DISCLAIMER: By using the CoolBot, You (the "User") acknowledge there are inherent hazards in getting a home air-conditioner (a/c) to do something it was not originally designed to do (say... cooling a space to temps far below 60F!) and that these inherent hazards cannot be ameliorated, mitigated or obviated while still maintaining the essential functionality of the CoolBot. User accepts all responsibility in the use of and monitoring of the CoolBot and a/c. User assumes all risk of loss of property or product due to improper functioning of the CoolBot (or a/c). User assumes all risk of injury and warrants that he will defend, indemnify and hold the seller harmless for any direct or consequential harm or damage that may result from the use of this product. **Users that don't accept this responsibility must return the CoolBot** for a FULL REFUND after getting an RMA#. **LIMITED WARRANTY**: CoolBots are warranted against defects for 1 year not including damage due to misuse/accidents. **HAPPY CUSTOMER GUARANTEE**: Return the CoolBot within 45 days if you're not tickled pink with your Bot for a full refund (minus shipping). For credit, get an RMA# by email or 877-750-COLD <u>before</u> shipping

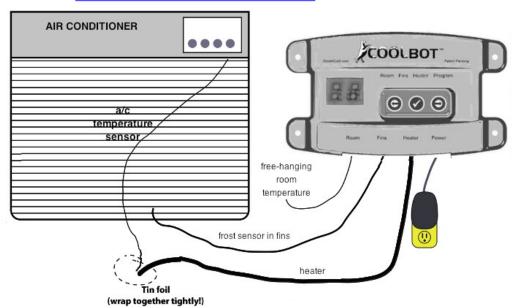
Quickstart Installation Guide For CoolBot

See VIDEO at www.storeitcold.com/installation.html

1) Final Assembly: Plug the wires into the correct ports on the bottom of the CoolBot. From right to left: (a) Power supply (b) The wire with the Red tip is the Heater. (c) and (d) The 2 sensor wires are interchangeable. The one plugged into the FINS hole becomes FIN/FROST Sensor. The one plugged into the ROOM hole becomes the ROOM sensor.

TIP: Plug them in and out a couple times. Sometimes they don't "seat" all the way the first time.

TIP: Hang the coolbot on the control panel side of the a/c with the bottom parallel with the bottom of the a/c. (It's easier to connect the wires).



2) Cold sinks, install the A/C unit higher-up (bottom of the a/c >5 feet/1.5 meters). If you have a rectangular room, it's important the a/c blows the long way. **Follow your a/c unit installation instructions, the A/C unit should tipped a LITTLE backwards.** See www.storeitcold.com for a/c size and brand recommendations.

- 3) Remove the front filters from your a/c unit. They drastically reduce cooling power ("Real" coolers don't have them either). Clean your fins 1-3 times a month, or when they get dirty. (see Troubleshooting). We recommend removing the PLASTIC GRILL as well. It's so much easier to see the fins so you know if they're dirty or to catch ice or problems! A few a/c units have closeable postage stamp size "Fresh air vents" where the air blows out. Make sure this is CLOSED.
- 4) **Find and Free your** a/c's <u>Temperature Sensor</u>. It's the *only thing* attached to the front fins/grill of your air conditioner. <u>Remove</u> both clip and sensor from the fins. Discard the clip. [Note: A small number of a/c units use a metal temp. sensor and have no digital display. In that case **CoolBot can not function**. Buy another a/c unit or return the CoolBot.]
- 5) Connect the CoolBot <u>HEATER</u> (with the red tip) to the Air Conditioner's Temperature Sensor. ** IMPO: Put it parallel to the Air Conditioner Temperature Sensor (see diagram). Wrap a short (1 inch square) piece of foil keeping both together tightly. The two should be touching & lying right next to each other like 2 fingers pointing <u>same</u> direction within the foil. Make sure they dangle <u>away</u> from the fins & flow of the air and hang free (<u>not</u> taped to anything.)
- 6) Insert CoolBot <u>FIN/FROST Sensor</u>. Take the wire coming from the port labelled "FINS" and **stick just 0.3 inches (0.7 cm) of the TIP** of that sensor <u>into</u> the front metal fins of the air conditioner, about 1" from the bottom and near the center (horizontally). It shouldn't touch a coolant pipe directly. You must use a screwdriver/pen/pencil to open the fins up first. If you just force the sensor in, you'll damage it. Pinch the fins <u>lightly</u> around the sensor so it doesn't fall out.
- 7) **Set your temperature.** Plug in the CoolBot. The number appearing in the display is the current temperature in your room. Press the center "CHECK" button. The SET temperature will appear, blinking in the display. Use the arrows to increase or decrease what you want the room temperature to be. Press the "CHECK" button to program it into memory.
- 8) **Turn your A/C unit on.** Set the temp on your A/C unit as low as it can go. (60-65F) and make sure your a/c unit is set at the highest fan speed and in "COOL" mode.
- 9) Secondary Sensor removal. Only applies to some a/c brands, including GE, most Kenmores, most Frigidaires

Comfortaire and Danby and most "inverter mini-split" air conditioners. These units have a hidden secondary sensor you need to remove and let "hang free." Look straight down from your air conditioner control panel area to the SIDE of the front fins. You'll see silver or copper colored coolant pipes. Look for a temperature sensor attached to the lowest or second lowest "U" of the coolant pipe. It could be attached with a plastic wire-tie, but usually it's stuck in a little copper cup welded onto the pipe. The sensor slips OUT of the sleeve. We use a "not-sharp" knife. *Don't cut the sensor!* You might have to cut some plastic ties holding it in place. Mini-split people, see our "tech-support" page at storeitcold.com for more info on how to locate this. On SOME a/c units (like GE units >15,000 BTU's) you can't see the coils until you remove the plastic cover. Unscrew the scews holding it in and then you need a flat head screwdriver to "POP" the cover off (which takes more force than you'd think! None have cracked, though!) Above 36F, just let the secondary sensor hang free outside the body of the a/c unit so it doesn't touch anything metal. BELOW 36F, use just 2 layers of electrical tape to attach the tip end of the secondary sensor to the OUTSIDE of the aluminum foil combination described in #5.

That's it for most people! Plug it in and give it a few hours!

Troubleshooting

FIRST CHECK the obvious things: (1) Your air conditioner has a digital display. **(2)** Your a/c is sized correctly for the room (see recommendations at www.storeitcold.com) **(3)** Your room is insulated enough, meaning at least 4" of rigid foam insulation **(4)** Cold sinks – if you have a trailer or you're above a basement/crawlspace then you MUST insulate the floor or it will never cool down! **(5)** Gaps and holes are all sealed. With the lights off in the cooler you don't see any light shining in from outside (except maybe from inside the air conditioner. That's okay, do NOT spray foam inside your air conditioner!)

PROBLEM: MY ROOM ISN'T GETTING COLD ENOUGH

- a) **Give it enough time**. The room should start getting cold within 1 hour BUT if you have a lot of mass in there or a concrete floor it will take longer the first time. Let the coolbot run overnight.
- b) If it's "stuck" at around 50F/10C, look for a secondary sensor (See #9 above)
- *c) Make sure the foiled combination (#5 above) is tight enough and aligned correctly. [*Most common problem!!]
- d) Make sure the **CoolBot Frost Sensor isn't touching a cooling pipe**. If it is, the CoolBot thinks there is frost even when there isn't. Pull it out or shift it a bit to be sure it's not touching a pipe. *Try pulling it out completely for 1 hr. to see if that works.* (If it does you were probably touching a pipe). Replace it more carefully.
- e) Make sure the foiled combination (#6 above) is **away from the front of the fins or blowing air** and is hanging free and not touching the cold metal of the A/C unit or taped to the wall.
- f) After you've checked a-e, try lowering the FIN Setting to 0 or even -1. (See Cheat Sheet for CoolBot Controls)
- g) Try wrapping just 1-2 layers of tape right over the aluminum foil holding the air conditioner temperature sensor and CoolBot heating element together. Don't wrap more than 2 layers of tape.
- h) If you've been running fine for over a year, unplug and replug the a/c unit in, and see the points about *dirty fins* and *dirty compressors* on the next page. And check online for more ideas at storeitcold.com TECH SUPPORT.
- i) Check the HEATER on the coolbot. Pull the heater out of the aluminum foil. Hold the red tip in your fingers. Unplug the POWER to the CoolBot, then re-plug it back in. In ~5 seconds the heater light will come on SOLID for about 20 seconds. It should get Warm-Hot in that time (you can't tell it's warm when it's just <u>blinking</u>). If it's not warm, unplug/re-plug the heater into the coolbot a few times... then repeat the above test. If it STILL doesn't get warm, call or email us!

PROBLEM: A Solid Block of Ice keeps forming on my A/C unit!

- **Ice must be MELTED completely before trying these steps.(Melts faster in FAN ONLY mode, or use hair dryer)
- a) Make sure your A/C fan is on HIGH. Make sure your A/C is in "Cool" mode, not Energy Saver.
- b) Make sure the tip of the FIN/FROST SENSOR is inserted <u>INTO THE FINS</u> of the air conditioner 1/3rd inch. Not "sitting next to the fins" or "stuck in the clip on the fins" and not too DEEP into the fins either!
- c) After the ice melts... watch your a/c unit as it's cooling. Where does frost FIRST start to form? Reposition the frost sensor so it is stuck in near where you see the white frost FIRST forming. While it's usually in the bottom center, some a/c units are different, so you'll have to reposition it to that area.

d) After trying steps a-c, try *increasing* the **FIN setting by 1 or 2 points, and/or the HEATER DELAY setting by 1 point (see cheat sheet for controls)**. Keep going up with one or both until problem is solved. This will take several tries. Sort of annoying, but you should only have to do this once. Contact us if you go above Fins=4 *and* Heater Delay=4. Note that *many* people just adjust the Fin setting, not the heater delay, and that works great!

PROBLEM: MY A/C UNIT NEVER TURNS OFF: Yes it does! Really! The fan stays on, but the compressor turns off. The fan is cheap to run & keeps the cold circulated in the room. See note about "Energy Saver" mode for small rooms, below.

PROBLEM: <u>1" band of ice forming at bottom of fins.</u> Don't worry about it. Probably the air conditioner is tilted a LITTLE into the room (it should be tilted back a bit and has to be HORIZONTALLY level) **or** the channel leading to the back evaporator pan is clogged with lint or even ice. Tilt it correctly, and unclog the channel by flushing it out with lots of water or an air-compressor. Actually, just a 1" band of ice probably won't impact the cooling power noticeably. There's less air flowing down to melt the ice and many people successfully just ignore a small band of ice like this.

*PROBLEM: Dirty Fins! Very common! Dirty fins drastically reduce cooling power/waste electricity! Clean 1-4 times a month! Run your finger down the fins, if you see lint buildup, you waited too long. Use a toothbrush, non metal scrub brush or stiff bristle paint brush to wipe down the fins so the bristles push through. Rinse brush in a pail of water with NO SOAP! Rinse/repeat until water running down/on the brush is completely clear! If your fins were knocked/squished the cooling power will be decreased - use your fingernails or a kitchen knife to straighten them.

PROBLEM: <u>Unit stops working when it gets cold outside</u> [The "Winter Problem"]. You'd think it should work better when outside temps gets cold, but not always!(This happens with commercial walk-in compressors that aren't winterized, too). It's a physics problem dependent on the design of the a/c unit. As temperatures drop the unit can't circulate coolant fluid properly and a safety is tripped. To reset some units UNPLUG-and-REPLUG your A/C unit when it warms up. **Frigidaire** suffers horribly from this problem even below 45 outside! LG & HAIER and GE have no trouble down to 20F and most mini-split a/c units run down to 5 deg F with no trouble (at that point you'll be needing heat!)

If you have a Frigidaire (or similar brand) and need to run in the winter try keeping the back of the a/c unit in a warmer area. Some hunters in Canada mount the a/c units INSIDE their garages.

PROBLEM: Room getting colder than I set it. Turn a/c to "Energy Saver" mode (best) OR turn a/c fan down. This just happens in small rooms with big a/c's OR, temporarily, in EMPTY rooms - The lack of stuff makes the air temp swing down too low. Once you load it up, this will stop happening. Flower folks: adding 5 gal buckets of water helps.

PROBLEM: <u>Dirty Compressor</u>. You need to slide out the a/c unit once a year and thoroughly clean, or even flush out any thing that built up, otherwise the compressor will start overheating and prematurely cutting off (and your room won't be as cold). Also your a/c unit will die early. A/C units can last decades if properly maintained.

PROBLEM: I run in the winter and I hear the fan hitting ice in the back! If your a/c unit doesn't have back drainage holes (many don't know, the fan just splashes and evaporates the water back there) then you need to drill some holes in the bottom of the a/c unit so the water can drain out or you'll crack the fan.

Improving Performance and Saving Energy with CoolBot

Temperature Setting: Electricity use increases drastically with each degree you drop the thermostat. It's a big jump in electricity to go from 45 to 40F degrees... but then much bigger to go from 40 to 35F! This isn't a function of CoolBot or a/c units, it's just physics. Most veggies keep fine at 41F/5C, do you really need to be running at 36F/2C?

Adding an insulated floor pays for itself quickly even in cooler climates! Below 41F/5C, cold just sinks down forever into the permanently warmer soil. Literally a money sink. If you are keeping your cooler *below* 40 degrees do the environment and your pocketbook a favor and put 2-4 inches of rigid foam insulation down with plywood laid over that. You don't even have to frame it out (the plywood spreads the load just fine). It's quick, easy and you'll see the A/C runs less.

Sealing the Holes: The smallest gap for air flow costs *dollars* per month (and limits cooling!) People are often sloppy around doors OR seals go bad. Go inside the darkened cooler and look at your door. You should see NO light. There are so many great cheap products to seal those gaps. Just a tiny piece of rubber can stop you from wasting dollars a month. And imperceptible holes in the corners can cause the same thing! One \$5 can of caulk or "Great Stuff" spray-foam pays for itself in weeks. *Also sprayfoam/bubblewrap gaps between the a/c and wall-opening*

Stopping Thermal Bridges: Coolers built with insulation between studs make for "thermal bridges" where the cold goes flying through the wood to the outside. Break the bridge by adding a layer of solid Styrofoam around the inside or outside

Adding another Layer of Insulation pays for itself quickly! The difference between 3" and 4" of Styrofoam is a lot.

Using CoolBot in a room with only *fiberglass insulation* leads to moisture condensing *inside* the walls! It sags and stops insulating. Mold develops. A continuous, unpunctured layer of 6 mil plastic on the OUTSIDE of the cooler helps. Not the inside! Best: Add a 1-2" layer of foam on the outside and seal the seams with caulk and then the fiberglass is fine!

QUICK Cheat Sheet for CoolBot Controls

The CoolBot remembers all your settings even if it is unplugged

ROOM TEMPERATURE

In normal operation, the coolbot displays the temperature in your Cooler. The light under "ROOM" will be on to show you are in "ROOM" mode. (It reverts to this display automatically after 30 seconds.)

To adjust Room temperature:

- -Press the ✓ button. Your desired "set-temperature" will appear, blinking in the display.
- **-Use the arrow buttons** to increase or decrease the temperature.
- -Press the ✓ button to program your new setting into memory.

FIN SETTINGS

Caution!! Changing this setting below "0" can cause unexpected random freeze-ups! Default is "1". Going lower is more "aggressive" but for many people it causes random freeze-ups. Some people need to bump up to 3 or 4! See troubleshooting, above, if it's freezing up (or not getting cold enough) to know how to decide your setting.

To change the FIN setting from normal (Room) mode:

- **-Press the right arrow key.** You'll see the light behind the word "FINS" illuminate. In "fins mode" the display reads the temperature on the fins of the air conditioner.
- -Press the ✓ button. Now the aggressiveness is displayed, blinking. 1 is the default. 0 or "-1" would be more aggressive but can cause ice-ups depending on your situation. If you are getting freeze-ups, you would RAISE the setting (to 2 or 3).
- -Press the ✓ button again to program your new setting into memory.

HEATER DELAY

This is rarely adjusted. 99% of users should leave it at the default of "d1"! It forces a longer delay before the heater turns on once fin-ice has melted. See troubleshooting re: ice ups *or* If you want faster cooling, most people can safely drop to a setting of "d0". If you get ice-ups, though, change back to "d1".

To change the HEATER DELAY setting from normal (Room) mode:

- **-Press the right arrow key 2 times.** The light behind the word "HEATER" illuminates, and it says "F" or "C" in the display for Farenheit or Celcius.
- -Press the ✓ button 3 times. You'll see a blinking "d1" (default). "d0" would be no delay faster cooling, fine for most people. "d2" or "d3" is longer delays. If you are up to "d4" and still getting ice up, please check out our online troubleshooting, call or EMAIL us.
- -Press the ✓ button again to program your new setting into memory.

ERROR CODES

The CoolBot performs a self-assessment every 30 seconds. "ER" flashes in the display if there's a problem and the light behind the problem sensor blinks rapidly. For example: if there is a light behind the "FINS" blinking quickly you know that the Fin Sensor is having trouble. It can happen temporarily if it gets covered in ice for a while. (It should fix itself, make sure you adjust the FIN setting up too, though.)

"EF" is the fin sensor, "Er" is the Room Sensor.

* If you do get an error with no ice, unplug and replug in the sensor 2-3 times, and wait 15 seconds. Usually we only hear about errors when things are maybe not fully "seated" into their plug points. If you get a random error like this (with no ice) don't panic, just email us for a replacement. You'll actually be fine for a few weeks like this (but don't wait to email us!)

HEATER LIGHT BLINKING: Most of the time the lower heater light will be blinking. It's supposed to.

More questions? Email <u>info@storeitcold.com</u> or check out <u>www.storeitcold.com/techsupport</u> We have 100% success rate. Not 99%! If things aren't running the way you want, let us know!!

^{**} Email info@storeitcold.com a picture of the inside of your Cooler w/the CoolBot visible within 3 months of purchase and tell us how it's working for our website (we won't include your name) and we'll DOUBLE YOUR WARRANTY!