

KING KB2410-1-B2-ECO

KING KB ECO2S Garage Heater Instruction Manual

Model: KB2410-1-B2-ECO

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your KING KB ECO2S Garage Heater. The KB ECO2S series offers advanced heating solutions with an integrated electronic thermostat and remote control, designed for energy-efficient 2-stage heating. It features an Eco mode, fan-only operation, and timer functions, making it suitable for primary or supplemental heating in garages, workshops, and similar large spaces.

Please read this manual thoroughly before installation and use, and retain it for future reference.



2. IMPORTANT SAFETY INFORMATION

WARNING: Risk of Fire, Electric Shock, or Injury to Persons.

- Read all instructions before using this heater.
- This heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces. Keep combustible materials, such as furniture, pillows, bedding, papers, clothes, and curtains, at least 3 feet (0.9 m) from the front of the heater and keep them away from the sides and rear.
- Extreme caution is necessary when any heater is used by or near children or invalids and whenever the heater is left operating and unattended.
- Do not operate any heater with a damaged cord or plug or after the heater malfunctions, has been dropped or damaged in any manner. Discard heater, or return to authorized service facility for examination and/or repair.
- Do not use outdoors.
- This heater is not intended for use in bathrooms, laundry areas, and similar indoor locations. Never locate heater where it may fall into a bathtub or other water container.
- Do not run cord under carpeting. Do not cover cord with throw rugs, runners, or similar coverings. Arrange cord away from traffic area and where it will not be tripped over.
- To disconnect heater, turn controls to off, then remove plug from outlet.
- Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock or fire, or damage the heater.
- To prevent a possible fire, do not block air intakes or exhaust in any manner. Do not use on soft surfaces, like a bed, where openings may become blocked.
- A heater has hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint, or flammable vapors or liquids are used or stored.
- Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
- This heater must be hardwired by a qualified electrician. Do not attempt to install or service this unit yourself if you are not qualified.

3. PACKAGE CONTENTS

Verify that all components are present and undamaged before proceeding with installation.

- KING KB ECO2S Garage Heater Unit
- Universal Wall/Ceiling Mounting Bracket
- Remote Control
- Instruction Manual (this document)



Image 2: The heater unit, mounting bracket, and remote control as included in the package.

4. INSTALLATION

IMPORTANT: This heater requires hardwiring to a 240V electrical supply. Installation must be performed by a qualified, licensed electrician in accordance with all local and national electrical codes.

4.1 Mounting the Heater

The heater comes with a universal bracket for wall or ceiling mounting. Ensure the mounting surface is structurally sound and capable of supporting the heater's weight (approximately 37.5 lbs).

1. Select a mounting location that allows for proper air circulation and is at least 3 feet (0.9 m) away from combustible materials.
2. Securely attach the universal bracket to the chosen wall or ceiling studs/joists using appropriate hardware (not included).
3. Mount the heater unit onto the bracket. The bracket allows for adjustable positioning to direct heat flow.

4.2 Electrical Connection

WARNING: Ensure power is disconnected at the main circuit breaker before attempting any electrical wiring.

1. A dedicated 240V circuit with appropriate amperage (45 Amps for the 10000W model) is required.
2. Access the internal wiring compartment of the heater. This typically involves removing a panel on the unit.
3. Connect the supply wires to the heater's terminals as indicated in the wiring diagram located inside the heater's wiring compartment and in the full installation guide. Ensure proper grounding.
4. Securely close the wiring compartment.
5. Once installation is complete, restore power at the circuit breaker.



Image 3: Rear view of the heater, illustrating the fan and the typical location for electrical wiring access.

5. OPERATING INSTRUCTIONS

The KB ECO2S heater can be operated using the integrated control panel or the included remote control.

5.1 Control Panel Overview

The front panel features a digital display and control buttons for power, mode selection, and temperature adjustment.



Image 4: Detailed view of the heater's control panel with digital display and buttons.

5.2 Remote Control Functions

The remote control provides convenient access to all heater functions from a distance.

- **Power On/Off:** Press the power button to turn the heater on or off.
- **Temperature Adjustment:** Use the up/down arrows to set the desired temperature. The digital display will show the set temperature.
- **Mode Selection:** Cycle through available modes (Heat, Eco, Fan Only, Timer) using the mode button.
- **Eco Mode:** Automatically adjusts wattage to maintain the set temperature efficiently.
- **Fan Only Mode:** Operates the fan without engaging the heating elements, useful for air circulation.
- **Timer Function:** Set a timer for automatic shut-off. Refer to the full manual for detailed timer programming.

5.3 Initial Operation

Upon first use, the heater may emit a slight odor as manufacturing oils burn off. This is normal and will dissipate quickly. Set the desired temperature. The heater will operate in 2-stage heating, using the lowest wattage necessary to reach and maintain the set temperature, optimizing energy consumption.

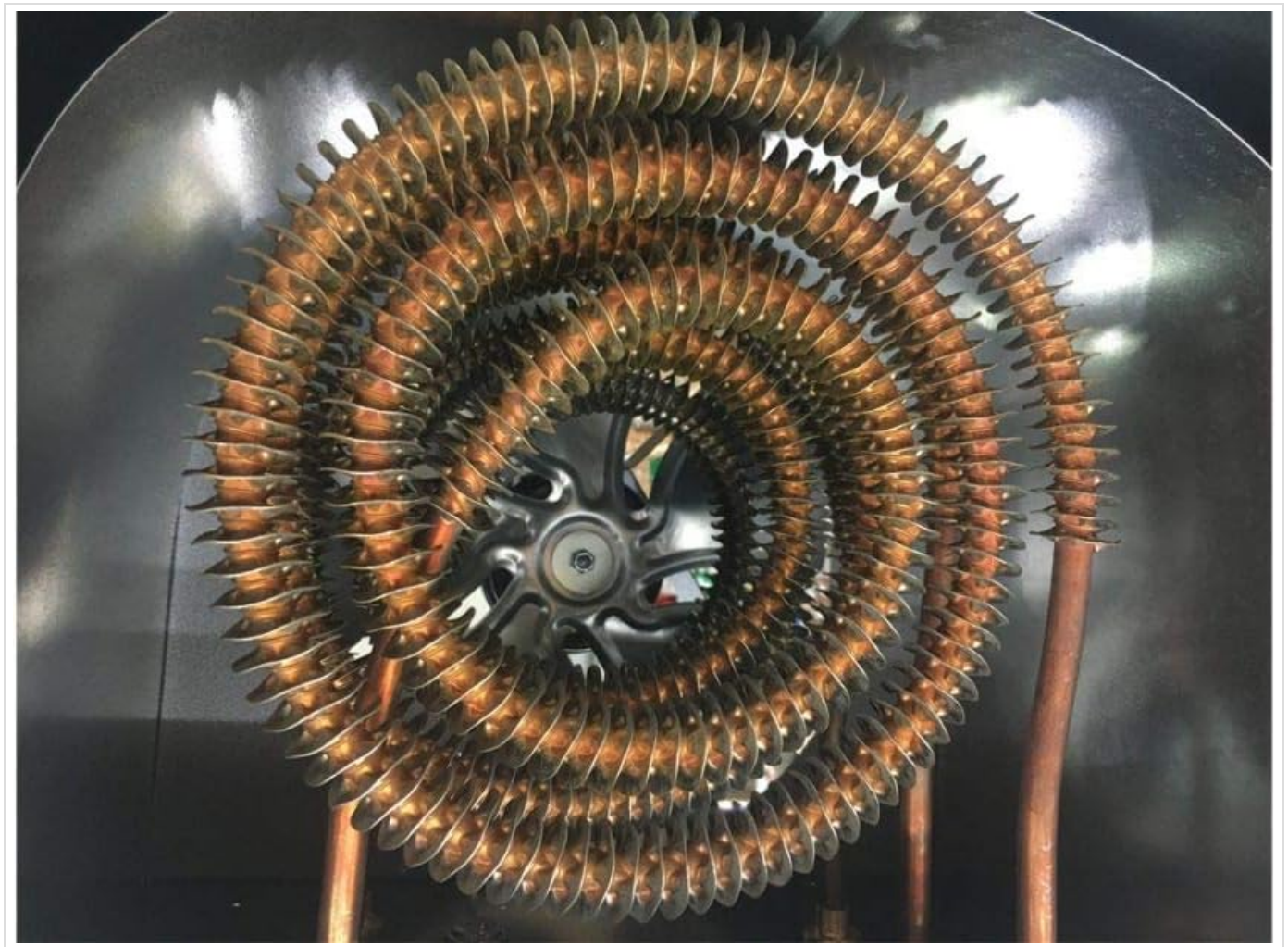


Image 5: View of the spiral steel heating elements and fan, designed for efficient heat distribution.

6. MAINTENANCE

WARNING: Disconnect power at the main circuit breaker before performing any maintenance.

- **Cleaning:** Periodically clean the exterior of the heater with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- **Air Intake/Exhaust:** Ensure that the air intake and exhaust grilles are free from dust, debris, and obstructions. Use a vacuum cleaner with a brush attachment to gently clean these areas.
- **Internal Inspection:** For internal cleaning or inspection, it is recommended to contact a qualified service technician.
- **Storage:** If storing the heater for an extended period, ensure it is clean and dry. Store in a cool, dry place.

7. TROUBLESHOOTING

Before contacting customer support, review the following common issues and solutions:

Problem	Possible Cause	Solution
Heater does not turn on.	No power supply; circuit breaker tripped; wiring issue.	Check circuit breaker. Ensure proper electrical connection (consult electrician if unsure).

Problem	Possible Cause	Solution
Heater produces insufficient heat.	Incorrect temperature setting; room size exceeds heating capacity; poor insulation.	Increase set temperature. Verify heater wattage is appropriate for the space (refer to specifications). Improve room insulation.
Heater cycles on/off frequently (clicking sound).	Thermostat sensitivity; rapid temperature changes.	This can be normal operation as the thermostat maintains temperature. If excessive, ensure proper air circulation around the unit and that the thermostat is not exposed to drafts. If the issue persists, contact customer support.
Remote control not working.	Dead batteries; obstruction; out of range.	Replace remote control batteries. Ensure no obstructions between remote and heater. Operate within recommended range.

8. SPECIFICATIONS

Feature	Detail
Model	KB2410-1-B2-ECO
Brand	KING
Voltage	240 Volts
Amperage	45 Amps
Wattage	10000 Watts
Heating Coverage	Up to 900 sq ft (based on 8-ft ceiling height and FHA standard insulation values)
Product Dimensions (D x W x H)	13.5" x 15" x 16.5"
Item Weight	37.5 pounds
Special Features	Remote Control, Electronic Thermostat, 2-Stage Heating, Eco Mode, Fan Only Mode, Timer
Number of Speeds	2
Fuel Type	Electric
Mounting Type	Universal Wall/Ceiling Bracket (included)

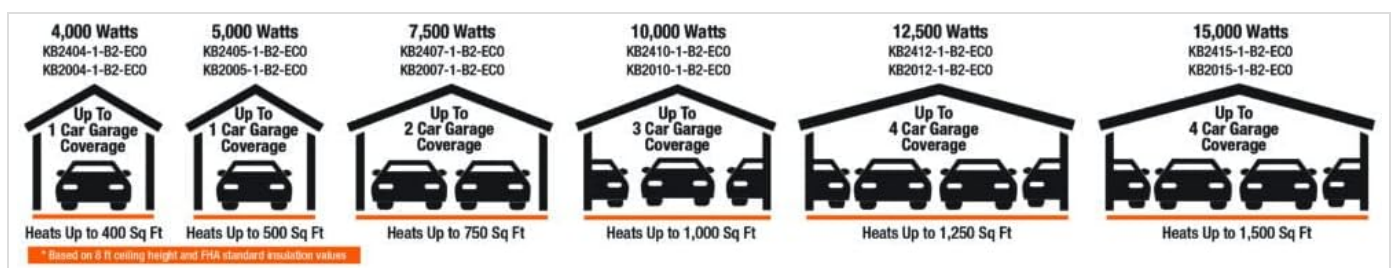


Image 6: Heating coverage chart for various wattage models, including the 10000W model covering up to 900 sq ft.

9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please refer to the official KING Electric website or contact their customer service directly. Keep your purchase receipt as proof of purchase for warranty claims.

Manufacturer: King Electric

Website: www.king-electric.com



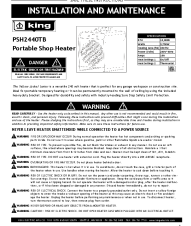
10. PRODUCT VIDEOS




KING Electric - Smart Heating Solutions

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Video 1: An overview of KING Electric's commitment to smart heating solutions and manufacturing quality.

Related Documents - KB2410-1-B2-ECO

	<p>King LPW-ECO Series Heater Installation and Maintenance Guide</p> <p>Comprehensive guide for installing, operating, and maintaining King LPW-ECO series electronic heaters, including safety instructions, wiring diagrams, remote sensor setup, and troubleshooting.</p>
	<p>King KBP ECO2S+ Series Compact Unit Heater - Energy Efficient 2-Stage Heating</p> <p>Detailed information on the King KBP ECO2S+ Series compact unit heater, featuring energy-saving ECO2S+ electronic control, 2-stage heating, remote temperature sensing, and versatile installation options. Includes specifications, ordering information, and engineering details.</p>
	<p>King PSH2440TB Portable Shop Heater: Installation, Operation, and Safety Manual</p> <p>This comprehensive manual provides essential information for the King PSH2440TB Portable Shop Heater, including installation, safety guidelines, operating instructions, maintenance tips, and troubleshooting solutions. Designed for garage and workshop use, it features 3750W power and 240V operation.</p>

 <p>Wireless 24V RF Thermostat Kit for Electric Heat Control</p> <p>Thermostat Link</p> <p>King KRF-HEAT-KIT</p>	<p>King KRF-HEAT-KIT Wireless 24V RF Thermostat Kit for Electric Heat Control</p> <p>Comprehensive guide to the King KRF-HEAT-KIT, a 24V RF wireless thermostat system designed for line voltage electric heat control. Features include the KRFTP-B programmable thermostat and KRFLR-120/240V relay, with detailed specifications, ordering information, and optional accessories for enhanced control and energy savings.</p>
 <p>King KRF-B-KIT</p> <p>Submittal Sheet</p> <p>Product Details</p>	<p>King KRF-B-KIT Wireless 24V RF Multi-System Thermostat Kit - Submittal and Specifications</p> <p>Product details for the King KRF-B-KIT Wireless 24V RF Multi-System Thermostat Kit, including submittal sheet fields, system diagram, engineering specifications, ordering information, and optional accessories. Features backup line voltage electric heat control.</p>
 <p>INSTALLATION INSTRUCTIONS</p> <p>King KCV Series</p> <p>WARNING</p>	<p>King KCV Series Cove Heater Installation Guide</p> <p>Official installation instructions for the King KCV Series Cove Heater (Model KCV1202), detailing safety precautions, electrical setup, mounting, wiring, and maintenance.</p>