

## LF Bros N2

# LF Bros 110V/12/24V 5KW Diesel Heater User Manual

Model: N2

## 1. INTRODUCTION

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This manual provides comprehensive instructions for the safe and efficient operation, setup, and maintenance of your LF Bros 110V/12/24V 5KW Diesel Heater, Model N2. Please read this manual thoroughly before using the product to ensure proper function and to prevent damage or injury.

The LF Bros all-in-one 5KW diesel heater is designed to provide constant heating with a power output of 4700-17000 BTU and a fuel consumption of 0.18-0.53 L/H. It operates effectively in temperatures ranging from -40°F to 104°F (-40°C to 40°C). This versatile heater supports 12V, 24V, and 110V power inputs, making it suitable for various environments including RVs, cars, campers, trailers, homes, shops, and basements.

## 2. SAFETY INFORMATION

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Always prioritize safety when operating the diesel heater. Failure to follow safety guidelines can result in serious injury or property damage.

- Ensure adequate ventilation when operating the heater, especially if the exhaust is routed indoors. Carbon monoxide is a colorless, odorless gas that can be fatal.
- Do not block the air intake or exhaust outlets.
- Use only diesel fuel. Do not use gasoline or other volatile fuels.
- Keep flammable materials at a safe distance from the heater.
- Regularly inspect the fuel lines and connections for leaks. The fuel tank cover is designed with an internal thread to prevent spills.
- Do not operate the heater in enclosed, unventilated spaces.
- Keep children and pets away from the operating heater.
- Disconnect power before performing any maintenance or cleaning.

### 3. PRODUCT OVERVIEW

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The LF Bros Diesel Heater (Model N2) is an all-in-one unit featuring a compact design, integrated fuel tank, and user-friendly controls. It includes a remote control and an LCD screen for convenient operation.

#### 3.1 Components

- Main Heater Unit with Integrated Fuel Tank
- Remote Control
- LCD Screen/Control Panel
- 110V Transformer (for AC power)
- Exhaust Pipe and Silencer
- Air Intake Pipe
- Hot Air Outlet Pipe
- Fuel Pump
- Mounting Accessories



Figure 3.1: Main components of the LF Bros 5KW Diesel Heater. This image shows the compact heater unit, the remote control, the LCD display, and the 110V power adapter.

# HEATING PRINCIPLE DEMONSTRATION

Cold air enters from the air inlet, passes through the heated aluminum body, and the air is heated, then hot air is blown out from the air outlet

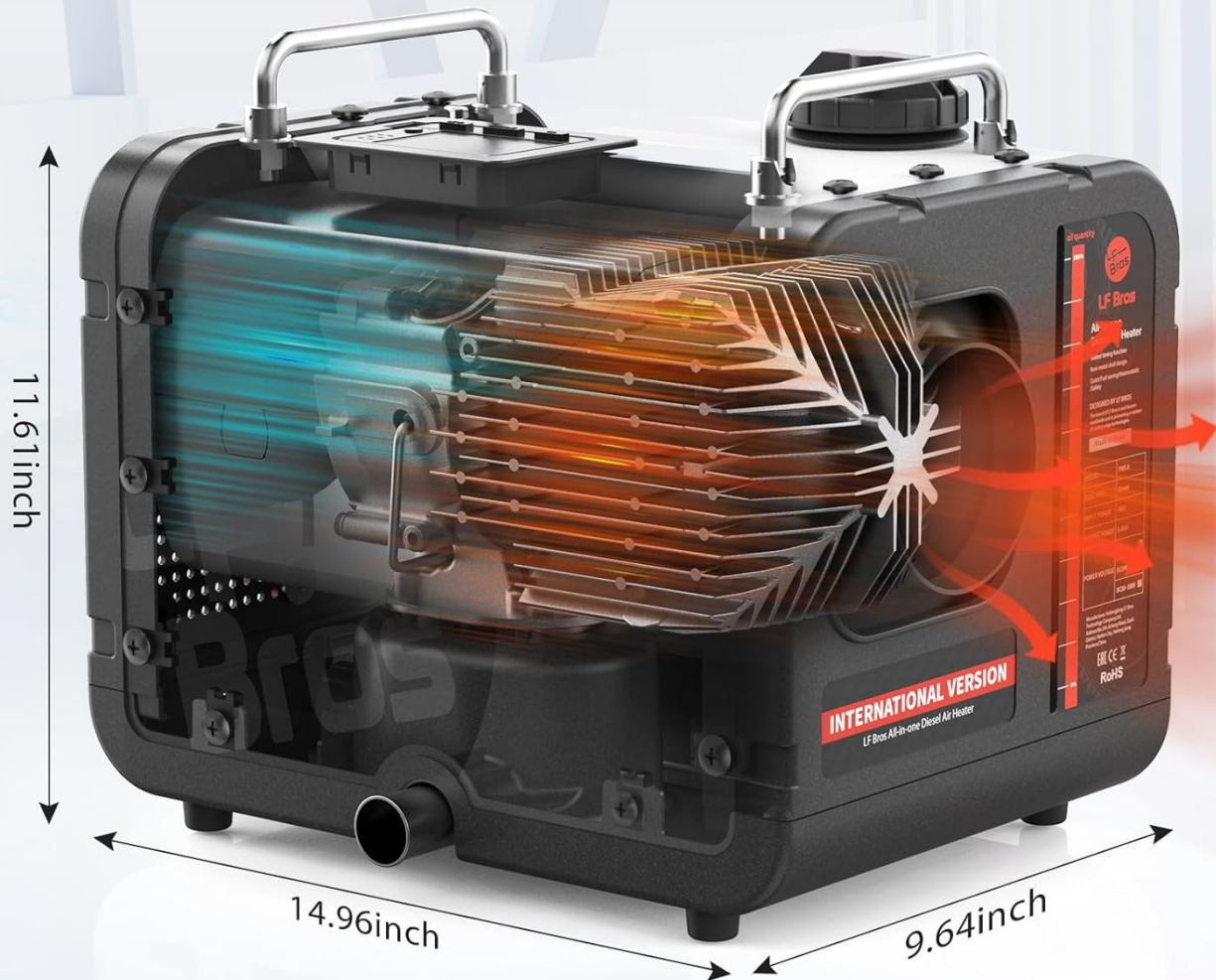


Figure 3.2: Heating Principle Demonstration. Cold air enters from the air inlet, passes through the heated aluminum body, and the air is heated, then hot air is blown out from the air outlet.

# ANTI LEAKAGE TANK COVER



Figure 3.3: Anti-Leakage Tank Cover. The exclusive designed cover with internal thread effectively prevents oil spills.

## 4. SETUP

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The LF Bros diesel heater is designed for easy setup. Follow these steps for initial installation:

### 4.1 Initial Placement

- Place the heater on a stable, flat surface.
- Ensure there is sufficient clearance around the unit for proper airflow and heat dissipation.
- If using indoors, ensure the exhaust pipe is routed safely to the outside.

### 4.2 Connecting Power

The heater supports 12V, 24V DC, and 110V AC power. Use the appropriate connection for your setup.

- **DC Connection (12V/24V):** Connect the red wire to the positive (+) terminal and the black wire to the negative (-) terminal of your DC power source (e.g., vehicle battery). Ensure a secure connection.
- **AC Connection (110V):** Use the provided 110V transformer. Plug the heater's DC input into the transformer, then plug the transformer into a standard 110V AC wall socket.



Figure 4.1: The kit includes an adapter for indoor heating, allowing you to plug the heater directly into 110V sockets for use in garages, basements, or homes.

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Video 4.1: LF Bros N2 Diesel Heater Installation (Wire Part). This video demonstrates the wiring and initial setup of the heater, including connecting the power and exhaust components.

### 4.3 Exhaust and Air Duct Installation

Proper installation of the exhaust and air ducts is crucial for safety and performance.

- Attach the exhaust pipe to the exhaust outlet on the heater. Secure it with the provided clamps.
- Install the silencer onto the exhaust pipe if desired.
- Route the exhaust pipe away from any flammable materials and ensure it exits the enclosed space safely.
- Connect the hot air outlet pipe to the main air outlet.

- Connect the air intake pipe to the air intake port.

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Video 4.2: How to get the tutorial video of installation & maintenance. This video guides users on how to access detailed installation and troubleshooting videos by scanning a QR code in the manual.

## 5. OPERATING INSTRUCTIONS

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### 5.1 Filling the Fuel Tank

- Open the fuel tank cap.
- Carefully fill the tank with clean diesel fuel. Do not overfill.
- Securely close the fuel tank cap. The internal thread design helps prevent leaks.

### 5.2 Powering On and Off

- **Using the LCD Screen:** Press the "ON/OFF" button on the LCD control panel to turn the heater on or off. The screen will display the working status.
- **Using the Remote Control:** The remote control is pre-paired. Press the "ON" button to start the heater and "OFF" to turn it off. The remote control has a range of up to 100 feet.

## THE KIT INCLUDES AN ADAPTER FOR INDOOR HEATING



Figure 5.1: Remote operation allows you to turn on the heater in advance, ensuring a warm environment before you arrive. This image illustrates the benefit of remote control in cold conditions.

### 5.3 Adjusting Settings

- Use the buttons on the LCD screen to adjust temperature, power output, and other settings. Refer to the detailed instruction booklet for specific menu navigation.

## 6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your LF Bros Diesel Heater.

- **Cleaning:** Periodically clean the exterior of the unit. Ensure air intake and exhaust ports are free from obstructions.
- **Fuel Filter:** Check and replace the fuel filter as needed to prevent fuel system blockages.
- **Storage:** When storing the heater for extended periods, especially during off-season, ensure the fuel tank is empty and the unit is clean and dry. The original delicate packaging box can be used for storage.

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Video 6.1: How to get the tutorial video of installation & maintenance. This video provides guidance on accessing maintenance tutorials via QR code.

## 7. TROUBLESHOOTING

If you encounter issues with your heater, refer to the following common problems and solutions. For more detailed troubleshooting, scan the QR code in your physical user manual for video tutorials.

Problem	Possible Cause	Solution
Heater does not start.	No power, low fuel, clogged fuel line, glow plug issue.	Check power connection and voltage. Ensure sufficient fuel. Inspect fuel lines for blockages. Consult manual for glow plug replacement.
Reduced heat output.	Clogged air filter, restricted air flow, low fuel quality.	Clean air filter. Ensure air intake and exhaust are clear. Use clean, appropriate diesel fuel.
Unusual noise during operation.	Loose components, fan obstruction, fuel pump noise.	Check for loose parts and tighten. Ensure fan is clear. A slight ticking from the fuel pump is normal.
Fuel leakage.	Loose fuel cap, damaged fuel line, faulty seal.	Ensure fuel cap is tightly closed. Inspect fuel lines and connections for damage or looseness. Contact support if seals are faulty.
Error codes on LCD screen.	Specific system malfunction.	Refer to the detailed instruction booklet or scan the QR code for specific error code explanations and solutions.

Your browser does not support the video tag.

Video 7.1: How to get the tutorial video of installation & maintenance. This video provides guidance on accessing troubleshooting tutorials via QR code.

## 8. SPECIFICATIONS

Feature	Detail
Brand	LF Bros
Model Number	N2
Power Output	5KW (4700-17000 BTU)
Fuel Type	Diesel
Fuel Consumption	0.18-0.53 L/H

Feature	Detail
Operating Temperature	-40°F to 104°F (-40°C to 40°C)
Voltage Compatibility	12V, 24V, 110V AC
Product Dimensions	15"D x 9.6"W x 11.6"H
Item Weight	26 pounds
Special Features	User Manual, Energy Efficient, Portable, Remote Control

## 9. WARRANTY AND SUPPORT

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LF Bros is committed to providing high-quality products and excellent customer service. For warranty information, technical support, or any inquiries, please refer to the contact details provided in your product packaging or visit the official LF Bros website.

You can also refer to the [official User Manual \(PDF\)](#) for additional details.