Smart Thermostat **ESSENTIAL**

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 by phone:

support@ecobee.com
1-866-518-6740

COMPATIBLE SYSTEMS
Smart Thermostat Essential works with
most centralized residential heating and
cooling systems.

Heating and Cooling: Up to 1 stage Heat with
2 stages Cool or 2 stage Heat with 1 stage Cool.
Heat pumps: Air, Water, and Geothermal with
1 stage of AUX heat.
Packaged Terminal Air Conditioners (PTAC):
Single or variable fan speed.

TERMINAL DESCRIPTIONS

G/PEK	Fan or Power Extender Kit (PEK)
R	Single transformer
OB*	Heat pump reversing valve, 2nd stage of conventional A/C or 2nd stage of conventional heat.
Y1	1st stage of conventional A/C or heat pump compressor.
W1	1st stage of conventional heat or heat pump AUX heat.
C	24VAC common

No common wire?
Power Extender Kit (PEK) extends a C-wire (common
wire) when a physical wire is not available. PEK is
not included in all ecobee models and can be
purchased separately. PEK is not compatible with
dual transformer, fan coil or communicating units.

⚠ **IMPORTANT – TURN OFF POWER**
Power off the HVAC system with the master switch or circuit breaker box.

⚡ **WARNING!** ecobee thermostat is designed for 24VAC equipment. Do not connect
it to line (high) voltage or millivolt systems. Limit 2A maximum current per terminal.

**CONVENTIONAL HEATING AND COOLING
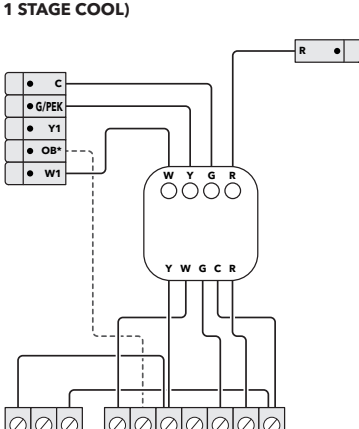(UP TO 2 STAGE HEAT WITH 1 STAGE COOL)**
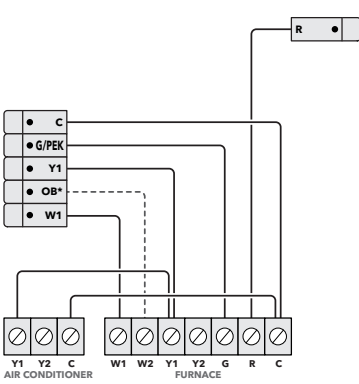
Stage 2 Heat, if applicable

**CONVENTIONAL HEATING AND COOLING
(UP TO 1 STAGE HEAT WITH 2 STAGE COOL)**
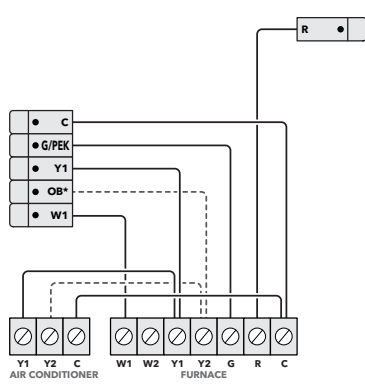
Stage 2 Cool, if applicable

**CONVENTIONAL HEATING AND COOLING
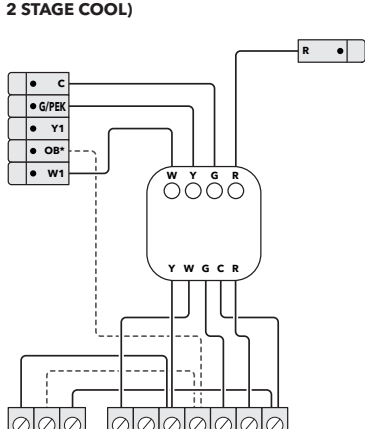WITH PEK (UP TO 2 STAGE HEAT WITH
1 STAGE COOL)**

Stage 2
Heat, if
applicable

NOTES:
1. When using a PEK with a heat
pump system, the O/B terminal is
wired directly to the thermostat.
2. The PEK is not compatible with
dual transformer or fan coil units.

**CONVENTIONAL HEATING AND COOLING
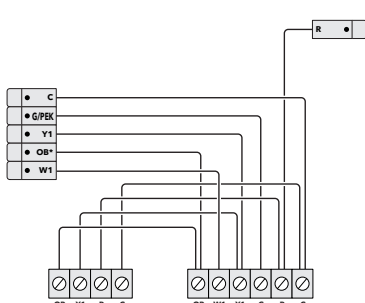WITH PEK (UP TO 1 STAGE HEAT WITH
2 STAGE COOL)**

Stage 2
Cool, if
applicable

NOTES:
1. When using a PEK with a heat
pump system, the O/B terminal is
wired directly to the thermostat.
2. The PEK is not compatible with
dual transformer or fan coil units.

**HEAT PUMP (AIR OR GEOTHERMAL) WITH
AUXILIARY HEAT**

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

Installation Settings

THRESHOLD SETTINGS   ☰ Menu > Settings > Installation Settings > Thresholds

SETTING NAME	DESCRIPTION	DEFAULT
Conventional & Heatpump Systems		
Auto Heat/Cool	In Auto mode, the thermostat will engage both your heating and cooling as necessary.	Enabled
Heat/Cool Min Delta	The minimum temperature difference between the desired Heat and Cool set points in Auto mode.	5°F
Configure Staging	Configure staging Manually, to select and customize values such as dissipation time, temperature deltas, and runtimes for both your heating and cooling equipment. (See **Manual Setting Options**)	Automatic
Compressor Min Cycle Off Time	The amount of time the compressor remains off between cycles.	300 seconds
Compressor Min Outdoor Temperature	The AC or Heatpump compressor will not run below this outdoor temperature.	AC - 35°F / Heatpump - User defined
AC Overcool Max	Will allow the air conditioner to overcool (above Cool set point) by this value to help decrease humidity.	Disabled
Heat Min On Time	The minimum amount of time the furnace/boiler will stay on during a call for heat.	5 minutes
Compressor Min On Time	The minimum amount of time the compressor will stay on.	5 minutes
Temperature Correction	If the thermostat temperature reading is incorrect, a correction may be applied to achieve an accurate reading.	+0F
Humidity Correction	If the thermostat sensor reading is incorrect, a correction may be applied to achieve an accurate reading.	+0%
Thermal Protect	The minimum temperature reading difference between sensors that will trigger the algorithm to ignore the inaccurate sensor reading.	Disabled
Installer Code	When enabled, this restricts access to Installation Settings (Code 3262 permits access)	Disabled
Heatpump only Systems		
Aux Savings Optimization	This setting simplifies Heatpump to Aux Heating staging based on Savings vs. Comfort. The higher the temperature setting will sacrifice comfort for savings.	2°F
Aux Heat Max Outdoor Temperature	The Auxiliary Heat will not run above this outdoor temperature.	50°F
Aux Min On Time	The minimum amount of time your auxiliary heat will stay on during a call for aux heat.	5 minutes
Compressor To Aux Temperature Delta	The minimum number of degrees from the current temperature vs. set point before engaging the auxiliary heat.	Auto
Compressor to Aux Runtime	The minimum number of minutes the Heatpump compressor will run for before switching to auxiliary heat.	Auto
Aux Reverse Staging	When enabled, aux heat will be engaged if the current temperature is greater than the value designated in the Compressor to Aux Temperature Delta setting.	Off
*Manual Setting Options		
Heat Differential Temperature	The minimum temperature differential before engaging heating.	0.5°F
Heat Dissipation Time	The amount of time the fan will continue to run once the heating cycle is completed.	Auto
Cool Differential Temperature	The minimum temperature differential before engaging cooling.	Auto
Cool Dissipation Time	The amount of time the fan will continue to run once the cooling cycle is completed.	Auto
Compressor Reverse Staging	When enabled, stage 2 cool compressor will be engaged if the current temperature is greater than the value designated in the Compressor Stage 2 Temperature Delta setting.	Off
Compressor Stage 2 Temperature Delta	The minimum number of degrees from the current temperature vs. set point before engaging the second stage of the compressor.	Auto
Compressor Stage 1 Max Runtime	The maximum number of minutes running stage 1 before engaging the second stage of the compressor.	Auto
Heat Reverse Staging	When enabled, second stage heat will be engaged if the current temperature is greater than the value designated in the Heat Stage 2 Temp Delta setting.	Off
Heat Stage 2 Temp Delta	The minimum number of degrees from desired setpoint before engaging the 2nd stage of heat.	Auto
Heat Stage 1 Max Runtime	The maximum number of minutes running stage 1 before engaging the second stage heating.	Auto

REMINDERS & ALERTS SETTINGS   ☰ Menu > Reminders and Alerts > Preferences

SETTING NAME	DESCRIPTION	DEFAULT
HVAC Maintenance	Maintenance interval for the heating & cooling systems.	Enabled, 6 months
Furnace Filter	The frequency of filter reminders based on months or runtime hours.	Enabled, 3 months
UV Lamp	The frequency when maintenance is needed based on months or runtime hours.	Disabled
Low Temp Alert	When indoor temperature meets/exceeds this setting an alert will be generated.	Enabled, 50°F
High Temp Alert	When indoor temperature meets/exceeds this setting an alert will be generated.	Enabled, 92°F
Aux Outdoor Temp Alert	An alert will be generated when Aux Heat meets at this value or above.	Disabled
Aux Heat Runtime Alert	An alert will be generated when Aux Heat meets/exceeds this runtime value in a 24hr period.	Disabled
Low Humidity Alert	An alert will be generated if humidity falls below this value.	Disabled
High Humidity Alert	An alert will be generated if humidity rises above this value.	Disabled
Display Alerts on Thermostat	When enabled, Alerts will also appear on the thermostat display.	Disabled
Enable Heating/Cooling Alerts	An alert will be generated indicating that the system has failed to heat or cool the indoor location.	Enabled