Installing your CoolBot to a Mini-Split A/C

COMPATIBLE MINI SPLIT BRANDS:
LG, Mitsubishi, Fujitsu.
*Samsung and Daikin (only for uses over 45°F / 7°C).

INCOMPATIBLE BRANDS:
Panasonic, Fedders, Midea, Toshiba, Electrolux, or any other brand built with their compressors.

OTHER BRANDS:
We don’t have enough feedback from other brands to fully recommend them. However, customers in other countries and the USA have tried other brands “at their own risk” and have succeeded. Because our feedback on those brands is so limited, we would be happy to offer support during the installation but we cannot guarantee they will work. You will be taking a chance on any other brand that is not on the compatible list (and that is not on the incompatible list). As a general rule the simpler the A/C the better.

Please refer to our A/C selection chart at: https://www.storeitcold.com/ac-selection/ to check the compatibility status of your brand.

IMPORTANT!

Before installing your CoolBot to your Mini-Split, run your A/C unit on the COOL Mode with the Fan set on High Speed and set to the lowest temperature setting. It should be very easy for the A/C to achieve and maintain the lowest set temperature. Allow the A/C to run for at least 24hrs to make sure that it is installed correctly, that it is performing well, and that it has no errors on the digital display when running under these conditions.
COOLBOT PRO users:

- **Using Wi-Fi**: Before you install the CoolBot Pro to your A/C please follow the instructions on page 1-2 of the CoolBot Pro Quick Set Up Guide available at:  
  https://www.storeitcold.com/support-library/
- **Not using Wi-Fi**: Start with Step 1 of this Guide.

COOLBOT (Red & Blue Display) users:

Start with Step 1 of this Guide

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**ATTENTION ALL USERS!**

We understand how important this investment is for you, and we understand the value behind the product that you will store in your cooler. We highly recommend that you read your A/C and CoolBot installation manual, follow the setup guide step by step, and familiarize yourself with the use and troubleshooting of the CoolBot as well as your A/C unit.

After installing your CoolBot, we strongly advise you to run your cooler for a test period (at least 24 hours) and place some buckets of water or non-perishables to add mass. This is to assure the system is performing correctly and to your needs.
CONNECTING THE COOLBOT TO A MINI- SPLIT A/C

STEP 1

- Plug the cables into the corresponding labeled ports at the bottom of the CoolBot. If you have a CoolBot Pro DO NOT plug the Data Cable yet.
- Plug the cables in and out a couple times as sometimes they don’t always “seat” all the way the first time.
- If you are replacing an existing CoolBot with removable Temperature Sensors and Heater Cables, you can leave them in place and connect them to the new CoolBot. The CoolBot Pro & CoolBot (Blue) work with both black and blue Temperature Sensor Cables.
- The Room Sensor should hang free in the room.

STEP 2

- Mount the CoolBot on the wall next to the control panel side of the A/C to make it easier to connect the wires.
- CAUTION! Make sure the wall fasteners are smaller in diameter than the hole in the CoolBot tabs or you will break the plastic tabs.
STEP 3

- Cut power to your A/C unit from the power source.
- Remove the entire housing of the Mini Split indoor unit to expose the coil and the controls. Follow the A/C manufacturer’s installation instruction manual for directions on how to do this.

STEP 4

- Find and free your A/C’s Main Temperature Sensor.
- **DO NOT confuse the secondary sensors with your MAIN Temperature sensor.** Secondary sensors are **ALWAYS** touching the copper pipes. They will usually have a copper (or brass) tip at the end. *The main temperature sensor of your A/C will NOT be attached or touching any of the refrigeration lines (cooling tubes).*

- On Mini-Splits the main sensor is often on the control panel side (1) and it’s a bit short. It can be under a plastic grill in front of the fins (4), or it can also be hidden in places like inside the plastic casing away from the fins (3), or not even a wire at all (Daikin units) but just a “nub” (resistance) built into the board (2).

  *(see pictures on next page for examples)*
If your A/C has a plastic clip built into the sensor to hold the sensor to the fins (4), remove the temperature sensor from the plastic clip.

STEP 5

Using ONLY a 2” square piece of regular Aluminum foil, place the CoolBot HEATER Cable (RED tip) next to the A/C’s Temperature Sensor (from STEP 4).

NOTE: If you have a Daikin Mini-Split with a sensor build into the board, DO NOT use the foil. Please see “Daikin” gallery section below for guidance on this step.
• Keep them together next to each other, pointing in the same direction, and wrap them tightly with the foil.

• Make sure the bundle does NOT hang in front of the A/C fins or hangs directly in front of the air flow of the air conditioner – It should hang free, to the side or below the A/C not touching anything cold or metal. You can put a wire tie or zip tie around the 2 cables (1 inch before the foil bundle) to keep the cables from getting pulled apart.

STEP 6

• Find and free your A/C’s Secondary Sensor(s).

• Look for a wire (or two or three in some cases) that comes out of the main control box which is attached to a copper tube. This copper tube is soldered to one of the refrigerant pipes (cooling tube) on your Indoor Unit. **Secondary sensors are ALWAYS touching the copper pipes. They will usually have a copper (or brass) tip at the end.**

• Grab it with your fingers and slide it out of the copper cup. **DO NOT cut the sensor!** It is OK to cut the plastic tie-downs to free the sensor.

• Sometimes the Secondary Sensor can be attached to the Cooling Pipes with black foam insulation tape instead of plugged in to a copper cup. Grab it with your fingers and slide it out of the insulation tape. **DO NOT cut the sensor!** It is OK to cut the plastic tie-downs to free the sensor.

• Some Mini-Splits will have more than one Secondary Sensor. They will all be on the same side of the evaporator coil and they will all have to be found and freed.

(See pictures on next page for examples)
STEP 7

- Use just 1 layer of electrical tape (or a wire tie) to attach the end of the Secondary Sensor(s) to the OUTSIDE of the aluminum foil. DO NOT place the secondary sensor(s) inside of the foil. Make sure the foil bundle does NOT hang in front of the A/C fins or hangs directly in front of the air flow of the air conditioner – It should hang free, to the side, the top or below the A/C not touching anything cold or metal.
STEP 8

- Use a pen/pencil to open a small gap in the fins of the evaporator coil, about 1” from the bottom and near the center (horizontally), between the bottom and second horizontal cooling pipes (1).
- Take the sensor coming from the CoolBot port labeled “Fins” and gently insert just 1/4 inch (0.7 cm) of the TIP into the small gap. DO NOT force the sensor in, you’ll damage it.
- Do not touch a coolant pipe with the FINS Sensor tip. You want to be between the bottom 2 horizontal cooling pipes.
- Pinch the fins lightly around the sensor so it doesn’t fall out.

IMPORTANT!
Once the CoolBot installation is finished and before installing your housing back on, watch how the ice forms on your coil. Move the Fins Sensor to where the ice first starts to form in “your” coil (e.g.,2) - that is where the Fins Sensor needs to be placed!
STEP 9

- You can use your indoor Mini Split unit with or without the housing, or just removing the air direction blades and the filter covers. See examples below. *In installations below 50°F it is useful to have the coil exposed to some extent, to visually inspect the condition of the coil and prevent ice ups (or catch them in time) should they ever happen.*
STEP 10
*If you do not have Wi-Fi skip this step and go to STEP 11.*

Mount the CoolBot Jumper outside of your cooler in a location close enough for the provided Data Cable to connect the CoolBot Pro to the CoolBot Jumper.

**The CoolBot Jumper is not weatherproof.** If it is to be mounted outdoors where rain, snow, and sunlight may get to it, then install it inside of a weatherproof nonmetallic container.

After your CoolBot Jumper is mounted, connect the CoolBot Pro and the CoolBot Jumper using the provided Data Cable.

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STEP 11

Turn your Air Conditioner ON. Set the A/C on “**COOL**” Mode and set the Fan on “**HIGH**” speed. Set the A/C temperature to the lowest setting. *If your A/C has a separate Economy Mode make sure is OFF. The Fan should run continuously!*

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STEP 12

Plug in your CoolBot with the provided power supply. To set the temperature on your CoolBot, press the checkmark button – the current set temperature will blink. Use the right or left arrows to set the temperature to the desired value. Press the checkmark to save the value.

*You are done! Happy Cooling!*

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*For full Manuals for the CoolBot & CoolBot Pro and for troubleshooting please visit us at:*

[https://www.storeitcold.com/support](https://www.storeitcold.com/support)

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*-SEE ADITIONAL TIPS AND PICTURES FOR INSTALLATIONS BY BRAND ON NEXT PAGES-*
The primary sensor is sometimes tricky to find in LG units. It comes out of the circuit board and attaches (or hides behind) into a plastic cover/face on the right side of the indoor unit. There are usually two secondary sensors (sometimes only one) on the LG units, and they can be found on the coils, inserted into copper cups (see pictures and examples below).
Mitsubishi

Our friend Brandon was kind enough to share these excellent pictures of a Mitsubishi Mr. Slim Unit. Here is a shot of the unit with the cover and air direction blades removed.

There are 2 Secondary Sensors on the top right-hand corner, one clipped onto a silver clip and one sitting in a copper cup. This copper cup has a copper lever that secures the thermostat inside the cup. Gently pull the lever up to free the thermostat.
Here are the two sensors pulled up and away from the unit.

The room thermostat is a little tricky to find. It is located inside the dark grey electronic control panel. It is tucked in behind the square piece of grey plastic (to the right of thumb nail).
Here is the final set up. The CoolBot Heater Cable is foiled to the A/C room thermostat and tucked up away from the air flow. **The 2 Secondary Sensor thermostats stand free (in this case they worked OK just hanging free for a set temperature of 44°F).**
Fujitsu

With the wonderful help of Lauren in Virginia we are able to share these pictures. We found the primary sensor hidden under a little black cage in the upper right-hand corner.

We had to pull that black cage off the fins and you’ll see the primary sensor is clipped on the backside (See Picture on next page).
Un-clip the primary sensor so it can then be wrapped up with the CoolBot Heater.
Below you can see the secondary sensor. Is the wire all wrapped up in the foamy black insulation tape, unwrap it!
Finally, we wrap the primary sensor to the Heater using the foil, and then use a zip tie to hold the secondary sensor along the foil pack too. Then placed the foil bundle out of the way – to the side.
Daikin

Daikin should ONLY be used for temperatures 45°F (7°C) and above. The Daikin’s primary sensor is part of one of the boards. The board may be different depending on the model (see pics below). **DO NOT use the foil provided.** Carefully strap the Heater cable to the board with a Zip-tie, **DO NOT over tighten the Zip-tie as it can break the board.**

This is what the boards may look like in some models when its removed. Typically, the part labeled “RTH1” is the temperature sensor on this unit. This small board is connected to the main A/C board.

See connection with Heater Cable on next page
You can see the heater zip-tied into place and the board tucked back onto the unit here.
SAMSUNG, PIONEER AND OTHERS

Sorry, no installation pictures yet.

Do you have a Mini Split not depicted here and would like to share your installation pictures? Send them to us at: support@storeitcold.com and we will double the Warranty of your CoolBot. We would love to share with other fellow CoolBot customers just as the other customers did for the mentioned brands.