

How to install
your ecobee

Welcome!

If you have questions, we have answers.
Visit **ecobee.com/Support** for tutorials,
how-to videos and FAQs.

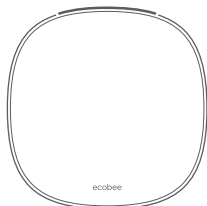
Technical support is also available by email or phone:
support@ecobee.com
1.866.518.6740 (North America)
1.647.428.2220 (International)

Compatible systems

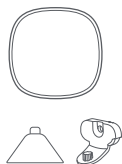
ecobee works with most centralized residential heating
and cooling systems.

Heating:	Up to 2 stages
Cooling:	Up to 2 stages
Heat pumps:	1 or 2 stages + up to 2 stages auxiliary heat
Accessories:	Dehumidifier, humidifier or ventilation device
Fan:	Up to 3 speeds

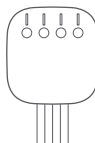
First things first. Here's what you'll find in the box:



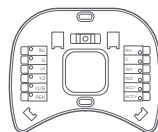
SmartThermostat



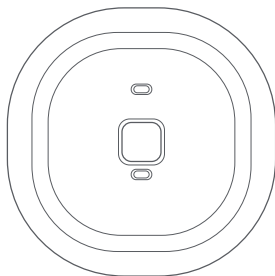
SmartSensor, stand,
and wall-mount



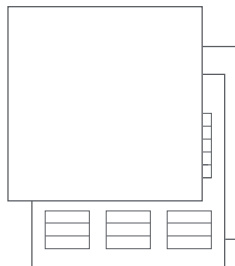
Power Extender
Kit (PEK)



Backplate



Trim plate



Install guide (this booklet)
quick start guide & wire labels



Screws
(x2)



Drywall plugs
(x2)

TERMINAL DESCRIPTIONS:

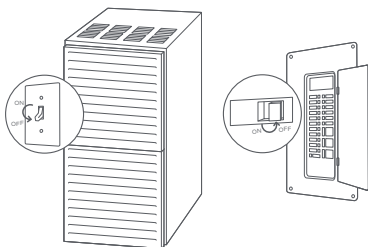
G	Fan
Rc	Cool transformer
R_H	Heat transformer
O/B	Heat pump reversing valve
Y1, Y2	Used for 1-2 stages of conventional A/C or 1-2 stages of heat pump compressor
W1, W2	Used for 1-2 stages of conventional heat or 1-2 stages of auxiliary heat with heat pump
C	24VAC common
ACC	Accessory (+/-): Used for dehumidifiers, humidifiers, ventilators, HRVs or ERVs
PEK	Terminal used for 4 wire to 5 wire convertor. DO NOT USE.



WARNING: ecobee is designed for **24VAC** with a **2A** maximum current.
Do not connect it to line (high) voltage or millivolt systems.

STEP 1

Power off your Heating, Ventilation, and Air Conditioning (HVAC) system by using the master switch or circuit breaker box. **This is important for your safety.**



STEP 2

Remove your old thermostat cover from the wall to find the terminal. Label each wire with the provided stickers.

Discard any jumper wires between R_H, R_C, or R. Your ecobee does not need them.

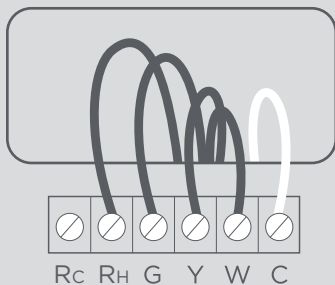


STEP 3

Determine if you need a Power Extender Kit (PEK).
Do you have a wire labelled “C” or “common” ?

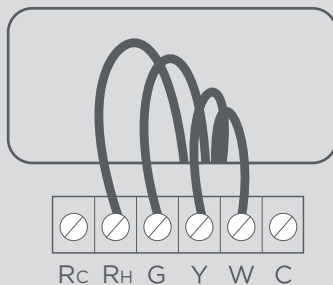
YES

**You do not need a PEK.
Go to step 4 on the
next page.**



NO

**Looks like you
need a PEK.
Go to page 18.**



STEP 4

Review the following wiring diagrams:

- p11** Conventional heating and cooling
- p12** Heat Pump (air or geothermal) with auxiliary heat
- p13** Boiler or radiant system with air handler and conventional cooling
- p14** Heat Pump or PTAC (air or geothermal) with auxiliary heat and multispeed fan
- p15** 2 pipe fan coil unit (with AUX or pipe sensors optional)
- p16** 4 pipe fan coil unit
- p17** 1-wire accessory
- p17** 2-wire accessory

STEP 5

Secure the back plate to your wall with the provided screws.

STEP 6

Use the stickers from step 2 as a guide and insert the wires into the ecobee terminal blocks.

STEP 7

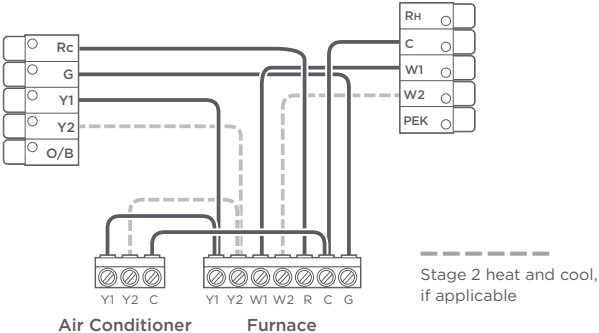
Power your HVAC equipment back on. Your ecobee will automatically power on and guide you through setup.



YOU'RE DONE! If your thermostat does not power on, please see the troubleshooting tips on p28.

Wiring Diagrams

CONVENTIONAL HEATING AND COOLING (UP TO 2 STAGES EACH)

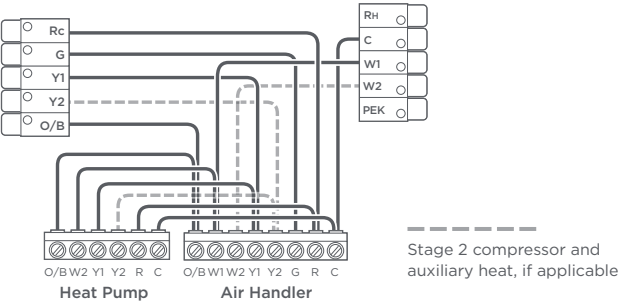


☰ Main menu > Settings > Installation settings > Thresholds	
Heat / Cool Temp Differential	Compressor Min On time / Heat Min On time
The minimum temperature difference between indoor temperature and set point before bringing on heating or cooling. Default is 0.5F .	The minimum time that the compressor or heating system stays on once it is engaged. Default value is 5 mins .



NOTE: Do not jumper Rc or Rh. ecobee does this automatically. The R wire needs to go into the Rc terminal on your ecobee.

HEAT PUMP (AIR OR GEOTHERMAL) WITH AUXILIARY HEAT

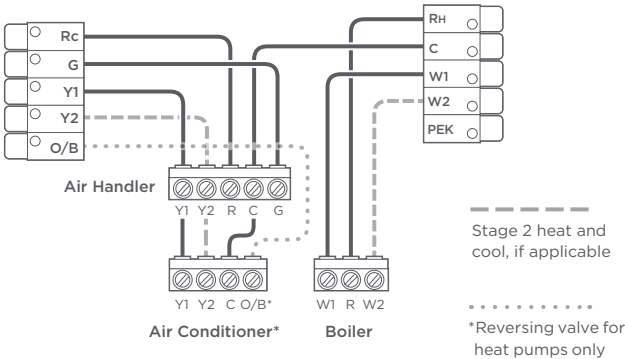


Main menu > Settings > Installation settings > Thresholds		
Heat pump and aux. heat simultaneous run	Compressor min. outdoor temperature	Aux. heat max. outdoor temperature
When ON aux heat will run with heat pump compressor. Default OFF . Turn ON if evaporator coil is upstream of Aux Heat.	Defines the temp below which compressor does not run. Default DISABLED . Set value based on manufacturer recommendation.	Defines the temp above which aux heat does not run. Default 35F . Change value if required.



NOTE: Heat pumps use an internet-based weather feed and do not require outdoor temp sensor and/or a dual-fuel kit.

BOILER OR RADIANT SYSTEM WITH AIR HANDLER AND CONVENTIONAL COOLING

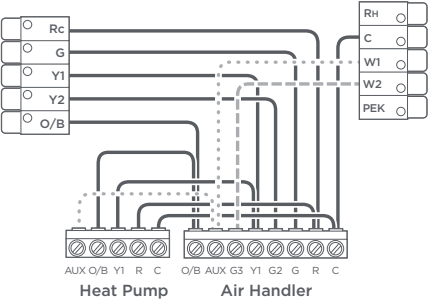


Main menu > Settings > Installation settings > Thresholds			
Heat / Cool Temp Differential	The minimum temperature difference between indoor temperature and set point before bringing on heating or cooling. Default is 0.5F .	Compressor Min On time/ Heat Min On time	The minimum time that the compressor or heating system stays on once it is engaged. Default value is 5 mins .



NOTE: Do not jumper Rc or Rh. ecobee does this automatically. The R wire needs to go into the Rc terminal on your ecobee.

HEAT PUMP OR PTAC (AIR OR GEOTHERMAL) WITH AUXILIARY HEAT AND MULTISPEED FAN



G3 optional based on the number of fan speeds supported.

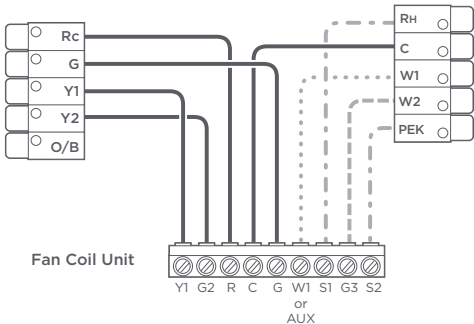
.....
W1 may be used for AUX if applicable.

☰ Main menu > Settings > Installation settings > Thresholds		
Heat pump and aux. heat simultaneous run	Compressor min. outdoor temperature	Aux. heat max. outdoor temperature
When ON aux heat will run with heat pump compressor. Default OFF . Turn ON if evaporator coil is upstream of Aux Heat.	Defines the temp below which compressor does not run. Default DISABLED . Set value based on manufacturer recommendation.	Defines the temp above which aux heat does not run. Default 35F . Change value if required.



NOTE: Heat pumps use an internet-based weather feed and do not require outdoor temp sensor and/or a dual-fuel kit.

2 PIPE FAN COIL UNIT (WITH AUX OR PIPE SENSORS OPTIONAL)



G3 optional based on the number of fan speeds supported.

S1 and S2 wires used for a Pipe Sensor are optional.

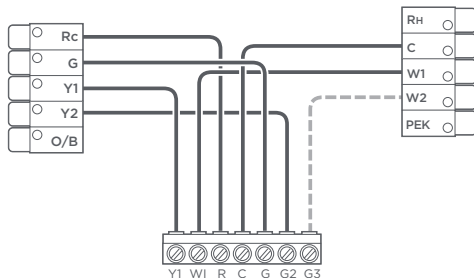
.....
W1 may be used for AUX or used for Heat based on the Equipment Manufacturer.

Main menu > Settings > Installation settgins > Thresholds	
Heat / Cool Temp Differential	The minimum temperature difference between indoor temperature and set point before bringing on heating or cooling. Default is 0.5F .



NOTE: Do not jumper Rc or Rh. ecobee does this automatically. The R wire needs to go into the Rc terminal on your ecobee.

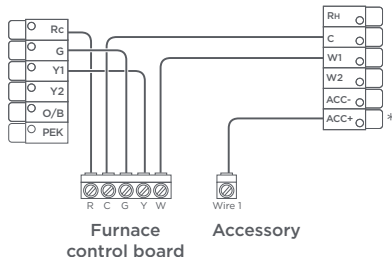
4 PIPE FAN COIL UNIT



G3 optional based
on the number of fan
speeds supported

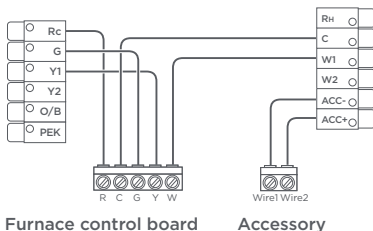
Main menu > Settings > Installation settings > Thresholds	
Heat / Cool Temp Differential	The minimum temperature difference between indoor temperature and set point before bringing on heating or cooling. Default is 0.5F .

1-WIRE ACCESSORY

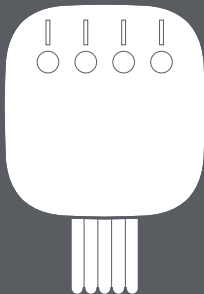


WARNING: Damage may occur if accessory is connected to ACC-. *ecobee automatically connects Rc to ACC- when 1-wire configuration is selected during accessory setup.

2-WIRE ACCESSORY



NOTE: To determine which wires from your accessory need to be connected to the ACC+/ACC- terminals on your ecobee, you will need to refer to your accessory manual.



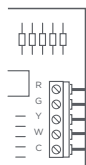
Install the Power Extender Kit

If you don't have a C wire, you'll need to use the Power Extender Kit (PEK) included to reliably power the thermostat.



PEK OVERVIEW

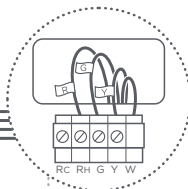
At your utility closet



HVAC
control board

Power
Extender Kit

At your thermostat



Existing
thermostat wires

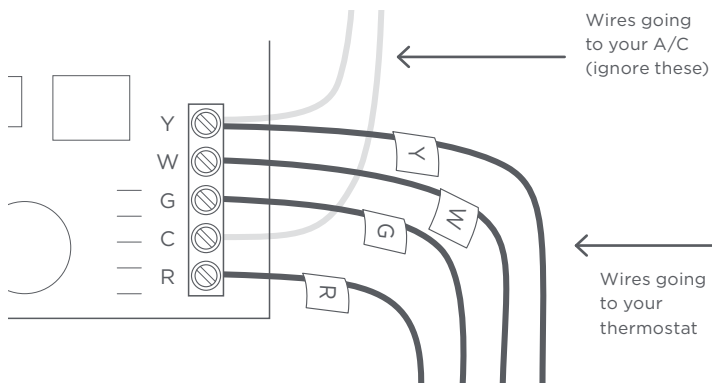


PEK STEP 1

Remove the cover panel from your HVAC equipment.

Locate the control board and take a picture of it for reference.

Using the stickers provided, label the wires on the control board leading to the thermostat.

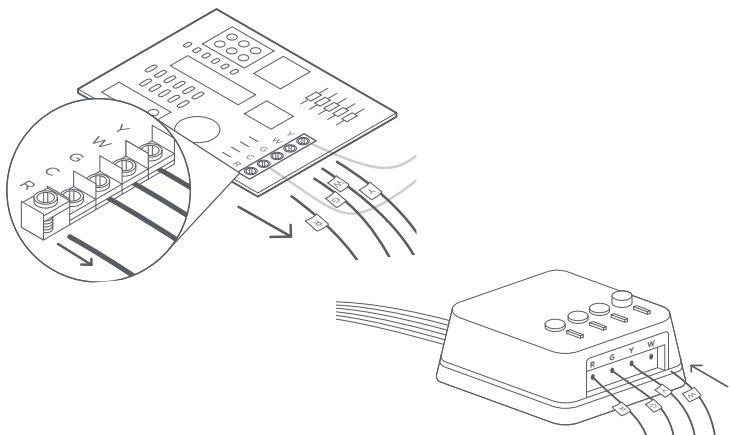




PEK STEP 2

Disconnect the wires from the control board and reconnect them to the corresponding terminals on the thermostat side of the PEK.

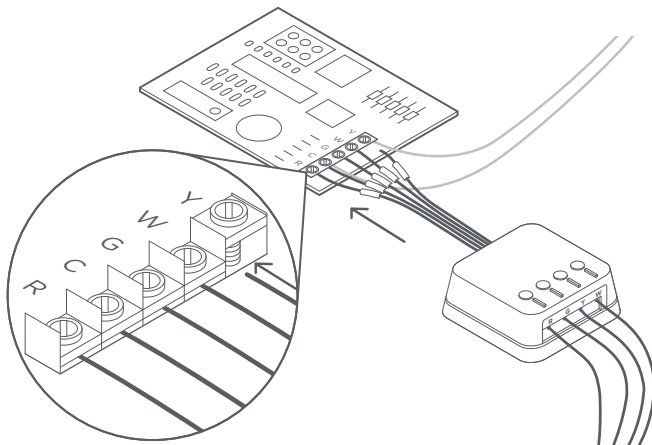
Using the wires provided with the PEK, connect the terminals on the equipment side of the PEK to the corresponding terminals on the control board.





PEK STEP 3

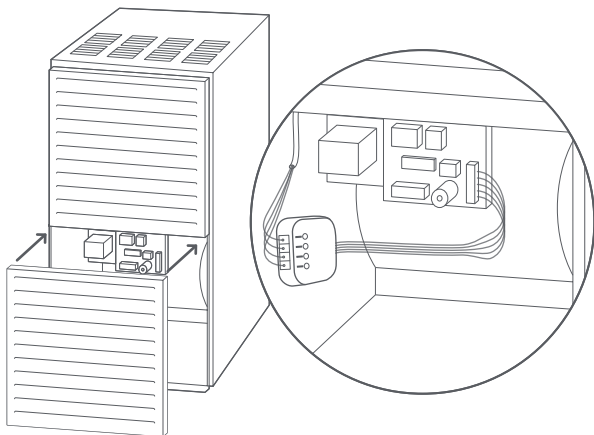
Connect the five white wires coming out of your Power Extender Kit to their corresponding terminals on the control board.





PEK STEP 4

Mount the Power Extender Kit inside your HVAC system, taking care not to strain the wires. Close the HVAC cover panel securely and return to your thermostat.





PEK STEP 5

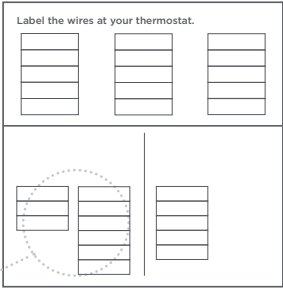
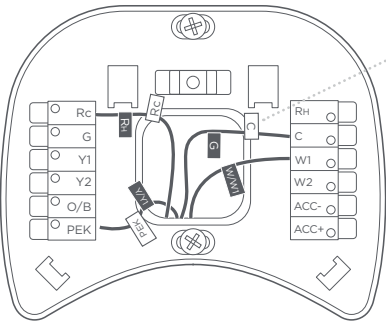
Back of the thermostat:

Remove the Rc, C, and PEK labels from the label sheet and attach them to the wires as shown below:

R/Rc/RH → Rc

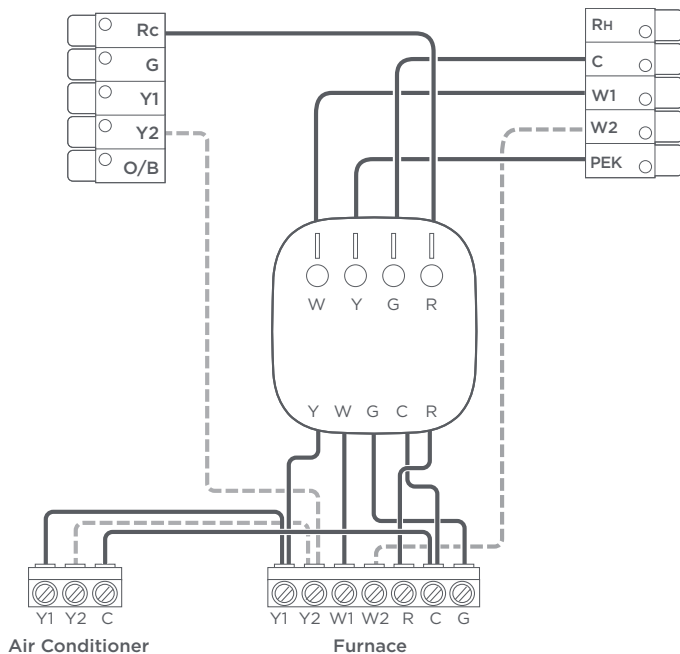
G → C

Y → PEK





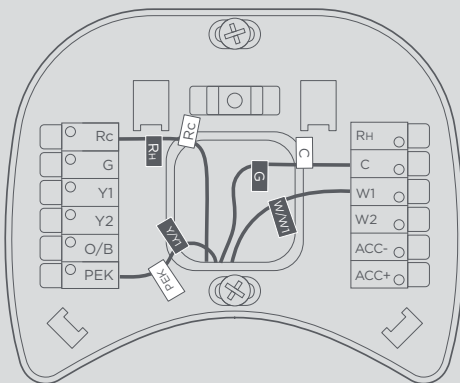
PEK REFERENCE DIAGRAM





PEK STEP 7

Did you connect the correct wires to the Rc, C, and PEK terminals, as shown below?



YES

**Continue to
the next page.**

NO

**Please ensure that your
wiring is as shown above.**



PEK STEP 8

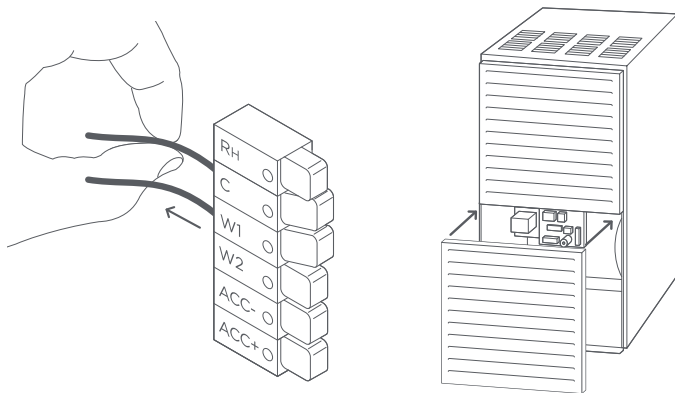
Power your HVAC equipment back on. Your ecobee will automatically power on and guide you through setup.

You're done!

If your thermostat does not power on, please see the troubleshooting tips on the next page.

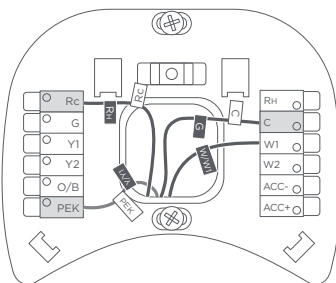
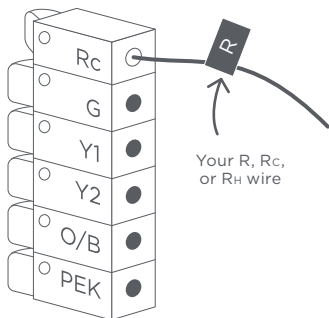
TROUBLESHOOTING

If your ecobee doesn't turn on, please try these steps:



1. Check that all wires are properly inserted into the terminal blocks at the thermostat. Tug on the wires to ensure they are not loose.
2. Make sure your HVAC cover panel is closed. Some systems will not turn on if the cover panel has not been closed properly.

TROUBLESHOOTING



3. If you have only one R wire (either R, Rc, or R_H), make sure it's inserted into the Rc terminal.
4. If you installed the Power Extender Kit, make sure you inserted the wires into the correct terminals.

LEGAL

Approvals

This Product was designed and built in accordance to RoHS directive 2002/95/EC and contains no hazardous substances as defined by this directive.

FCC Compliance Statement | Compliance Notice:

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 8 inches during normal operation.

Innovation, Science and Economic Development Canada (ISED) | Compliance Notice:

This device contains licence-exempt transmitter(s)/ receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

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

RF Exposure Statement:

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This transmitter must be installed to provide a separation distance of at least 8 inches from all persons and must not be colocated or operating in conjunction with any other antenna or transmitter.

FCC ID: WR92221123114
IC: 7981A-2221123114
CAN ICES-3 (B)/NMB-3(B)

Warning: Changes or modifications not expressly approved by ecobee Inc. could void the user's authority to operate the equipment

5-Year Limited Warranty

ecobee warrants that for a period of five (5)

years from the date of purchase by the consumer ("Customer"), SmartThermostat Pro with voice control (the "Product") shall be free of defects in materials and workmanship under normal use and service. During the warranty period, ecobee shall, at its option, repair or replace any defective Products, at no charge. Any replacement and/or repaired device are warranted for the remainder of the original warranty or ninety (90) days, whichever is longer. A proof-of-purchase will be required from the Customer in order for ecobee to provide a replacement and/or repaired device. This Warranty is valid only for Product installed in the country in which it is purchased.

If the Product is defective, call Customer Service at 1-866-518-6740. ecobee will make the determination whether a replacement Product can be sent to you or whether the Product should be returned to our address.

In the event of a failure of a Product, Customer may:

- a. If Customer did not purchase the Product directly from ecobee, contact the third party contractor from whom the Product was purchased to obtain an equivalent replacement Product, provided the contractor determines that the returned Product is defective and Customer is otherwise eligible to receive a replacement Product;
- b. Contact ecobee directly for service assistance at 1-866-518-6740 and ecobee will make the determination whether an advance equivalent replacement Product can be sent to Customer with return shipping supplies (in which case a hold shall be put on Customer's credit card for the value of the replacement Product until ecobee has received the defective Product). Product should be returned to our address. If the returned Product is found by ecobee to be defective and Customer is otherwise eligible to receive a replacement Product, no amount shall be charged to Customer's credit card; or
- c. Ship the defective Product directly to ecobee, in

which case Customer shall contact ecobee directly at 1-866-518-6740, so ecobee can make the required shipping arrangements. Upon receipt of the defective Product, ecobee will ship an equivalent replacement Product to Customer, provided the returned Product is found by ecobee to be defective and Customer is otherwise eligible to receive a replacement Product.

This warranty does not cover removal or reinstallation costs and shall not apply if the damages were found to be caused by something other than defects in materials or workmanship, including without limitation, if the Product:

- was operated/stored in abnormal use or maintenance conditions;
- is repaired, modified or altered, unless ecobee expressly authorizes such repair, modification or alteration in writing;
- was subject to abuse, neglect, electrical fault, improper handling, accident or acts of nature;
- was not installed by a licensed Heating Ventilating and Air Conditioning (HVAC) contractor; or
- was installed improperly.

ecobee's sole responsibility shall be to repair or replace the Product within the terms stated above. ECOBEE SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE OF ANY KIND, INCLUDING ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING, DIRECTLY OR INDIRECTLY, FROM ANY BREACH OF ANY WARRANTY, EXPRESS OR IMPLIED, OR ANY OTHER FAILURE OF THIS PRODUCT. Some US states and Canadian provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

ecobee's responsibility for malfunctions and defects in materials and workmanship is limited to repair and replacement as set forth in this warranty statement. All express and implied warranties for

the Product, including but not limited to any implied warranties and conditions of merchantability and fitness for a particular purpose, are limited to the three-year duration of this limited warranty. No warranties, whether expressed or implied, will apply after the limited warranty period has expired. Some US states and Canadian provinces do not allow limitations on how long an implied warranty lasts, so this limitation may not apply.

ecobee neither assumes responsibility for nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this Product.

This warranty gives you specific rights, and you may also have other rights which vary from jurisdiction to jurisdiction. If you have any questions regarding this warranty, please write to ecobee Customer Service.

Legal Notice

Use of the HomeKit™ logo means that an electronic accessory has been designed to connect specifically to iPod®, iPhone®, or iPad®, respectively, and has been certified by the developer to meet Apple® performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPod, iPhone, or iPad may affect wireless performance. Apple, iPhone, iPad, and iPod touch are trademarks of Apple Inc., registered in the U.S. and other countries. HomeKit is a trademark of Apple Inc..

We're here to help.

ecobee.com

support@ecobee.com

1.866.518.6740

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