OX SPOT HEATER X10

OX
Outdoor & eXtreme



USER MANUAL

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USER MANUAL

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1. Fill the canister with diesel fuel. Connect it to the heater using quick-release hoses.





2. Open the air intake cap on the canister. **Caution!** The cap must always be open when the heater is running.



3. Assemble the exhaust system consisting of three segments: a muffler and two pipes.





Connect it to the heater.



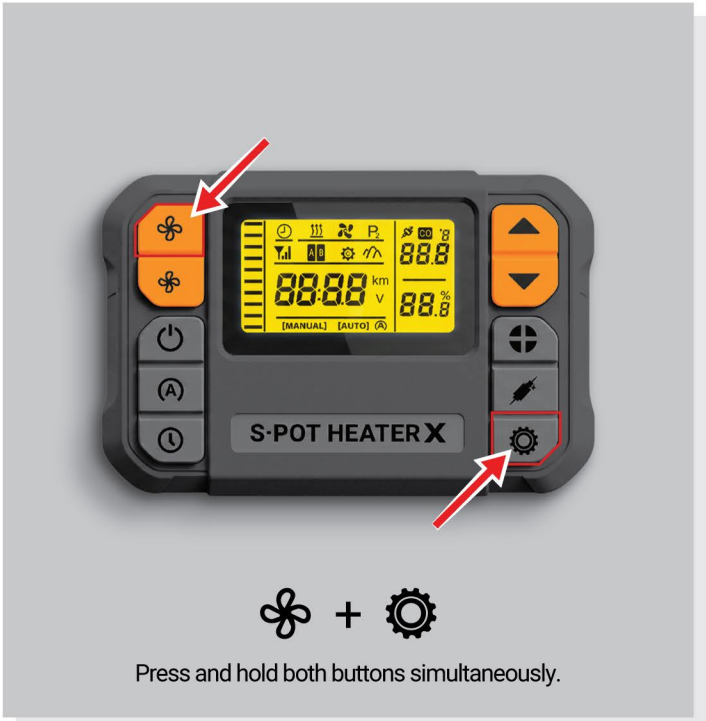
4. Connect the heater to a suitable power source: 12 V DC using the appropriate cable, or 220 V AC using the supplied power adapter. The power source may be a battery, portable power station, generator, or mains supply.



5. **First start only!** Pair the remote control with the heater via Bluetooth. Locate the button on the heater next to the power adapter connector. Press it once—it will latch in the depressed position. Wait 5 seconds, then press it again to switch it off and release it. The button indicator will start flashing.



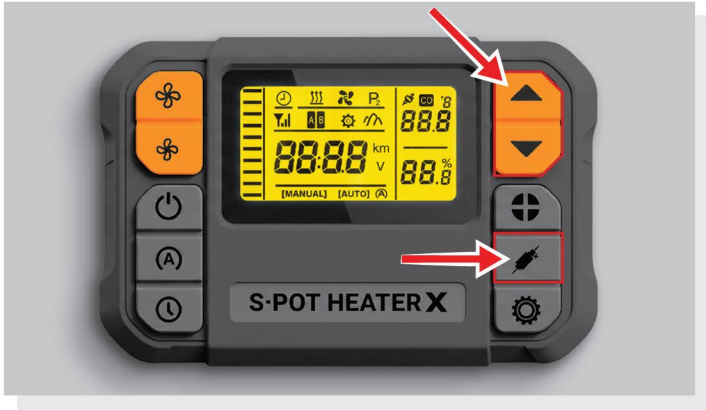
On the remote control, press and hold the top left and bottom right buttons and wait until 'PE' flashes on the display. The remote control is now paired.



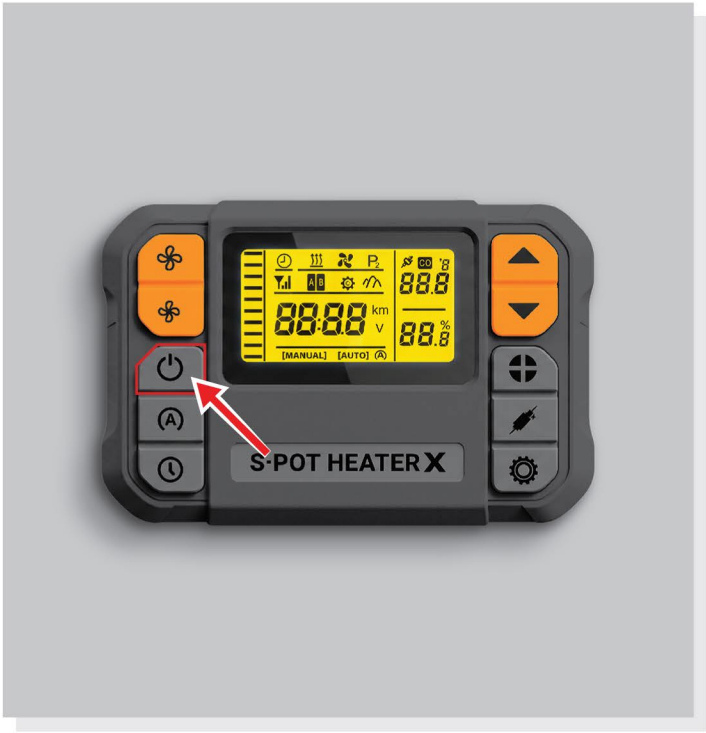
Press and hold both buttons simultaneously.

6. **First start only!** Perform manual fuel priming from the canister into the heater system.

- Press and hold the fuel priming button (the middle gray button on the right with the pump icon) for 3–5 seconds.
- Using the orange buttons on the right, set the value on the display to "120P" (P indicates seconds) and press the button from the step above to start the first priming. You will hear a characteristic sound from the pump.
- Upon completion of the first priming, set the value to "70P" and start the second priming.
- Perform the final priming by setting the value to "20P".
- Press and hold the fuel priming button until the remote exits to the main menu.



7. Turn on the heater by pressing the power button on the remote (top gray button on the left). Wait for the heater to enter operating mode (5–7 minutes).



8. Select the heater operating mode:

- To enable AUTO mode, press and hold the top right orange button for 3–5 seconds. In this mode, the heater maintains the set indoor temperature.

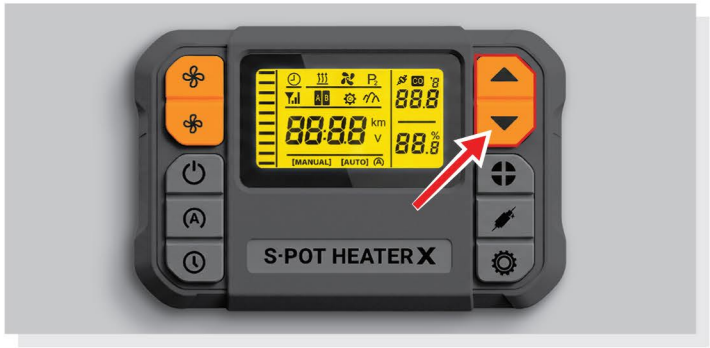
Caution! We **DO NOT** recommend using AUTO mode when running on a power station, as this may lead to faster battery discharge.

- To enable MANUAL mode, press and hold the top left orange button for 3–5 seconds. In this mode, the heater will operate according to the set values.

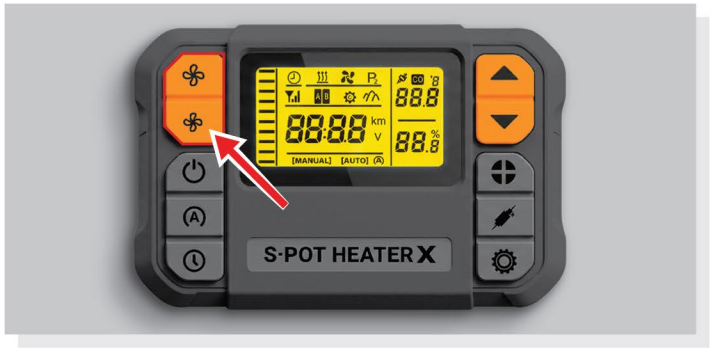
Note: We recommend using MANUAL mode in conditions of limited access to electricity (for example, camping).

The current active mode is shown in the lower part of the display: **AUTO** or **MANUAL.**

AUTO mode



MANUAL mode



9. The heater comes with two main nozzles through which warm air is released.

- If you want the heater to intake air from the outside, use only the nozzles.
- If you want the heater to intake air from the room, put the sleeves over the nozzles.





10. The heater is fully assembled and ready for operation.



IMPORTANT!

SHUTTING DOWN THE HEATER

- To turn off the heater, press and hold the power button until “OFF” lights up on the display.
- Do not disconnect the heater from the power source until it has blown all the warm air out of the heating system.
- The entire shutdown process takes about 5–7 minutes.

Be sure to wait for the purge system to completely stop before disconnecting from the power source.

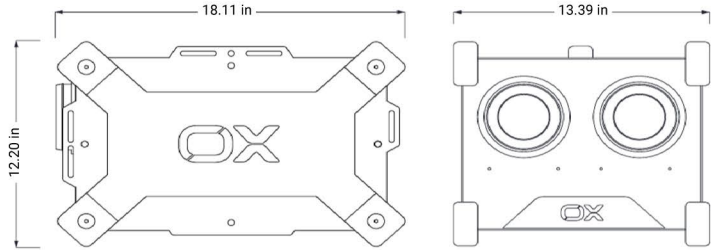
Failure to do so may damage the heater.

PRODUCT SPECIFICATIONS

Product Features: This product generates intense heat and emits exhaust gases during operation, so improper use poses a risk of accidents. Please exercise extreme caution during use and be sure to keep children from touching the product, especially when they are nearby.

Caution! This product generates intense heat and emits exhaust gases during operation. Improper use can cause burns and other injuries. Carbon monoxide (CO) is colorless and odorless and can cause fatal poisoning. In the supplied configuration, a CO sensor is built into the wireless remote control. To help prevent carbon monoxide poisoning, use a separate, functioning CO alarm suitable for the operating conditions.

Product Name	PORTABLE SPOT HEATER X10
Model Name	SPOT HEATER X10
Manufacturer	Wenzhou Chuangen Automotive Parts Co., Ltd.
Country of manufacture	China, Wenzhou
Intended Use	Portable diesel air heater for heating camping tents, parked vehicles, and RVs, with the heater unit located outside.
Heated Medium	Air
Heat Output	Min. 1.5 kW ~ Max. 10 kW (adjustment range)
Heating Air Flow Rate	60–370 m^3/h
Nominal Voltage	12V DC
Power Source	Car battery (lead-acid, lithium iron phosphate batteries recommended) / SMPS 200 W and above. Supply only 12 V DC to the XT90 connector, observing correct polarity. Do not connect it directly to AC mains power or a 24 V power source. Use a power supply and cable rated for the heater's startup load.



Power Consumption at Startup	100 W (2 min) + 130 W (1 min): high power consumption for 3 minutes
Power consumption during operation	Min. level (1st): 10 W Max. level (10th): 80 W
Low voltage alarm threshold	10.5 V
High voltage alarm threshold	16 V
Fuel Type	Clean diesel fuel suitable for the ambient temperature.
Fuel Consumption	Max. level (10th level, 10 kW): 1100 mL/h Min. level (1st level, 1.5 kW): 150 mL/h
Fuel Tank Capacity	20 L (optional 10 L)
Ambient Temperature during Operation	−40 ~ 68 °F (−40 ~ 20 °C)
Fuse	Automotive fuse, large, 12 V, 15 A. Replace the fuse only with one of the same type and a 15 A rating. Do not bypass the fuse or use a higher-rated fuse. If the fuse blows again, stop using the heater and contact the seller.
Product Dimensions	18.11 × 13.39 × 12.20 in (width × depth × height)
Weight	36.38 lbs.

PRECAUTIONS

⚠ This information is intended to ensure user safety and prevent property damage. Please read the information below carefully and use the product correctly.
** Precautions are divided into three categories: "Danger", "Warning", and "Caution".*

⚠ Danger

△ *Fuel type*
- Use diesel fuel only.
- It is strictly prohibited to use gasoline, thinner, cooking oil, machine oil, and other types of fuel. (This may cause a fire and damage the product.)

△ *12 V DC Power Source and Cable*
- Use a portable lithium iron phosphate battery (power bank) with a 12V DC voltage or an automotive lead-acid battery.
- If the battery starting current is insufficient, the device may fail to start.
- Be sure to comply with the allowable power cable specifications.
- Using power cables other than the included one may lead to fire.
- Recommended power cable specifications: VCTF 2.5SQ wire or 12AWG silicone cable.
- It is recommended to use a power cable no longer than 5 meters.

⚠ Caution

■ Precautions for Handling Fuel

△ *Use of Fuel in Winter*
- Use diesel fuel as the main fuel.
- Diesel fuel may freeze due to paraffin and moisture content, making it unusable.
- Do not use fuel additives.

△ *Fuel Storage*
- Store fuel in a place protected from fire, rain, dust, high temperatures, and direct sunlight.
- Do not store together with other types of fuel, such as gasoline. (This may cause a fire if used improperly.)
- Be sure to close the vacuum valve when transporting and storing the fuel tank. (The vacuum valve must be open during use.)
- During long-term storage of diesel fuel, fuel cleanliness and efficiency may decrease.

△ *Refueling*
- Before refueling, shut down the heater using the normal shutdown procedure and wait for the cooling cycle to finish. Refuel the tank outdoors. Do not smoke. Do not overfill the tank. Clean up any spilled fuel and check for leaks before starting the heater.

- Refuel after disconnecting the quick-release fitting from the main body and the fuel tank.
- Refuel in an area free of flames, sparks, and hot surfaces, including stoves and grills.
- When refueling, make sure that foreign objects do not enter the quick-release fitting and the refueling port filter.
- Spilled fuel must be wiped up immediately and thoroughly.
- Close the refueling port cap tightly all the way. (This prevents fuel odor and fire.)

⚠ Precautions for Use

- This product is designed for outdoor use.
- Do not use the device in enclosed spaces, such as unventilated rooms, inside tents, or inside vehicles.
- Place the heater in a stable, level position on a noncombustible surface outside the tent or vehicle. Do not place it in an enclosed tent vestibule. Prevent exhaust gases from entering doors, windows, ventilation openings, or the heating air intake. Before each startup, check for leaks at fuel connections, secure attachment of the exhaust system, unobstructed airflow, and damage to the power cable.
- Installing and using the heater indoors can lead to the generation of carbon monoxide, which is life-threatening.
- During or immediately after use, the exhaust pipe gets very hot, which can lead to burns.
- Do not touch the exhaust pipe, muffler, or hot air duct during operation or until they have cooled completely. Service these components only after they have cooled; use suitable heat-resistant gloves if necessary.
- Do not move the device while it is operating. Incomplete fuel combustion resulting from excessive fuel supply may lead to fire. Before moving the heater, shut it down using the normal shutdown procedure, wait for the cooling cycle to finish and all hot components to cool completely, then disconnect the power and secure the fuel tank and fuel line to prevent leaks during transport.
- Maintain a clearance of at least 20 cm (8 in) between the heater body and the tent, and at least 50 cm (20 in) between the hot exhaust pipe and other objects. These clearances do not replace the requirement to direct exhaust gases away from windows, doors, and air intakes.
- If the exhaust pipe is blocked, a large amount of carbon monoxide may form and penetrate into the room.
- Ensure that the exhaust pipe outlet is not blocked by a tent, soil, water, ice, dust, or other foreign objects.
- Be extra careful to prevent the exhaust pipe from being blocked.
- For comfortable and stable use, install the exhaust pipe in a direction where the wind effect is minimal.

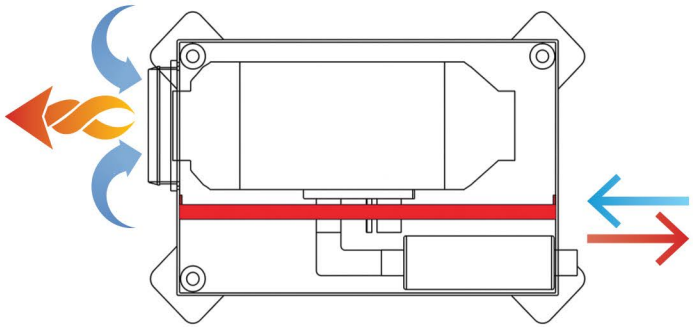
- Strong wind entering the exhaust pipe may temporarily disrupt the combustion process.
- Condensation forms inside the exhaust pipe, so install it pointing slightly downward.
- Install the end of the exhaust pipe so that it points downward to prevent rainwater from getting inside.
- There is a risk of inhaling exhaust gases, so direct the exhaust in the direction opposite to the wind. Position the exhaust outlet so that exhaust gases do not enter the tent, vehicle, air intakes, or areas occupied by people.
- To prevent noise and disconnection due to vibration, secure the exhaust pipe with mounting clamps.
- Be careful when handling the fuel line to prevent foreign objects from entering the quick-release fitting.
- To help prevent carbon monoxide poisoning from exhaust gases entering the heated space, install a separate CO alarm in that space according to its manufacturer's instructions. Keep the remote control with its built-in CO sensor in the heated area occupied by people. Do not cover the sensor openings or direct hot airflow at the remote control. Do not rely on readings from a remote control left outside.
- The heater air duct radiates a lot of heat, so be careful that people, animals, tents, blankets, clothing, plastic, and other heat-sensitive items do not come into direct contact with it. Do not allow hot components to touch the tent fabric. Use a suitable heat-resistant pass-through fitting rated for the air duct's operating temperature. Do not pinch or kink the air duct; keep the inlet and outlet unobstructed.
- The heater must always be used in a horizontal position.
- When using a dual air duct, if the inner air duct disconnects, overheating may occur, so securely connect the inner air duct before use.
- The wireless temperature controller is not waterproof, so be sure to keep it indoors. Monitor the remote control's battery level and connection status. Do not assume that CO protection is active if the remote control is turned off, has a depleted battery, is malfunctioning, or loses connection. Do not obstruct the sensor or attempt to bypass the CO warning.

PACKAGE CONTENTS AND HEATER COMPONENT NAMES



HEATER AIR CIRCULATION DIAGRAM





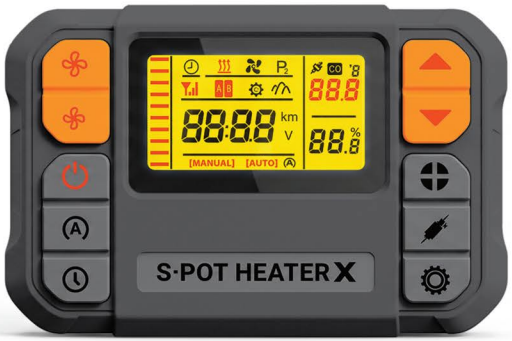
⚠ Air from the heated space enters the heating air intake, passes through the heat exchanger, and returns through the hot air outlet. Combustion air enters through a separate inlet, and combustion gases are discharged outdoors through the exhaust pipe. Do not connect the heating air ducts to the combustion air inlet or the exhaust outlet.

INSTALLING THE HEATER

Heater installation procedure

- Installing the heater outside the tent or vehicle.
- Connecting the air duct to the heater outlet.
- Connecting the dual air duct to the heating air intake.
- Place the fuel tank in a stable position, away from the exhaust system and other hot components. The distance between the heater and the fuel tank must not exceed 2 m (6.6 ft).
- Connecting the fuel line quick-release fitting to the heater.
- Opening the vacuum valve after connecting the fuel line quick-release fitting to the fuel tank.
- Connecting the exhaust pipe and securing it with clamps (if necessary, attach and secure the dual muffler).
- Connecting the power cable to the power supply unit.
- Connecting the XT90 power cable to the heater.
- Placement of the wireless temperature controller inside the tent (vehicle).

HEATER OPERATION AND TEMPERATURE CONTROL



POWER BUTTON (ON/OFF)

- **Switching on:** If you briefly press the power button on the remote control 1 time, the heater will start working. (“ON” is displayed on the screen.)
- After starting the heater, it automatically goes through the pre-heating process → ignition, and operates in normal mode according to the set mode and power criteria.
- **Switching off:** If you press and hold the power button again while the heater is running, the heater will stop. (“OFF” is displayed on the screen.)
- After a shutdown command, the heater performs automatic cooling. The OFF indication does not mean that power can be disconnected. Keep the power connected until the normal cooling cycle is complete and the fan has stopped. Do not move the heater for 3–5 minutes.
- Do not forcibly disconnect the power during cooling. Forcibly disconnecting the power may cause a malfunction due to residual heat.
- **MANUAL mode (level mode).** Using the power level + / – buttons on the remote control, you can directly control the fan speed and flame power. (The default factory setting is level mode.) It is recommended to use MANUAL level mode considering battery and fuel efficiency (levels 1–10). Fuel consumption and heat output increase in proportion to the power level.
- **AUTO mode (temperature maintenance mode)**
  If you set the target temperature using the + / – buttons on the remote control, the heater automatically adjusts the flame power and fan speed. Temperature setting range: 46–97 °F (8–36 °C). When the indoor temperature reaches the target, the output is automatically reduced, and the flame power is automatically adjusted according to changes in the ambient environment. AUTO mode does not work on a full shut-off principle, but rather on an output power control principle. (Depending on the installation location and ambient conditions, there may be a difference in perceived temperature.)

REMOTE CONTROL AND BUTTON FUNCTIONS

MAIN SCREEN DISPLAY

When power is connected, the screen displays time, current temperature, humidity, and operating mode.

MAIN BUTTON FUNCTIONS

Power level adjustment button / MANUAL mode

Level + :	increase air volume/power level
Level - :	decrease air volume/power level

Temperature adjustment button / AUTO mode

Temperature + :	increase target temperature
Temperature - :	decrease target temperature

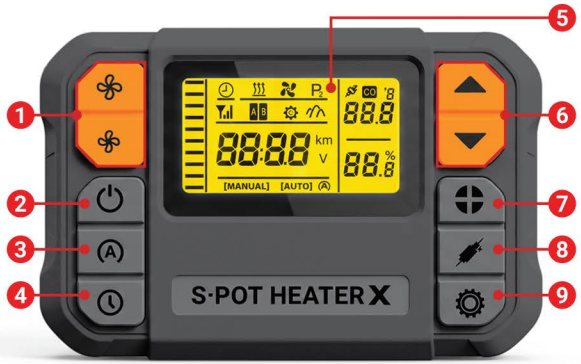
Power button:

Short press in standby mode: starts the heater, initiating pre-heating and ignition. Before starting, complete the installation, connect the power, and prime the fuel system if required.

Press and hold during operation: stops heating and initiates automatic cooling. Do not disconnect the power until the cooling cycle is complete.

Press and hold in standby mode: enters heater selection mode (A/B/AB). Use short presses to select the desired option; the selection is confirmed automatically after approximately 2 seconds.

* ***Standby mode*** *means that power is connected, heating is off, and the cooling cycle is complete.*



1) **Power level adjustment / MANUAL mode;**
2) **Power;**
3) **Automatic start/stop AUTO STOP & GO;**
4) **Timer;**
5) **LCD display;**
6) **Temperature adjustment / AUTO mode;**
7) **Blower mode;**
8) **Fuel priming mode;**
9) **Parameter display and settings.**

AUTO STOP & GO button:

Short press:	switches between operation and stop

The automatic start/stop function is available only in standby mode. With the heater off, press and hold the air volume adjustment button to disable the function. (Automatic startup may start the heater without a button press at that moment. Disable the timer and automatic startup before refueling, transport, servicing, or changing the installation.)

Timer button:

Short press:	timer settings
Long press:	time settings

Blower mode button:

Long press:	start blower mode
Repeat long press:	finish blower mode

Fuel priming button:

Long press:	enter manual fuel supply (priming) mode

Parameter display and settings button:

Short press	view voltage, external temperature, etc.
Long press:	switch °C / °F

DEVICE SELECTION (A/B/AB)

In standby mode, press and hold the power button to enter selection mode.

Short press the power button to select A/B/AB; the selection is confirmed automatically after about 2 seconds.

When “A” or “B” is selected, only the corresponding heater heats, while the other heater operates only in blower mode.

When “AB” is selected, after heater A finishes ignition, heater B starts heating automatically.

** **Standby mode** means that power is connected, heating is off, and the cooling cycle is complete.*

TROUBLESHOOTING AND BACKUP OPERATION

PERSISTENT WHITE SMOKE DURING COMBUSTION:

- This condition occurs when fuel soaks into the sound-absorbing material inside the muffler due to excessive fuel supply during initial fuel priming or operation. White smoke may also be caused by excessive fuel priming or heavy carbon buildup in the combustion chamber.
- Running the heater at maximum power for an extended period to burn off fuel absorbed due to overheating will gradually eliminate the symptoms.
- If the smoke does not decrease, becomes heavier, or error codes appear, stop using the heater and contact the seller. Shut down the heater using the normal control button, keeping the power connected until the cooling cycle is complete. If the CO alarm sounds, immediately move everyone outside to fresh air.
- Have carbon deposits in the combustion chamber removed by a qualified technician.

IF THE UNIT FAILS TO START AND ERRORS E-08 AND E-10 OCCUR:

- There is a high probability that there is no fuel inside the fuel hose or air has entered inside.
- Shut down the heater using the normal shutdown procedure and wait for the cooling cycle to finish. Check the fuel level and external connections. If there are no leaks, heavy smoke, or other signs of danger, restart the heater. If the error occurs again, stop further startup attempts and contact the seller.

CHECKING THE QUICK-RELEASE FUEL HOSE CONNECTION (MAINTENANCE TO PREVENT LEAKS):

- Check for foreign objects or damage inside the quick-release fuel hose connection.
- If foreign objects are present, be sure to remove them before use. Do not use a damaged or leaking connection. Do not use temporary wrapping or sealant to stop a leak unless an approved repair procedure specifies it. After cleaning or servicing, check for leaks before starting the heater.

IF OVERHEATING ERROR E-12 OCCURS DURING OPERATION:

- Shut down the heater using the normal shutdown procedure, wait for the cooling cycle to finish, and check the external air ducts for kinks, blockages, and disconnected sections. Use only an approved air duct configuration.
- Check if the air duct has disconnected and secure it tightly all the way.
- When using a dual air duct, overheating may occur if the airflow inside is obstructed.
- If an overheating error occurs during intermittent operation, use the heater without the outer return-air duct.

BACKUP STARTUP PROCEDURE IF THE WIRELESS REMOTE CONTROL IS DAMAGED OR LOST, OR ITS BATTERY IS DEPLETED:

- Press the backup start/stop button on the rear panel of the heater to start the heater.
- Press the same backup start/stop button to stop the heater.

** Upon receipt, inspect the housing, exhaust system, fuel tank, connections, and cables. If there is damage or a leak, do not start the heater; contact the seller. Keep the packaging until the initial inspection is complete.*

ERROR CODES AND TROUBLESHOOTING

Before inspection, shut down the heater using the normal shutdown procedure and allow it to cool. The user may check external connections and look for visible obstructions. Have combustion chamber disassembly and replacement of the glow plug, sensors, fuel pump, and electronic components performed by a qualified service technician. Do not bypass safety protections or change the factory fuel supply settings.

ERROR CODE	ERROR TYPE	LAMP FLASHING	SYMPTOMS / INSPECTION PROCEDURE
E-01	Voltage too low	1 flash	Below 10 V
E-02	Voltage too high	2 flashes	Above 17 V
E-03	Glow plug error	3 flashes	Glow plug open or short circuit / replacement
E-04	Fuel pump error	4 flashes	Fuel pump open or short circuit
E-05	Device overheating	5 flashes	Enclosure temperature above 500 °F (260 °C) / check for clogged intake/exhaust
E-06	Blower motor malfunction	6 flashes	Blower motor open or short circuit / Hall sensor signal missing
E-07	Communication loss	7 flashes	Open / poor contact of controller communication connector
E-08	Flameout	8 flashes	Air in the fuel line, occurrence of fuel supply problems
E-09	Temperature sensor error	9 flashes	Open or short circuit of the body temperature sensor
E-10	Two failed ignition attempts	10 flashes	Air in the fuel line, fuel supply problems, clogged filter
E-11	External temperature sensor error	11 flashes	Short circuit or open circuit of the external temperature sensor
E-12	Main board overheating	12 flashes	Main board temperature above 212 °F (100 °C), clogged intake/exhaust port or damage to the ECU
E-13	Intake port temperature too high	13 flashes	Intake port temperature too high. Check the intake port for blockage
E-14	Exhaust port temperature too high	14 flashes	Exhaust port temperature too high. Check the exhaust port for blockage
E-15	Air intake temperature sensor error	15 flashes	Open or short circuit of the air intake temperature sensor
E-16	Exhaust temperature sensor error	16 flashes	Open or short circuit of the exhaust temperature sensor
CO	Carbon monoxide warning	17 flashes	Excessive carbon monoxide concentration

⚠ If the CO alarm sounds, immediately move everyone outside to fresh air. From outside, open the tent entrance or the RV doors and windows to ventilate. Do not delay evacuation to turn off the heater. Inspect the heater and exhaust system only after everyone is safe. Restart the heater only after the cause has been identified and corrected.

WARRANTY CARD

**BEFORE USING THE PRODUCT,
PLEASE READ THIS ENTIRE MANUAL AND
KEEP IT IN AN EASILY ACCESSIBLE PLACE.**

If you discover a manufacturing defect or shipping damage during the warranty period, contact the seller. Provide the order number, product serial number, and a description of the problem. Provide photographs or a video if requested.

After reviewing your claim, the seller will provide the necessary replacement parts or replace the unit free of charge. The remedy will be determined based on the nature of the defect and whether the parts can be replaced safely.

Parts whose replacement requires specialized knowledge, tools, or disassembly of the fuel system or combustion chamber must be installed by a qualified technician.

Proof of purchase may be provided through an order number, receipt, or other purchase documentation. The absence of a paper warranty card alone is not grounds for refusing to review a claim.

Do not return the product to the seller without first agreeing on the return or replacement procedure.

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**Operation, refueling, and servicing must be performed by an adult who has read this manual.
Do not allow children to operate the heater or touch hot components.**

THANK YOU FOR PURCHASING OUR PRODUCT!

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CONTACT INFORMATION:

hot-tent.com | ox-outdoor.us

/hot_tent /hot tent /hot_tent /besthottent

OX SPOT HEATER X10

OX Outdoor & eXtreme - Designed for the wild, built for real.