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## KING KB2412-1-ECO2S-PLUS-FB

# KING KB2412-1-ECO2S-PLUS-FB 12.5KW 240V 2-Stage Electronic Garage Heater Instruction Manual

Model: KB2412-1-ECO2S-PLUS-FB

## INTRODUCTION

This manual provides essential information for the safe and efficient operation, installation, and maintenance of your KING KB2412-1-ECO2S-PLUS-FB 12.5KW 240V 2-Stage Electronic Garage Heater. Please read all instructions carefully before use and retain this manual for future reference.

The KB ECO2S+ series unit heaters are designed for primary or supplemental heating in warehouses, stores, or large garage spaces. They feature energy-efficient 2-stage heating, an Eco mode, integrated fan-only and timer modes, and a remote control for convenient operation. The included ECO2S+ Remote Temperature Sensor allows for precise temperature control by sensing the room's cold spot.



Figure 1: Front view of the KING KB2412-1-ECO2S-PLUS-FB 12.5KW 240V 2-Stage Electronic Garage Heater, showing the control panel and heating elements.

## SETUP AND INSTALLATION

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### Mounting

The heater comes with a universal wall/ceiling bracket for simple installation. Ensure the mounting location is structurally sound and can support the heater's weight (approximately 100 pounds). Maintain adequate clearance from walls, ceilings, and flammable materials as specified in the detailed installation guide (not included in this summary).



Figure 2: The KING KB2412-1-ECO2S-PLUS-FB heater shown with its included mounting bracket and the remote temperature sensor.

## Electrical Connection

This unit requires a 240V electrical supply and draws 52.1 Amps. Installation must be performed by a qualified electrician in accordance with all local and national electrical codes. The heater is hard-wired and does not use a standard plug.

## Remote Temperature Sensor

The ECO2S+ Remote Temperature Sensor should be placed on a wall or shelf in the area where you desire the most accurate temperature reading. This allows the heater to work smarter by sensing the actual room temperature away from the unit itself, ensuring even heating and eliminating cold spots.

## Optional 24V Thermostat

The heater includes a provision for adding an optional 24V thermostat for remote temperature control. This makes it compatible with smart thermostats like Nest or other 24V WiFi thermostats, offering enhanced control options.

## OPERATING INSTRUCTIONS

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Your KING KB2412-1-ECO2S-PLUS-FB heater offers advanced control for optimal comfort and energy efficiency.

### Control Panel and Remote Control

The heater can be operated via its integrated control panel or the included remote control. The remote allows for convenient adjustment of settings from a distance.



Figure 3: The heater's control panel and the remote control for convenient operation.

## 2-Stage Heating and Eco Mode

The heater features 2-stage heating, automatically using the lowest wattage needed to heat the room to your desired temperature. The Eco mode further optimizes energy consumption by intelligently adjusting heating output.

### Temperature Setting

Use the up and down arrows on the control panel or remote to set your desired temperature. The digital display will show the current and set temperatures.

### Fan-Only Mode

For year-round comfort, the heater includes a summer fan-only mode to circulate air without engaging the heating elements.

## Timer Function

Utilize the integrated timer mode to program the heater to operate for specific durations, enhancing convenience and energy savings.

## Video: ECO2S+ With Remote Temperature Sensing - 2-Stage Heating

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Video 1: This video demonstrates the features of the ECO2S+ heater, including its remote temperature sensing and 2-stage heating capabilities, highlighting how it works smarter to maintain comfort.

## MAINTENANCE

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Regular maintenance ensures the longevity and efficient operation of your heater.

- **Cleaning:** Periodically clean the exterior of the heater with a soft, damp cloth. Ensure the unit is powered off and cool before cleaning. Do not use abrasive cleaners or solvents.
- **Airflow:** Ensure that the air intake and exhaust grilles are free from dust, debris, and obstructions. Blocked airflow can lead to overheating and reduced efficiency.
- **Inspections:** Annually inspect the electrical connections and mounting hardware for any signs of wear or loosening. If any issues are found, contact a qualified technician.



Figure 4: Rear view of the heater, showing the fan and important safety labels regarding clearances and operation.

## TROUBLESHOOTING

If you experience issues with your heater, consult the following common problems and solutions:

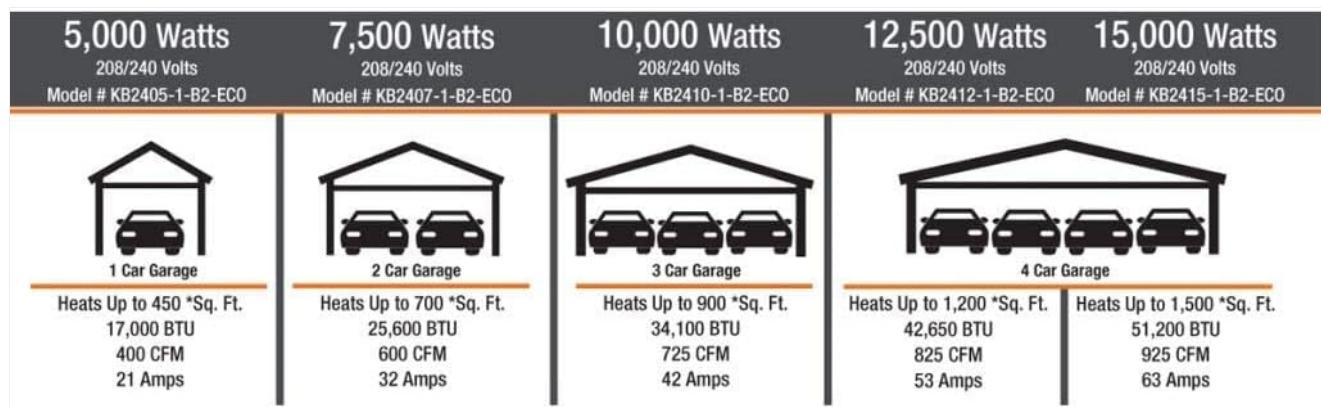
- Heater not turning on:** Check the circuit breaker for the heater's circuit. Ensure the unit is properly wired and receiving power. Verify the thermostat setting is above the ambient temperature.
- Heater not producing heat:** Confirm the unit is in heating mode, not just fan-only mode. Check the remote temperature sensor placement and ensure it's communicating with the main unit.

- **Fan not operating:** Ensure the unit is powered on. If in heating mode, the fan should activate with the heating elements. If in fan-only mode, check the setting.
- **Uneven heating:** Reposition the remote temperature sensor to a location that better represents the average temperature of the space or a known cold spot. Ensure no obstructions are blocking airflow.

For persistent issues, contact customer support or a qualified electrician.

## SPECIFICATIONS

Feature	Detail
Brand	KING
Model Number	KB2412-1-ECO2S-PLUS-FB
Power Output	12.5KW
Voltage	240 Volts
Amperage	52.1 Amps
Heating Coverage	Up to 1422 square feet (based on insulated walls and ceiling)
Mounting Type	Ceiling Mount
Special Features	Energy Efficient, Remote Control, 2-Stage Heating, ECO2S+ Remote Temperature Sensor, Compatible with Nest/24V WiFi Thermostats
Product Dimensions	16.5 x 15 x 18 inches
Item Weight	100 pounds



\*Square footage is calculated at 10 watts per square foot, based on insulated walls (4" R-11 or R-13) and 8 foot insulated ceiling (4" R-11 or R-13).

Figure 5: Heating coverage chart illustrating the area heated by various wattage KING garage heaters, including the 12.5KW model.

## WARRANTY INFORMATION

KING products are manufactured to high-quality standards. This product typically comes with a manufacturer's

warranty covering defects in materials and workmanship. For specific warranty terms, duration, and claim procedures, please refer to the warranty card included with your product or visit the official KING Electric website. Keep your proof of purchase for warranty claims.

## CUSTOMER SUPPORT

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For technical assistance, replacement parts, or any questions regarding your KING KB2412-1-ECO2S-PLUS-FB heater, please contact KING Electric customer support. Contact details can typically be found on the product packaging, the official website, or the warranty documentation.

**Online Resources:** Visit the [KING Store on Amazon](#) for additional product information and support.