SAVE THESE INSTRUCTIONS

INSTALLATION AND SETUP

king
Smart Heating Solutions

ECO PRO CONTROLLER

7-Day Programmable Thermostat
W/ Remote Temperature Sensing Controller

The ECO PRO Controller is a wireless 7-day programmable thermostat and temperature sensor that lets you set heating schedules and monitor ambient temperature remotely. Once paired with the heater, it transmits real-time temperature data and schedule updates for precise, responsive room temperature control.

ECO PRO Controller Placement

Important: Avoid areas with temperature extremes, making the PRO Controller think the room is cooler or warmer than it actually is. Don't install near doors that could let in drafts, or on exterior walls or near windows in direct sunlight.

Technical Specifications:

Protocol: Wireless 2.4G
Transmit Distance: 98'
Working Voltage: DC 3V (battery);
Control Range: 40° to 95°F

COMPATIBLE WITH THESE MODELS

PX ECO2S

LPW ECO2S

KBP ECO2S+

KBP PlatinumX

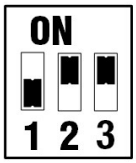
KB ECO2S+ BMS

KB PlatinumX BMS

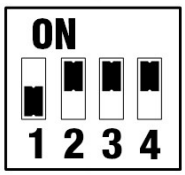
HEATER DIP SWITCH SETTINGS

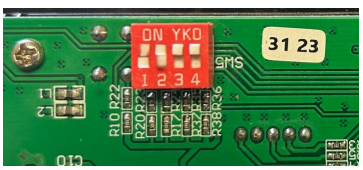
In order for your heater to recognized and pair with the ECO PRO Controller, Dip Switch #1 on the back of the Heater display must be set to OFF. Once set to OFF the heater will be able to receives signals from the ECO Pro Controller.

MODELS:
PX ECO2S / LPW ECO2S



MODELS:
KBP ECO2S+ / KBP PlatinumX
KB ECO2S+ BMS / KB PlatinumX BMS



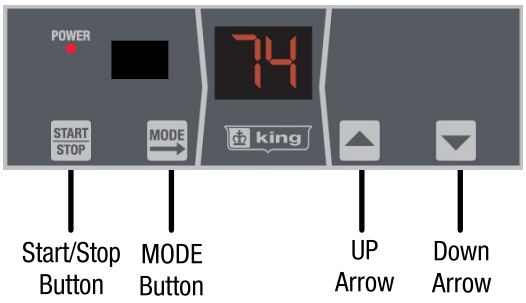


PAIRING ECO PRO CONTROLLER TO HEATER

PRO CONTROLLER PAIRING:

IMPORTANT: The PRO Controller must be paired to the heater prior to use. If heater display shows "L5" the PRO Controller has not been paired successfully. Repeat Pairing Process.

Heater Display Panel



PAIRING AND USEAGE GUIDE

Since it is possible that more than one heater/PRO Controller would be used in a home, you must first pair the PRO Controller to a specific heater. Each PRO Controller has a unique ID number, which will be used in the pairing process. When installing the PRO Controller first time, users need to pair the PRO Controller with heater, so the heater can learn and save the remote sensor's ID.

Step 1: On the Heater's Display Press START STOP and ▼ button at the same time for 5 seconds. The LED display will flash "id". Release buttons.

Step 2: Put the PRO Controller within 3 feet of the heater and then press and hold the ✓ button to enter pairing mode.

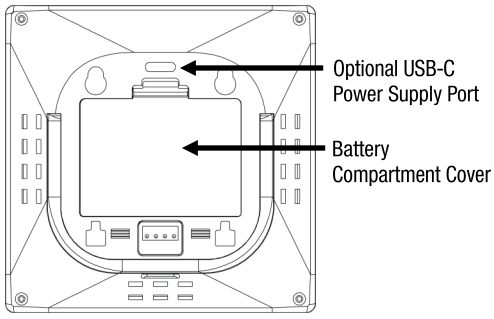
Step 3: The signal icon will appear on the PRO Controller, and the heater's display indicator lights will illuminate (LED tubes show 88) for 1 second and then turn off. This means the Pro Controller and the heater have paired with each other successfully.

NOTE: If the display flashes "id" for 20 seconds and then turns off, it means that the heater failed to pair with the PRO Controller and has exited the Pair mode. Repeat the above steps to pair the remote sensor.

Step 4: After pairing the PRO Controller successfully, put the PRO Controller in the room where you want to detect temperature. The heater display will now display the temperature from the remote sensor.

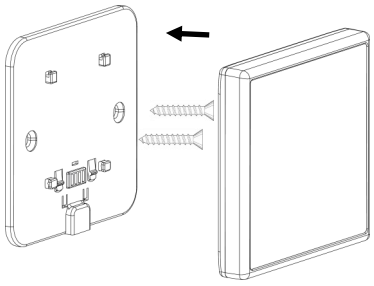
Installing Batteries

Open the battery cover and insert 3pcs AAA batteries, reinstall the battery cover.



Wall Mounting The PRO Controller

PRO Controller can be placed on any flat surface or can be fixed to the wall with the mounting bracket. Mounting Bracket Install: Select location for the PRO Controller on the wall,. Secure the bracket to with 2 appropriate anchors and screws. Insert PRO Controller into bracket.



Low Battery Indicator

When batteries are low, "BA" will flash on the heater display and battery icon appears on the Pro Controller to indicate batteries should be replaced.

Note: If batteries fail, the heater is designed to revert back to the onboard temperature sensor for temperature control until the batteries are replaced in the remote sensor.

Low Signal Indicator

When the PRO Controller is not paired with the heater or if the signal is being blocked. the display flashes "LS". After 10 minutes, the controller will automatically switch to work with the on-board temperature sensor, but the display will continue to flash "LS" until the signal restored.

1. Following Pairing process above to successfully pair the sensor.
2. Move PRO Controller closer to the heater or away from metal objects that might block the signal.

INITIAL SETUP OF ECO PRO CONTROLLER

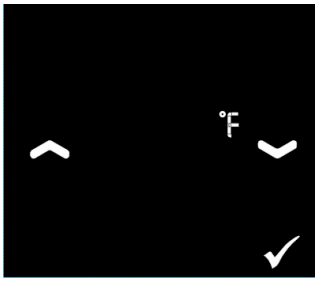
INITIAL SETUP:

Press and hold ^ and v buttons for 5 seconds to enter SETTINGS steps:

Setting#1: Set °Celsius or °Fahrenheit

Press ^ or v to select °C or °F (Default °F).

Press ✓ to save setting and move to next step.



Setting °C or °F

Setting#2: Set Clock

Press ^ or v to adjust Day → Hour → Minute.

Press ✓ to save setting and move to next step.

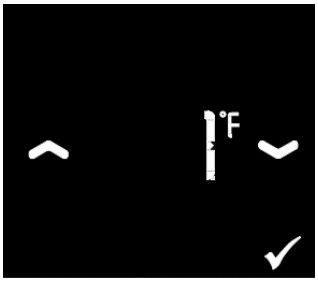
Setting Clock

Setting#3: Set Temperature Offset:

The Offset value that you set will be added or subtracted from the ambient temperature reading shown on the display. This can be useful to match other temperature reading devices in the space.

Press ^ or v to adjust the Temperature Offset. (Range -4°F to +4°F)

Press ✓ to save setting and move to next step. (Default 0°F)

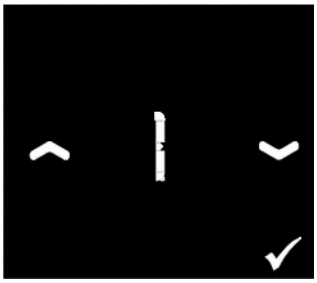


Setting Temperature Offset

Setting#4: Set Brightness:

Press ^ or v to select the screen's contrast level from 1(Dimmest) to 7 (Brightest).

Press ✓ to save setting and exit initial setup. (Default 5)



Setting Brightness

INITIAL SETUP OF ECO PRO CONTROLLER - Cont.

Setting#5: System OFF or Freeze Protection OFF:

System Off

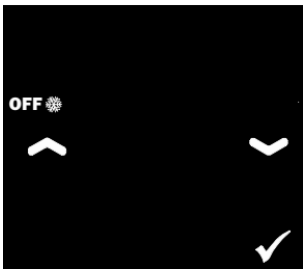
This option sets the preferred setting when the button is pressed.

Press or to select between System OFF or Freeze Protection OFF

Press to save setting and move to next step.

System Off = Disables the relay output and heater will never turn on under any scenario.

When activated OFF is shown on display.



Freeze Protection Off

Freeze Protection Off = Heater will turn on if the ambient room temperature drops below 40F.

When activated OFF is shown on display.

Setting#6: WINDOW OPEN SETBACK Temperature (Optional Window/Door Sensor Accessory Required)

Sets the preferred setback temperature if an optional Window/Door sensor is connected to system.

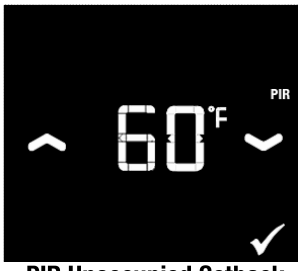
Window Open Setback

Press or to select between 40°F (default), 45°F, 50°F, or 55°F.

Press to save setting and move to next step.

Setting#7: PIR UNOCCUPIED SETBACK Temperature (Optional PIR Occupancy Sensor Accessory Required)

Sets the preferred setback temperature if an optional PIR Occupancy Sensor is connected to system.



PIR Unoccupied Setback

Press or to select between 45°F, 55°F, 60°F (default), or 65°F.

Press to save setting and exit initial setup.

Setting#8: MULTIPLE HEATERS INSTALLATION SCENARIO (SAME ROOM OR DIFFERENT ROOMS)

Since ECO PRO Controller can be paired to multiple heaters, the status of each heater will be different under these two scenarios. This option sets the control logic depending if multiple heaters are installed in a single room or different rooms.

Press or to select between 1 = Same Room (Default) or 0 = Different Rooms.

Press to save setting and exit initial setup.

Note: At any time during the setup process you can Press and Hold the button for several seconds to exit the initial setup early.

OPERATION OF ECO PRO CONTROLLER

PRESET SCENE TEMPERATURES:

ECO PRO Controller has 3 preset scene temperatures that you can quickly select to temporarily override the heating schedule, when your daily routine unexpectedly changes. Their default settings are shown in the following table:

Scene	Icon	Default Temp Settings
Home		70°F
Away		55°F
Sleep		60°F

HOW TO USE A PRESET SCENE:

Press the Preset Scene Temperature Icon until it starts flashing. With each addition press it will switch between the 3 preset scenes.

Once the Scene you desire is shown, Press to save Preset Scene.

That preset temperature becomes the current setpoint until the next Heat Schedule period starts , when the heater returns to the programmed heating schedule.

MODIFYING A PRESET SCENE TEMPERATURE:

Press the Preset Scene Temperature Icon until it starts flashing. With each addition press it will switch between the 3 preset scenes.

Once the Scene you desire to modify is shown, Press or to adjust the temperature setpoint for that scene until the new desired setpoint temperature is shown.

Press to save the new setpoint for the Preset Scene.

Note: This becomes the new setpoint, not only for the Preset Scene but also throughout your heating schedule where that scene is used.

PROGRAMMING THE HEATING SCHEDULE

DEFAULT HEATING SCHEDULE:

The ECO Pro Controller uses the PRESET SCENE TEMPERATURES setpoints (as described on page 10) as the temperature setpoints for the time period in your heating schedule. The default heating schedule is shown in the following table. We recommend using the default schedule since it was designed to help reduce your heating expenses.

The schedule consists of 4 periods per day, which represents a typical work day.

The HOME preset temperature is automatically used in Periods 1and 3.

The AWAY preset temperature is automatically used in Period 2.

The SLEEP preset temperature is automatically used in Period 4.

You can have a different schedule for every day; i.e., each period can start at a different time every day.

The PRO Controller has been factory programmed with the following schedule.

Period	Icon	Scene	Mon	Tue	Wed	Thr	Fri	Sat	Sun
1		Home	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM
2		Leave	8:00 AM	8:00 AM	8:00 AM	8:00 AM	8:00 AM	8:00 AM	8:00 AM
3		Home	6:00 PM	6:00 PM	6:00 PM	6:00 PM	6:00 PM	6:00 PM	6:00 PM
4		Sleep	10:00 PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM

HOW TO MODIFY THE HEATING SCHEDULE:

Step 1: Press to start the process.

Mon begins to flash. Press or to select the Day of the Week you would like to modify.

Step 2: Press again to move to the next step and select the Time Period you would like to modify.

Period 1 icon begins to flash. If changing Period 1, Press again to move to next step. Or Press or to change to the Time Period you would like to modify such as Period 2 or Period 3 or Period 4 .

PROGRAMMING THE HEATING SCHEDULE

HOW TO MODIFY THE HEATING SCHEDULE - Continued:

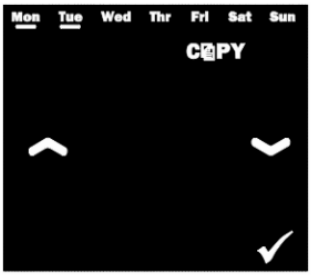
Step 3: Press  again, Hour begins to flash. Press  or  to modify the Hour period starts.

Step 4: Press  again, Minutes begin to flash. Press  or  to modify Minutes period starts.

Step 5: Press  again to select the next period of the selected day to modify that period program according to the steps above.

After modifying the heat schedule as needed, Press  to save setting or wait for 15 seconds and the setting will be saved automatically.

COPY & PASTE A DAY'S SCHEDULE - Save Time Programming!



If you would like to copy the schedule for a specific day and add it to other days of the week, follow these steps and save time!

Step #1 After changing the schedule for a specific day (example Mon), Press  to save the day's schedule.

Step #2 Press the  icon to copy the selected day's schedule (example Mon). The remaining Days of the Week will appear on the screen.

Step #3 Press each day of the week that you want to paste Monday's schedule to. (For example: Tues, Wed, Thr, Fri). As you press each day, a line will appears under the days you have selected.

Step #4 Press  to confirm the pasted schedule.

HEATING SCHEDULE OVERRIDE / ADJUSTING THE TEMPERATURE - (Temporary)

To adjust the desired temperature up or down, touch  and  on the thermostat home screen.

Note: Adjusting the temperature will temporarily override the current set point until the next schedule period unless you want to use one of the schedule overrides below.

GENERAL OPERATION

ECO PRO CONTROLLER OPERATING MODES

SYSTEM MODES:

PRO Controller has 3 system modes (**Schedule, Override, Permanent Hold**) that indicate if the state of the system. The current mode is displayed to the right of the **Set To** temperature on the home screen. The **set duration** of the current mode is displayed to the right of that, showing the time the system mode is active until. This makes it easy to identify when the next system change will occur.

Schedule:	System is running based on the programmed heating schedule.
Override:	System, is running based on a manually set override for a limited amount of time.
Permanent Hold:	System is running on a manually set override that will be permanently held until manually turned off.

OPERATION MODES:

PRO Controller has 4 operation modes (**Heat, Timer, Hold, Fan Only**). The current mode is displayed on the left, under the **Date and Time** on the home screen. The **set duration** of the current mode is displayed at the bottom right of the **Set To** temperature, showing the time it is active until.

To cycle through the available operation modes, touch **Mode** (MODE) on the thermostat home screen and select the appropriate mode and settings.

Heat:	This is the default operation mode based on the heating schedule you have programmed.
Timer:	This is a **temporary** system override based on the current system settings, that will expire after on a length of time you set.
Hold::	This is a **permanent** system override that holds the current system settings permanently, until manually canceled.
Fan Only:	This is a operating mode to run the fan only, typically used in the summer for cooling.

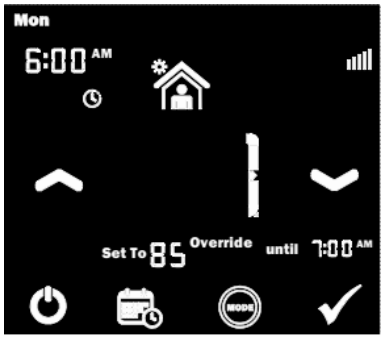
CHANGING THE OPERATION MODES:

Timer Mode: Press (MODE) once to enter into **Timer Mode.**

The timer **Hour** begins to flash. Press ^ or v to adjust the Hour for when the timer expires.

Press ✓ and **Minutes** begin to flash. Press ^ or v to adjust.

Press ✓ to save. Pro Controller will run based on current settings for that set period of time.



Timer Mode

To cancel, press (MODE) three times get to Heat mode. Press ✓ to save the mode.

Hold Mode: Press (MODE) two times to enter into **Hold Mode.**

Press ✓ to save the mode.

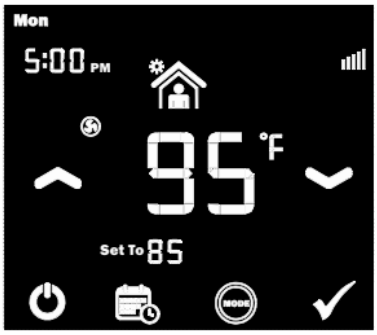
Pro Controller will **permanently** hold the current temperature until manually canceled.

Hold Mode

To cancel, press (MODE) two times get to Heat mode. Press ✓ to save the mode.

GENERAL OPERATION

CHANGING THE OPERATION MODES - Continued:



Fan Only Mode

Fan Only Mode: Press MODE three times to enter into Fan Only Mode.
Press ✓ to save the mode.

When fan mode is selected there is no heat output. Fan turns on when room temperature is higher than the set temperature. When room temperature drops to the set temperature, fan turns off.

Note: The system functions as a cooling thermostat.

To cancel, press MODE one time get to Heat mode. Press ✓ to save the mode.

Heat Mode: Press MODE four times to return to Heat Mode. System functions based on Programmed Heat Schedule again.
Press ✓ to save the mode.

SYSTEM OFF/STANDBY FUNCTION:

Press ⏻ button to enter or exit Standby Mode.
System will enter "System Off" or "Freeze Protection Off", depending on what default was set during INITIAL SETUP

System Off
(Heat Stays OFF Regardless of Room Temp)

Freeze Protection Off
(Heat Turns On When Room Drops Below 40F)

MULTIPLE HEATERS PAIRED TO CONTROLLER - SYSTEM STATUS CHECK:

When multiple heaters are paired to a single ECO PRO Controller, if the heaters are installed in different rooms the status of each heater will be different based on the ambient temperature in each room. Follow the below steps to check the status of each heater:

Long press ⌂ for 5s to enter the check mode. The middle number represents different heaters, press ∧ or ∨ to check the status of each heater and the mode of it. Press ✓ to exit the check mode.

GENERAL OPERATION

MAX TEMPERATURE LIMIT SETTING:

This setting allows the user to set a limit on the highest temperature setting allowed on the thermostat. It can be used in high traffic areas and can help prevent energy waste.

Press button to enter OFF mode

Press and hold and button simultaneously for 5 seconds to enter Max Temperature setting mode

Press or to adjust the max temperature (40~95 °F)

Press to confirm the setting or wait for 15 seconds and the setting will be saved automatically.

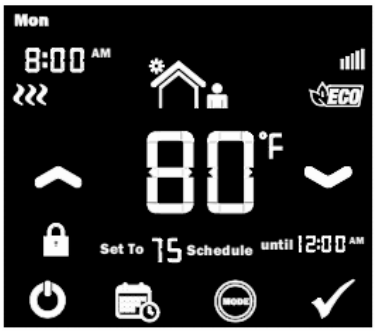
DISPLAY LOCK MODE:

Display Lock is designed for high traffic areas and deactivates the heater display buttons to prevent unwanted temperature adjustments. However settings can still be adjusted through the remote control.

Press and hold and button simultaneously for 5 seconds to enter Display Lock Mode.
All buttons on the Heater Display and ECO Pro Controller will be disabled until unlocked.

To Unlock: Press and hold and button for 5 seconds to exit Display Lock Mode.

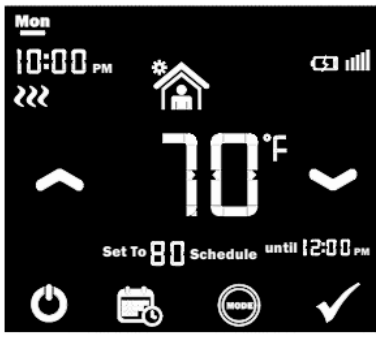
Note: While in Display Lock Mode, the heater operates at the last known settings.



Display Lock

LOW BATTERY INDICATOR

When running on battery power, when the batteries are low on power the display shows .
Replace batteries or plug into wall power.



Low Battery Indicator

FACTORY RESET UNIT

Press and hold and button simultaneously for 10 seconds.
All lights on the display will flash to confirm reset was completed and then the unit returns to it's factory default settings & program.

DISPLAY WAKEUP (Wall Adaptor Connected)

The controller has a proximity sensor, so as you approach the controller the display will turn on automatically (detection range is 5 feet). When there is no activity for 30 seconds, the display will turn off automatically.

If the display does not turn on when you approach the controller, you can also press the icon on the display to wake it up.

DISPLAY WAKEUP (Battery Powered)

When powered with batteries only, the display will automatically turn off after 15 seconds to save battery life.

CREATE A HEATING ZONE - Connect Multiple Heaters

Control Temperatures and Save Energy with Zoned Heating Systems

A zoned heating system allows homeowners to control the temperature of each room or zone individually, thereby maximizing comfort and minimizing energy costs. A zoned system can be adjusted for numerous factors, including room usage, personal preferences, and environmental conditions. Zoned systems help homeowners use their heating systems more effectively by distributing heat where and when it is needed.

A single ECO Pro Controller can be paired to multiple heaters, creating a Heating Zone that is controlled by a single heating schedule. All heaters in this zone will be synchronized to the heating schedule of the ECO Pro Controller.

Creating a Heating Zone

Step 1: Pair Multiple Heaters To A Single ECO PRO Controller

Follow the Pairing and Usage setup instructions on page 4 of this manual to pair each heater in the required heating zone to a single ECO PRO Controller. After pairing the first heater, repeat steps to pair each additional heater.

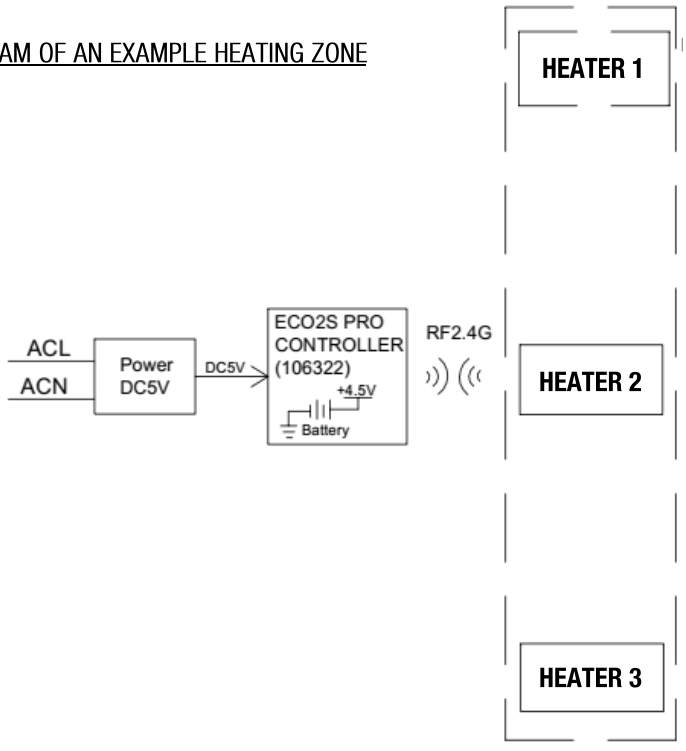
Step 2: Program The Desired Heating Schedule

Follow the Program The Heating Schedule instructions on page 9 to create a heating schedule for the ECO PRO Controller.

Step 3: Operation

All heaters within this heating zone are now synchronized and will operate off the programmed heating schedule. Any changes made to the ECO PRO Controller will effect all heaters in this zone. The ambient room temperature will be detected at the location of the ECO PRO Controller, so proper placement of the ECO PRO Controller is important. Locate the ECO PRO Controller in the coldest spot in the heating zone to eliminate any cold areas within the zone.

DIAGRAM OF AN EXAMPLE HEATING ZONE



ECO PRO Controller