, every Nest Protect in the house will speak up. Walk to each one to make sure you hear them talking.









OPERATING INSTRUCTIONS

When Nest Protect smoke and carbon monoxide (CO) alarm has something to say, it will speak to you in words and colors instead of just beeping. It has two kinds of voice alerts: Heads-Up and emergency alarms.

- Nest Protect can see smoke or carbon monoxide levels rising. So before it turns on an emergency alarm, Nest Protect gives you a friendly spoken Heads-Up to warn you in advance. It pulses yellow and speaks to you, telling you what and where the danger is.
- When smoke or carbon monoxide reach dangerous levels, Nest Protect tells you where the emergency is and pulses red, in addition to making a loud alarm sound. This is an emergency alarm.

	WHAT YOU HEAR	WHAT YOU SEE ON NEST PROTECT	WHAT IT MEANS	WHAT TO DO
SETUP	"READY. PRESS TO TEST"	 BLUE pulses	To setup or run a manual test	
		 GREEN light above the Nest logo	AC power is connected	
ALERTS	"HEADS-UP.THERE'S SMOKE IN THE (ROOM NAME).THE ALARM MAY SOUND"	 YELLOW pulses	Smoke levels are rising	Stand under Nest Protect and wave your arm to hush the alert. Then put out the source of the smoke
		 YELLOW pulses	Carbon monoxide levels are rising. This Heads-Up will occur if carbon monoxide levels stay at 70ppm for 60-240 minutes	Stand under Nest Protect and wave your arm to hush the alarm. Open a window or door to get fresh air, then find the CO leak and stop it
	(ALARM SOUND) "EMERGENCY.THERE'S SMOKE IN (ROOM NAME)"	 RED pulses	The smoke in the room has now reached emergency levels	Get out of the house immediately
		 RED pulses	The carbon monoxide in the room has now reached emergency levels	<ol style="list-style-type: none"> 1) Press the Nest button to silence 2) Call your fire dept. or 911 3) Move to fresh air 4) Do not reenter the premises until the emergency services tell you to. Refer to page 20 for complete instructions

	WHAT YOU HEAR	WHAT YOU SEE ON NEST PROTECT	WHAT IT MEANS	WHAT TO DO
SILENCING	"NEST PROTECT HAS BEEN HUSHED"	 YELLOW or RED pulses	You've hushed an alert. Nest Protect will now keep quiet, unless smoke or carbon monoxide reaches dangerous levels	Make sure you're safe and have put out the source of smoke or carbon monoxide
AT NIGHT		 You turn off the lights for the night, and the GREEN light pulses once	Nest Protect has tested its sensors and batteries to confirm they are working correctly	Sleep well
		 WHITE light	Pathlight lights your way at night as you pass under it (Wi-Fi required)	
TROUBLE SIGNALS	"THE NEST PROTECT BATTERY IS LOW IN THE (ROOM NAME). REPLACE THE BATTERY SOON"	 YELLOW pulses	The backup battery is low	Change the backup batteries of Nest Protect soon
	"THE NEST PROTECT BATTERY IS VERY LOW IN THE (ROOM NAME). REPLACE THE BATTERY NOW" SINGLE CHIRP EVERY 30 SECONDS	 YELLOW pulses	Nest Protect backup batteries have been depleted. It will chirp	Change the backup batteries of Nest Protect now
	"THE SENSOR FAILURE IN THE (ROOM NAME). REPLACE NEST PROTECT NOW"	 YELLOW pulses	Nest Protect has tested its sensors and there is a problem	Replace Nest Protect
	"NEST PROTECT HAS EXPIRED. REPLACE IT NOW." TWO CHIRPS EVERY 60 SECONDS		Nest Protect has expired and reached its end of life	Replace your Nest Protect

HEADS-UP AND EMERGENCY ALARMS

ALERTS

Nest Protect has two kinds of voice alerts: Heads-Up and emergency alarms. Both tell you what and where the danger is, but the spoken Heads-Up is designed to give you a friendly warning before conditions get dangerous.

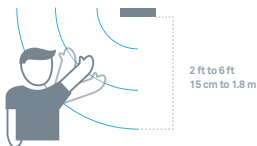
A Heads-Up can be silenced by standing underneath Nest Protect and waving at it or pushing the Nest button.

When smoke or carbon monoxide reach dangerous levels, Nest Protect tells you where the emergency is and pulses red, in addition to making a loud alarm sound. This is an emergency alarm.

The smoke alarm will take precedence when carbon monoxide is also present.

NEST WAVE™

You can silence Nest Protect by simply standing under it and waving at it.



Dense smoke or rising CO level will override Nest Wave and sound a continuous alarm.

▲ WARNING

Before waving at Nest Protect to silence it, identify the source of the danger and make sure you're safe.

Your hand should be 2 ft – 6 ft (15 cm – 1.8 m) away from Nest Protect when you wave. If your hand is within this range, Nest Protect will tell you that it is ready to be hushed. Children or pets are not tall enough to accidentally trigger the Nest Wave.

You can also push the Nest button to quiet Nest Protect.

WHICH ALERTS CAN BE HUSHED

- Heads-Up alerts can be hushed by using Nest Wave or the Nest button.
- Emergency alarms cannot be hushed by using Nest Wave or the Nest button if the smoke or carbon monoxide levels reach emergency level. Because there are many different types of fires, you may experience an Emergency alarm without having first experience a Heads-Up alert. This means that dangerous levels of smoke or CO occur extremely quickly and Nest Protect had to sound the Emergency alarm.
- After the Nest Protects in your home are connected to each other, whenever there's a Heads-Up in one room, they'll all tell you what and where the danger is. So go to that room and wave at the Nest Protect there to hush every Nest Protect in the home. This will ensure that you will identify the source of the danger in that room.

WIRELESS INTERCONNECT

Nest Protects connect wirelessly to each other so that when one speaks, they all speak. That means when one Nest Protect raises any kind of alerts, every Nest Protect in the house will tell you in which room the smoke or CO is in. For example, if you're in the bedroom and the alarm goes off in the basement, the Nest Protect in the bedroom will speak up and relay that alarm so that you know where the danger is. To silence the alert, go to that room and wave at the Nest Protect there. That will hush every Nest Protect in the house.

Nest Protect's 120V connector does not have a red/orange/yellow wire for interconnect as it connects wirelessly. There's no need to connect any wire to the red/orange/yellow interconnect wire from the ceiling/wall.

Nest Protects can typically communicate with each other if they're 50 ft (15m) apart inside a home. Some features of a home may reduce their range, including the number of floors, number/size of rooms, furniture, type of building material, suspended ceilings, ductwork, large metallic appliances and metal studs. This kind of interference can be overcome by adding more Nest Protects that can route wireless signals around obstructions.

Nest Protect - Battery (model number 05A) and Nest Protect - Wired 120V (model number 05C) are compatible and can be interconnected wirelessly.

▲ WARNING

- Nest Protect is not compatible with smoke/CO alarms from other manufacturers. Nest Protect wireless interconnect will not work with other products from other brands. We recommend using only Nest Protect alarms.
- The range and proper operation of any wireless device will vary depending on its surroundings.
- Nest Protect alarms are not to be used outdoors or to transmit between buildings. The alarms will not communicate properly in those conditions.
- Metal objects and metallic wallpaper may interfere with signals from wireless alarms. Test your Nest Protects with metal doors opened and closed.

PATHLIGHT

Usually Nest Protect has its light turned off, but it will light your way when it's dark as you walk underneath it. You can enable Pathlight from the Nest Mobile app.

TESTING NEST PROTECT

SELF-MONITORING

Nest Protect continuously tests itself to ensure that everything is working fine, so you don't have to wonder if it is working or not. Nest Protect will check its battery and sensors and will let you know if it has a message for you.

When you turn out the lights for the night, Nest Protect will glow green for a moment - that means everything is working. If it glows yellow, this means Nest Protect has detected something wrong that needs your attention. Just wave at it or push the Nest button to hear its warning: either the batteries are low, Wi-Fi has been down or there is an issue with its sensors.

TEST NEST PROTECT MANUALLY

The Nest button has two purposes. It hushes Heads-Up and emergency alarms and allows you to test Nest Protect's sensors and batteries.

It is required by regulation to perform a weekly manual testing.

After installation, test Nest Protect by pressing the Nest button twice. Before sounding the alarm, Nest Protect will give you a countdown so that you have time to move away from the alarm.

▲ WARNING

DO NOT stand close to the alarm when the horn is sounding. Exposure at close range may be harmful to your hearing. When testing, step away when horn starts sounding.

Test procedure

- Press the Nest button.
- Nest Protect will say: "Ready. Press to test".
- Press the Nest button again.
- Nest Protect will say: "This is only a test. The alarm may sound. The alarm is loud. The test starts in ten seconds. Ten. Nine. Eight. Seven. Six. Five. Four. Three. Two. One. I'm starting the test."
- You will see: Nest Protect will flash its lights in several colors.
- Once the Nest Protect test is finished in the room, Nest Protect will tell you everything's okay.

If they are interconnected, every Nest Protect will speak up in the house. Walk to each one to make sure you hear them.

▲ WARNING

- If the alarm ever fails to test correctly, have it replaced immediately! If the alarm is not working properly, it cannot alert you to a problem.
- DO NOT use a match, cigarette or any other makeshift fire to test the smoke alarm.
- To test the CO alarm, NEVER use vehicle exhaust! Exhaust may cause permanent damage and voids your warranty.
- NEVER use an open flame of any kind to test this alarm. You might accidentally damage or set fire to the unit or to your home. The built-in self test accurately tests the unit's operation as required by Underwriters Laboratories, Inc. (UL).

GENERAL MAINTENANCE

CLEANING YOUR NEST PROTECT

Use a damp cloth to clean your Nest Protect. Don't clean it with detergents or solvents (like Windex®) and do not spray air fresheners, hair spray or other aerosols near it. These chemicals will damage your smoke alarm and make it non-operational. Do not disassemble your Nest Protect or clean inside. If a continuous alarm occurs, return for servicing. Do not get water inside the alarm. Do not paint over Nest Protect, as paint will seal the vents and affect its ability to detect smoke and CO.

RESETTING YOUR NEST PROTECT

If you're selling your home and leaving your Nest Protect behind, you can reset it to erase all your settings. Resetting will reset the wireless interconnection between Nest Protects.

1. Turn off power.
 2. Remove Nest Protect from the wall or ceiling by twisting it counter-clockwise. Unplug the 120V connector from Nest Protect.
 3. Climb down from your step-stool or ladder. You'll need both hands to perform the reset.
 4. Using a pen or paper clip, push and hold the ERASE ALL SETTINGS button on the back of Nest Protect.
 5. While you're holding the ERASE ALL SETTINGS button, push and hold the Nest button on the front of Nest Protect.
 6. Now you can release the ERASE ALL SETTINGS button and the Nest button.
 7. Nest Protect will tell you it's erasing all settings. After a few seconds it will restart.
 8. Place Nest Protect back on the wall/ceiling.
 9. Turn on power.
- After resetting Nest Protect, it will still detect smoke and carbon monoxide.

BACKUP BATTERY

In case of power outage, Nest Protect will use its backup battery. If Nest Protect backup battery is low, Nest Protect will light up yellow and once you wave at it, it will say "Nest Protect Battery is low. Replace it soon."

3 AA Energizer® Ultimate Lithium batteries (L91)

These backup batteries can be purchased at your local retailer or visit [nest.com](https://www.nest.com)

▲ WARNING

Use only batteries specified by Nest. Use of a different battery model will have a detrimental effect on the smoke alarm operation.

Never disconnect a wired alarm to stop an unwanted alarm (caused by cooking smoke, etc.). Removing power disables the alarm so it cannot sense smoke, and removes your protection. Instead open a window or fan the smoke away from the unit.

The backup battery cannot work until you install the battery in the correct position (Match "+" to "+" and "-" to "-").

Use only the replacement batteries listed above. The alarm may not operate properly with other batteries. Never use rechargeable batteries since they may not provide a constant charge.

REPLACING THE BACKUP BATTERIES

1. Remove your Nest Protect from its backplate.
2. Using a Phillips-head screwdriver, unscrew the two screws from the battery door on the back of Nest Protect.

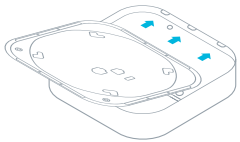


3. Replace the batteries. Make sure to use Energizer Ultimate Lithium batteries and install them in the right order. If you install them out of order, you may not be able to close the battery compartment.

1. First battery
2. Second battery
3. Third battery. This battery will push the bracket into place.



4. Reattach the battery door by sliding it into the tabs located on the opposite side from the batteries, replacing the screws and then reattaching Nest Protect back to its base.



5. Press the Nest button to run a test.

SERVICING

- Step 1: Before sending Nest Protect for service, visit [nest.com/support](https://www.nest.com/support)
- Step 2: If your Nest Protect needs servicing, first contact our support team to get a return number.
- Step 3: Send it to

Nest Labs
(YOUR RETURN NUMBER)
4 East Stow Road
Marlton, NJ 08053 USA

RECYCLING AND DISPOSAL

Visit www.nest.com/recycle

ALARM EXPIRATION

Alarms have a limited life. You will need to replace your Nest Protect no later than 7 years after the date of manufacture with a brand new Nest Protect. Check the date of replacement written on the back of Nest Protect.

⚠ WARNING

You'll no longer be protected from smoke or CO if you don't replace your Nest Protect.

About two weeks before it expires, Nest Protect will light up with a rotating yellow light. Wave at Nest Protect and it will say, "Nest Protect has expired. Replace it now." Buy a new alarm and recycle the expired one. Make sure you test your new Nest Protect once it's installed.

SAFETY

ALARM LIMITATIONS

LIMITATIONS OF SMOKE ALARMS

Alarms reduce deaths resulting from home fires worldwide. However smoke alarms can only work if they are properly located, installed and maintained, and if smoke reaches the alarms.

- Smoke alarms may not waken all individuals. Make sure you create an escape plan and you practice fire drills with all members of the family.
- Smoke alarms cannot work without power. If they are powered by batteries, the smoke alarms cannot work if the batteries are missing, dead or disconnected. If they are wired, the smoke alarms cannot work during a long power outage and once the back up battery is dead. Nest Protect will warn you in advance when batteries are running low so that you can replace them.
- Smoke will not be able to reach smoke sensor while the dust cover is in place. The dust cover must be removed.
- Smoke alarms cannot detect fires if the smoke does not reach the alarms. For example, if a door is closed, smoke may not reach the smoke alarm. This is why you should have a smoke alarm in each bedroom and in the hallways as bedroom doors may be closed at night.
- Smoke alarms may not be heard. Although the smoke alarm comes with a loud horn of 85 decibels, it may not be heard if: 1) people have consumed alcohol or drugs, 2) the alarm is drowned by noise from stereo, TV, traffic, air conditioner or other appliances, 3) residents are hearing impaired or have high frequency hearing loss associated with aging. Special smoke alarms should be installed for those who are hearing impaired.

- This alarm is not intended to alert hearing impaired residents. Alarms specifically designed for the hearing impaired, which feature devices like flashing strobe lights or low frequency devices are available to alert the hearing impaired in case of fire.
- This smoke alarm alone is not a suitable substitute for complete fire detection systems in places housing many people—like apartment buildings, condominiums, hotels, motels, dormitories, hospitals, long-term health care facilities, nursing homes, day care facilities, or group homes of any kind—even if they were once single-family homes. It is not a suitable substitute for complete fire detection systems in warehouses, industrial facilities, commercial buildings, and special-purpose non-residential buildings which require special fire detection and alarm systems. Depending on the building codes in your area, this smoke alarm may be used to provide additional protection in these facilities.

LIMITATIONS OF CO ALARMS

- NEVER ignore your carbon monoxide alarm if it alarms. Refer to “What to do in case of a carbon monoxide alarm” for more information. Failure to do so can result in injury or death.
- This CO alarm is designed for use inside a single-family home or apartment. It is not meant to be used in common lobbies, hallways, or basements of multi-family buildings unless working CO alarms are also installed in each family living unit. CO Alarms in common areas may not be heard from inside individual family living units.
- This CO alarm alone is not a suitable substitute for complete detection systems in places which house many people, like hotels or dormitories, unless a CO alarm is also placed in each unit.
- DO NOT use this CO alarm in warehouses, industrial or commercial buildings, special-purpose non-residential buildings, or air planes. This CO alarm is specifically designed for residential use, and may not provide adequate protection in non-residential applications.
- Some individuals are more sensitive to CO than others, including people with cardiac or respiratory problems, infants, unborn babies, pregnant mothers, or elderly people can be more quickly and severely affected by CO. Members of sensitive populations should consult their doctors for advice on taking additional precautions.
- The silence feature is for your convenience only and will not correct a CO problem. Always check your home for a potential problem after any alarm. Failure to do so can result in injury or death.

INSTALLATION CODE

THIS EQUIPMENT SHOULD BE INSTALLED IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION’S STANDARD 72 (National Fire Protection Association, Battery-march Park, Quincy, MA 02269).

IMPORTANT! Specific requirements for Smoke Alarm installation vary from state to state and from region to region. Check with your local Fire Department for current requirements in your area.

▲ WARNING

This product is intended for use in ordinary indoor locations of family living units. It is not designed to measure compliance with Occupational Safety and Health Administration (OSHA) commercial or industrial standards.

WHERE TO INSTALL YOUR SMOKE DETECTORS

“For your information, the National Fire Alarm and Signaling Code, NFPA 72, reads as follows: “29.5.1 *Required Detection.”

- “ *Where required by applicable laws, codes, or standards for a specific type of occupancy, approved single- and multiple-station smoke alarms shall be installed as follows:
- (1) *In all sleeping rooms and guest rooms
 - (2) *Outside of each separate dwelling unit sleeping area, within 6.4 m (21 ft) of any door to a sleeping room, the distance measured along a path of travel
 - (3) On every level of a dwelling unit, including basements

- (4) On every level of a residential board and care occupancy (small facility), including basements and excluding crawl spaces and unfinished attics
- (5) *In the living area(s) of a guest suite
- (6) In the living area(s) of a residential board and care occupancy”

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SMOKE DETECTION Are more smoke alarms desirable?

The required number of smoke alarms might not provide reliable early warning protection for those areas separated by a door from the areas protected by the required smoke alarms. For this reason, the use of additional smoke alarms for those areas for increased protection is recommended. The additional areas include the dining room, and hallways not protected by the required smoke alarms. The installation of smoke alarms in kitchens, attics (finished or unfinished), or garages is not normally recommended, because these locations occasionally experience conditions that can result in improper operation. As Nest Protect is also a Carbon Monoxide alarm, it is not recommended to install it in a furnace room or a utility room if it contains a water heater or a furnace. It should be 15-20 feet from these appliances to avoid transient conditions and/or perceived nuisance alarms.

AC INSTALLATION WARNINGS

ELECTRICAL SHOCK HAZARD

- Turn off power to the area where you will install this unit at the circuit breaker or fuse box before beginning installation. Failure to turn off the power before installation may result in serious electrical shock, injury or death.
- Do not restore power until all alarms are completely installed. Restoring power before installation is complete may result in serious electrical shock, injury or death.
- Turn off the power to the area where the alarm is installed before removing it from the mounting bracket. Failure to turn off the power first may result in serious electrical shock, injury or death.
- If any unit in the series does not alarm, TURN OFF POWER and recheck connections. If it does not alarm when you restore power, replace it immediately.
- Attempting to disconnect the power connector from the unit when the power is on may result in electrical shock, serious injury or death.
- Failure to meet any of the above requirements could damage the units and cause them to malfunction, removing your protection.
- Improper wiring of the power connector or the wiring leading to the power connector will cause damage to the alarm and may lead to a non-functioning alarm.
- This unit must be powered by a 24-hour, 120V AC pure sine wave, 60Hz circuit. Be sure the circuit cannot be turned off by a switch, dimmer, or ground fault circuit interrupter. Failure to connect this unit to a 24-hour circuit may prevent it from providing constant protection.

- The alarm cannot be operated from power derived from a square wave, modified square wave or modified sine wave, inverter. These types of inverters are sometimes used to supply power to the structure in off grid installations, such as solar or wind derived power sources. These power sources produce high peak voltages that will damage the alarm
- Never disconnect the power from an AC powered unit to stop an unwanted alarm. Doing so will disable the unit and remove your protection. In the case of a true unwanted alarm open a window or fan the smoke away from the unit. The alarm will reset automatically when it returns to normal operation.
- Improper wiring of the power connector or the wiring leading to the power connector will cause damage to the alarm and may lead to a non-functioning alarm. You must test to ensure proper installation.

WHERE NOT TO INSTALL YOUR SMOKE ALARMS

For best performance, AVOID installing a smoke alarm in these areas:

- **Where combustion particles are produced.** Burning material creates combustion particles which could cause your smoke alarm to go off unnecessarily. Areas to avoid include poorly ventilated kitchens, garages, boats, recreational vehicles, and furnace rooms. Keep a smoke alarm at least 20 feet (6 m) from the source of combustion particles (stove, furnace, water heater, space heater) if possible. In areas where a 20-foot (6 m) distance is not possible – in mobile, or smaller homes, for example – it is

recommended a smoke alarm to be placed as far from these fuel-burning sources as possible. The placement recommendations are intended to keep a smoke detector at a reasonable distance from a fuel-burning source, reducing “unwanted” alarms. Unwanted alarms can occur if a smoke alarm is placed directly next to a fuel-burning source. Ventilate these areas as much as possible.

- **In air streams near kitchens.** Air currents can draw cooking smoke into the sensor of a smoke alarm near the kitchen.
- **In very damp, humid or steamy areas, or directly near bathrooms with showers.** Keep a smoke alarm at least 10 feet (3 meters) away from showers, saunas, dishwashers, etc.
- **Where temperatures are regularly below 40°F (4°C) or above 100°F (38°C)** including unheated buildings, outdoor rooms, porches, or unfinished attics or basements.
- **In very dusty, dirty, or greasy areas.** Do not install a smoke alarm directly over the stove or range. Clean a laundry room unit frequently to keep it free of dust or lint.
- **Near fresh air vents, ceiling fans, or in very drafty areas.** Drafts can blow smoke away from a smoke alarm, preventing it from reaching the sensor.
- **In insect infested areas.** Insects can clog openings to the sensor and cause unwanted alarms.
- **Less than 12 inches (30.48 cm) away from fluorescent lights.** Electrical “noise” can interfere with the sensor.
- **In “dead air” spaces.** “Dead air” spaces may prevent smoke from reaching a smoke alarm.

WHERE NOT TO INSTALL YOUR CO ALARMS

- Keep carbon monoxide alarm at least 5 ft (1.5 m) away from any cooking appliance including stovetop, oven, microwave, etc.
- This alarm should not be installed in locations where the normal ambient temperature is below 4.4°C (40°F) or exceeds 37.8°C (100°F).

EXAMPLES OF WHEN YOUR ALARM MAY NOT BE EFFECTIVE

Your smoke alarm may not be effective in protecting against fire in certain cases:

- Smoking in bed
- Leaving children unsupervised
- Cleaning with flammable liquids, like gasoline.
- When someone's clothes have caught on fire.
- Fires where the smoke is prevented from reaching the alarm due to a closed door or other obstruction.
- Incendiary fires where the fire grows so rapidly that an occupant can't get out, even with alarms in proper locations.

CARBON MONOXIDE (CO) PRECAUTIONS

WHAT IS CARBON MONOXIDE?

Carbon Monoxide (CO) is an invisible, odorless, tasteless gas produced when fuels do not burn completely, or are exposed to heat (usually fire). These fuels include: wood, coal, charcoal, oil natural gas, gasoline, kerosene, and propane.

Common appliances are often sources of CO, such as oil or gas burning furnaces, gas ovens, wood-burning fireplaces, and charcoal grills. If they are not properly maintained, are improperly ventilated or malfunction, CO levels can rise quickly. CO is a real danger now that homes are more energy efficient. "Air-tight" homes with added insulation, sealed windows, and other weatherproofing can "trap" CO inside.

Electrical appliances typically do not produce CO.

The Nest Protect CO sensor meets the alarm response time requirements of the American National Standard ANSI/UL 2034. Standard alarm times are as follows:

- At 70 PPM, the unit must alarm within 60-240 minutes.
- At 150 PPM, the unit must alarm within 10-50 minutes.
- At 400PPM, the unit must alarm within 4-15 minutes.

▲ WARNING

This carbon monoxide alarm is designed to detect carbon monoxide from any source of combustion. It is NOT designed to detect any other gas.

▲ WARNING

The alarm only indicates the presence of carbon monoxide gas at the sensor. Carbon monoxide gas may be present in other areas.

Individuals with certain medical problems should consider using detection devices with lower COHb alarming capabilities and consider warning devices which provide audible and visual signals for carbon monoxide concentrations under 30 ppm.

SYMPTOMS OF CO POISONING

The following symptoms are related to CARBON MONOXIDE POISONING and are to be discussed with ALL members of the household:

- **Mild Exposure:** Slight headache, nausea, vomiting, fatigue (often described as 'Flu-like' symptoms).
- **Medium Exposure:** Severe throbbing headache, drowsiness, confusion, fast heart rate.
- **Extreme Exposure:** Unconsciousness, convulsions, cardiorespiratory failure, death.
- Many cases of reported CARBON MONOXIDE POISONING indicate that while victims are aware they are not well, they become so disoriented they are unable to save themselves by either exiting the building or calling for assistance. Young children and household pets are typically the first affected.

WHAT TO DO IN CASE OF A CARBON MONOXIDE ALARM

▲ WARNING

Actuation of your CO alarm indicates the presence of carbon monoxide (CO) which can KILL YOU.

If alarm signal sounds:

- 1) Press the Nest button;
- 2) Call your emergency services [fire dept. or 911];

PHONE NUMBER:

- 3) Immediately move to fresh air – outdoors or by an open door/window. Do a head count to check that all persons are accounted for. Do not reenter the premises nor move away from the open door/window until the emergency services responders have arrived, the premises have been aired out, and your alarm remains in its normal condition.
- 4) After following steps 1 – 3, if your alarm reactivates within a 24 hour period, repeat steps 1 – 3 and call a qualified appliance technician

PHONE NUMBER:

to investigate for sources of CO from fuel burning equipment and appliances, and inspect for proper operation of this equipment. If problems are identified during this inspection have the equipment serviced immediately. Note any combustion equipment not inspected by the technician and consult the manufacturers' instructions, or contact the manufacturers directly, for more information about CO safety and this equipment. Make sure that motor

vehicles are not, and have not been, operating in an attached garage or adjacent to the residence.

This information is available as a label provided in the box. Stick it in a spot where everyone can see it, like the refrigerator.

THE FOLLOWING CONDITIONS CAN RESULT IN TRANSIENT CO SITUATIONS

1. Excessive spillage or reverse venting of fuel burning appliances caused by:
 - I) Outdoor ambient conditions such as wind direction and/or velocity, including high gusts of wind; heavy air in the vent pipes (cold/hu mid air with extended periods between cycles).
 - II) Negative pressure differential resulting from the use of exhaust fans.
 - III) Simultaneous operation of several fuel burning appliances competing for limited internal air.
 - IV) Vent pipe connection vibrating loose from clothes dryers, furnaces, or water heaters.
 - V) Obstructions in or unconventional vent pipe designs which amplify the above situations.
2. Extended operation of unvented fuel burning devices (range, oven, fireplace, etc.)
3. Temperature inversions which can trap exhaust gases near the ground.
4. Car idling in an open or closed attached garage, or near a home.
5. NEVER bring a charcoal grill inside and ALWAYS operate a portable generator outside, a safe distance from the house, and well away from windows.

FIRE SAFETY PRECAUTIONS

CREATE AN ESCAPE PLAN TO PRACTICE

Be prepared when your smoke/CO alarm sounds its alarm. Develop a family escape plan, discuss it with all household members, and practice it regularly.

- Make sure everyone is familiar with the sound of your smoke/CO alarm and explain what the sound means.
- Determine TWO exits from each room and have an escape route to the outside from each exit.
- Teach all the members in your household to check doors for heat with the back of your hand before opening them, and to use the alternate exit if the door is hot. Make sure they do not open the door if it is hot.
- Teach household members to crawl along the floor to avoid dangerous smoke, fumes and gases.
- Determine a safe meeting place for all household members to regroup at outside the building.

PRACTICE FIRE SAFETY

Practice your escape plan at least twice a year, making sure that everyone is involved – from kids to grandparents. Practice the escape plan with children, including holding one at night when they are sleeping. If children or others do not wake up to the sound of the smoke alarm, or if there are infants or family members with mobility limitations, make sure that someone is assigned to help them for the fire drill and in the event of an emergency.

Current studies have shown smoke alarms may not awaken all sleeping individuals, and that it is the responsibility of individuals in the household that are capable of assisting others to provide assistance to those who may not be awakened by the alarm sound, or to those who may be incapable of safely evacuating the area unassisted.

WHAT TO DO IN CASE OF FIRE

- Get out now.
- Don't panic; stay calm.
- Operate your safety plan as previously planned.
- Alert small children in the home and those who may need extra assistance.
- Leave the building as quickly as possible. Touch doors with the back of your hand and make sure they are not hot before opening them. Use an alternate exit, if necessary. In case of smoke, crawl along the floor, and DO NOT stop to collect anything. Close the doors behind you.
- Meet at a pre-arranged meeting place outside the building.
- Once outside, do a head count, and call the fire department.
- DO NOT reenter the house, unless a fire official says it's safe to reenter.

CALIFORNIA STATE FIRE MARSHAL

As stated by the California State Fire Marshal "Early warning fire detection is best achieved by the installation of fire detection equipment in all rooms and areas of the household as follows: A smoke alarm installed in each separate sleeping area (in the vicinity of, but outside of the bedrooms), and heat or smoke detectors in the living rooms, dining rooms, bedrooms, kitchens, hallways, attics, furnace rooms, closets, utility and storage rooms, basements and attached garages".

FEDERAL COMMUNICATIONS COMMISSION (FCC) COMPLIANCE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Change or modifications that are not expressly approved by the manufacturer could void the user's authority to operate the equipment.

RF EXPOSURE INFORMATION:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm during normal operation.

MOBILE NOTIFICATIONS

▲ WARNING

Nest Protect smartphone and tablet notifications require a functional Wi-Fi connection. They're only as reliable as your home's Wi-Fi network and aren't a substitute for a third party emergency monitoring service.

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Installation Guide

Nest Protect Wired 120V
Detects smoke, carbon monoxide and heat.

