

Thermostat Setup Guidelines for All-Electric Heat Pumps

from the

Single-Stage Heat Pumps



The ecobee SmartThermostat with voice control is a powerful tool that can help save energy and money while managing energy resources to best serve all cooperative members. To make sure you're getting the most out of your ecobee SmartThermostat, Advanced Energy offers the following recommendations, based on the presence of an all-electric heat pump system and thermostat operating per manufacturers' instructions prior to the ecobee SmartThermostat installation.

Advanced Energy considers a single-stage heat pump to have one outdoor compressor stage (speed). This is more common on older, original equipment.

Read the ecobee installation materials carefully and only install the thermostat yourself if you are comfortable with electrical wiring and device setup. If you are not, seek a qualified HVAC contractor to complete installation and setup.

DANGER: Incorrect wiring can cause damage and expensive equipment repairs.

Part One

Step 1



When starting up the ecobee SmartThermostat, this should be the first prompt you see. Select Yes, only Rc is connected for one transformer (most HVAC systems); select Next.

We have detected a wire connected to the Rc terminal, & not the Rh terminal. Is this correct?	put
Yes, only Rc is connected No, Rc and Rh are connected	ed
ecobee	Next

If your HVAC system has two transformers installed, select No, Rc and Rh are connected.



Make sure the following icons are highlighted on the screen: G Y1 W1 O/B; select Next.

Manual Co Tap on a te disconnec G Y1 Y2 O/B	nfiguration: rminal to connec t the wire.	W1 W2	
Back	ecobee	Next	

It is important to follow the ecobee SmartThermostat installation documents to ensure your HVAC system is wired to maximize the thermostat's capabilities.



Select Air to air; select Next.

What kind of heat pump do you have in your home?
Air to air
Geothermal
lf you have a condenser outside, you have an air to air heat pump.
If you have pipes connecting your compressor to the ground, or going through the walls, you have a geothermal heat pump.
Back Next
ecobee

These are the recommended settings for an all-electric air to air heat pump. See the ecobee SmartThermostat installation documents if any other source of heating (geothermal, furnace, etc.) is present.



For Rheem and Ruud branded equipment only, select On heat; select Next. For all other equipment brands, select On cool; select Next.

On cool	
On heat	
Refer to your heat pump owner's manual.	
If you are still not sure, choose On cool. After installation, turn on the equipment. If cool air comes on when you turn on the heat, change this setting to On heat in Settings > Installation Settings > Equipment > Heat Pump.	
This will not damage your equipment.	
Back Next	
ecobee	

This will maximize your system's capabilities with the new thermostat.



Select Enable Aux Heat Simultaneous Operation; select Next.

Allow th Heat to	ne Heat Pump and A run simultaneously	AUX ?	
	Enable		
	Disable		
Warning natural g fuel, oth may occ	g: Set this to Disabl gas or oil is the Aux her wise Heat Pump cur.	eif Heat failure	
Back		Next	
	ecobee		

This is the recommended setting to maximize the efficiency of your air source heat pump before less efficient strip heat comes on to maintain comfort at lower temperatures.



Select Disabled for Compressor Min Outdoor Temperature; select Next.

Configur minimum The com this outo	re the compresso outdoor tempera opressor will not ru loor temperature	r ature. in below	
ecobee air-to-ai Warning may cau failure. (pump ma setting	Disabled recommends 35° r heat pump. , setting it to Disa ise premature equ Consult with the heanufacturer for op	O°F F for an bled ipment eat timum	
Back	 ecobee	Next	

This maximizes the efficiency of your air source heat pump before less efficient strip heat comes on to maintain comfort at lower temperatures.



Select Furnace; select Next.

What kind in your ho	d of heating do you have ome?	
	Furnace	
	Boiler	
lf you hav ceiling, yo furnace.	ve vents in the floor or ou most likely have a	
lf you hav in-floor h have a bo	veradiators and/or neating, you most likely oiler.	
Back	Next	
	ecobee	

This is to tell the thermostat that the heat source for your home comes from the same components as your cooling.

Select By thermostat; select Next.

How do you want controlled?	your fan to be	
By ther	mostat	
By fui	rnace	
As the more energy option, using the the allow your furnace heat that would of Using the furnace amount of cold air when the furnace	gy - efficient hermostat will to repurpose therwise be lost. will reduce the in the ducts ignites.	
Note that this doe other fan control f applies only to gas systems.	s not affect eatures and / electric	
Back	Next	
eco	bee	

It is important to follow the ecobee SmartThermostat installation documents to ensure your HVAC system is wired to maximize the thermostat's capabilities.

The next series of questions will allow you to customize the thermostat settings based on your preferences and location. Part 1 is complete.

Part Two

Your new ecobee SmartThermostat has been configured to work with your HVAC system. Select the following settings to maximize comfort and efficiency.



Once you are back on the home screen, select the Main Menu icon.





≻	Main Menu		
	Comfort Settings	>	
4	Vacation	>	
¢	Reminders & Alerts	>	
Ô	Settings Preferences & Defaults	>)	
72 \$	About	>	
	ecobee		~







Select Installation Settings.

	Settings		
	Date & Time	>	
	Preferences	>	
	Wi-Fi No network selected	>	
·	Installation Settings Advanced Options	>	
	Access Control Disabled	>	
	Dasat		,
	ecobee		

Select Thresholds.

< Installation Settings		
Equipment	>	
Thresholds	>	
Test Equipment	>	
ecobee		•

Step 5

Select Compressor Min Cycle Off Time; select 600 seconds.



This is a recommended setting to save energy and increase equipment durability. After the unit cycles off, it will not come back on for 10 minutes.



Select Aux Heat Max Outdoor Temperature; select between 30 and 45 degrees; select Save.



This temperature range is recommended to maximize the efficiency of your air source heat pump before less efficient strip heat comes on to maintain comfort at lower temperatures.



Select Heat Differential Temperature; select 1.0°F.



A 1°F heat differential temperature will turn the heat on after the indoor temperature drops 1°F below setpoint. This setting should decrease energy usage and increase system durability through longer runtimes.



Select Heat Dissipation Time; select 60 sec.



60 seconds will maximize the distribution of remaining heat in the system but not circulate cool air.

Select Aux Min On Time; select 1 min.



This setting regulates the electric heat runtime, which maximizes energy savings and increases system durability.



Select Cool Differential Temperature; select 1.0°F.



A 1°F cool differential temperature will turn the cooling on after the indoor temperature is 1°F above setpoint. This setting should decrease energy usage and increase system durability through longer runtimes.



Select Cool Dissipation Time; select 0 sec.



This maximizes the amount of humidity removed during cooling mode.



Select Compressor to Aux Temperature Delta; select 3°F.



This is to maximize the efficiency of your air source heat pump before less efficient strip heat comes on to maintain comfort at lower temperatures.



Select Compressor to Aux Runtime; select 30 min.



This is to maximize the efficiency of your air source heat pump before less efficient strip heat comes on to maintain comfort at lower temperatures.

When complete, select the arrow symbol in the upper left corner to return to the main screen.

Congratulations, your new ecobee SmartThermostat should now be setup to maximize your HVAC system efficiency and home comfort.

