

Nest Learning Thermostat



Installation Guide

In most homes, installing a Nest Learning Thermostat is an easy DIY project that takes 60 minutes or less. The step-by-step instructions in the Nest app make it easy to install and wire your thermostat, so use it as your main guide. Or refer to this sheet if you need a little extra help.

Don't want to install it yourself? Contact our installation partner OnTech at 1-833-ONTECH2 to schedule an appointment. They can check your system's compatibility and install your thermostat. After they've installed your Nest thermostat, they can give you a demo and answer any questions you have.

Preparing for installation

If you'd like to install your Nest Learning Thermostat yourself, everything you need is included in the box:

- Thermostat display
- Base
- Optional trim kit
- Mounting screws and labels
- Screwdriver
- Welcome guide

If you'd like to pre-drill holes, use a 3/32" drill bit, or if you're drilling into hard materials, such as, stone, brick, concrete, or marble, use a masonry drill bit and drill.

Watch the installation video

g.co/nest/ltiv or scan the QR code



Open the camera app on your phone and scan the code to view the installation video.

Getting started

The Nest app will guide you through thermostat installation, but here are some more detailed instructions to walk you through everything you need to do to install your Nest Learning Thermostat.

1. Switch off power to your system

(You may have already completed this step.)

It's important to protect your thermostat and your system. Turn off the power to your system and thermostat before exposing any wiring.

Your HVAC system can have multiple breakers, so make sure to turn them all off before moving on. Check that the power to your system is off by changing the temperature on your thermostat by at least 5 degrees.

- If it's winter, turn up the temperature to turn on heating.
- If it's summer and you have system cooling, turn down the temperature to activate your central air conditioning.
- Wait at least 5 minutes to see if your system turns on (you'll need to wait because many systems have a built-in delay).

You can listen for your system to turn on, or put your hand near a vent to feel if there's warm or cool air coming through.

2. Install the Nest app

- It's essential to have the latest version of the Nest app to complete setup. Download it from the App Store or from Google Play. If you don't already have an account, the Nest app will ask you to create one.
- Tap **Settings** on the Nest app home screen.
- Scroll down and select **Add product** to start the setup instructions.
- To tell the Nest app which thermostat you're installing, scan the QR code on the back of the display. Or choose "**continue without scanning**" and select your thermostat model.
- The app will show you how to install your thermostat. It will ask you some questions about your thermostat wires. Answer them as accurately as possible.

NOTE: You'll get a custom wiring diagram for your system after you've installed the thermostat base.

3. Remove your thermostat's cover and take a photo

Once you're sure the power is off and you've successfully signed into your account, remove your current thermostat's cover.

Some thermostat covers pop off, while others need to be unscrewed. If you haven't already done so, now's a good time to take a photo of your current wiring.

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4. Get a wiring diagram from the app

To get a custom wiring diagram for installation, simply follow the Nest app's thermostat installation instructions.

Important: Each system's wiring is different. You must get your own custom wiring diagram with our Compatibility Checker.

Note: If your existing thermostat is labeled 120V or 240V, has stranded wires, or has thick wires with wire nuts, your system is high voltage and not compatible. Learn more at g.co/nest/iwire.

5. Remove jumper wires and save them

Jumper wires are short wires between two connectors. Your Nest thermostat doesn't need them.

Keep your current thermostat, the photo of your wiring, and any jumper wires your current thermostat uses in a safe place.

That way if you ever decide to move and you want to take your Nest thermostat with you, you'll have everything you need to reinstall your current thermostat.

6. Label the wires

Peel off the labels from the quick start card that came with your Nest thermostat and attach them to the matching wires on your thermostat. You can also use the white labels for additional wires if needed.

Troubleshooting wire labels

If you have labels like W, Y, or R, use the wiring diagram that you created earlier to choose which labels to attach to these wires.

If you removed your old thermostat without labeling your wires first, check the photo you took in step 3. If you don't have a photo, you can check your system to try to determine your wires, or contact our installation partner OnTech at 1-833-ONTECH2.

7. Disconnect the wires and remove the base

Important: It's important that the power to your system is off to avoid blowing a fuse in your equipment. If you blow a fuse, your Nest thermostat won't turn on, or may display a power error after installation.

After removing the base, we recommend gently wrapping the wires around a pen or pencil to ensure they don't fall back into the hole in the wall.

Now is a good time to patch and paint over any holes in your wall. You can also use the included trim plate to help hide scratches or screw holes on your wall.

8. Mark screws and attach the thermostat base

If you're going to use the optional trim plate, place it on the wall before installing the thermostat base.

Pull the wires through the center of the base, then attach it to the wall with the screws.

Important: Use a screwdriver, not a power drill, to drive in screws for the thermostat base. Drills can easily over-tighten the screws and crack the base and damage its electronics.

Use the built-in level on the thermostat base to make sure the Nest thermostat is level.

The Nest screws are self tapping, so there's no need to drill into soft materials. If you need to drill into harder things like wood, use a 3/32" or 2.5mm drill bit.

9. Connect the wires

Connect the wires to your Nest thermostat's base by following the wiring diagram that you got from the Nest app.

Press down on the connector button and insert the wire as far as it will go in. Then release the button.

The connector button should stay down. This confirms that the wire is properly seated.

Terminals with wires should stay pressed down.

If the button doesn't stay down, take the wire out, straighten it, and put it back in as far as it will go. You may need to strip the end of your wire to make sure enough copper is exposed.

Important: Do not put more than one wire in each connector on the thermostat base.

Important: Do not connect any "spare" wires to your Nest thermostat that were not connected to your old thermostat.

Only use the wires on your Nest thermostat wiring diagram.

After all the wires are securely connected, push them down toward the wall to make sure they're flush with the base. If your wires stick out too far they can keep your thermostat display from connecting properly. If your wires stick out from the wall, press them down.

10. Attach the Nest thermostat display

Line up the pin connector on the back of the display and push it onto the base until it clicks into place.

Tip: If you don't hear the display click, use your thumb to push the wires further into the wall. This will make sure the wires aren't stopping the display from connecting to the base.

11. Switch power back on

After turning the power back on, your Nest thermostat should power on automatically. If it doesn't turn on, you might see a blinking red light to indicate that the battery is charging.

Wait for the battery to charge. If your thermostat won't turn on, or for more information on troubleshooting, visit g.co/nest/tto

12. Set up your Nest thermostat

After it's finished starting up, your Nest thermostat will guide you through setup.

Then you'll tell your thermostat a few basics about your home and your heating and cooling system so it can help keep you comfortable and help save energy.

You can also connect your thermostat to Wi-Fi so you can control it with the Nest app, and download important thermostat software updates.

That's it. You're all set.

With your Nest thermostat installed, you're ready to take control of your comfort and savings, home or away.¹ To learn more about controlling your Nest thermostat and improving your energy savings, visit support.google.com/googlenest.

¹ Remote control and mobile notifications require working internet and Wi-Fi.