

## LF Bros N3

# LF Bros Professional 110V/12V 5KW Diesel Heater N3 User Manual

## 1. IMPORTANT SAFETY INFORMATION

Read all instructions carefully before operating the LF Bros N3 Diesel Heater. Failure to follow these instructions may result in fire, explosion, electric shock, or other hazards, which could cause property damage, personal injury, or death.

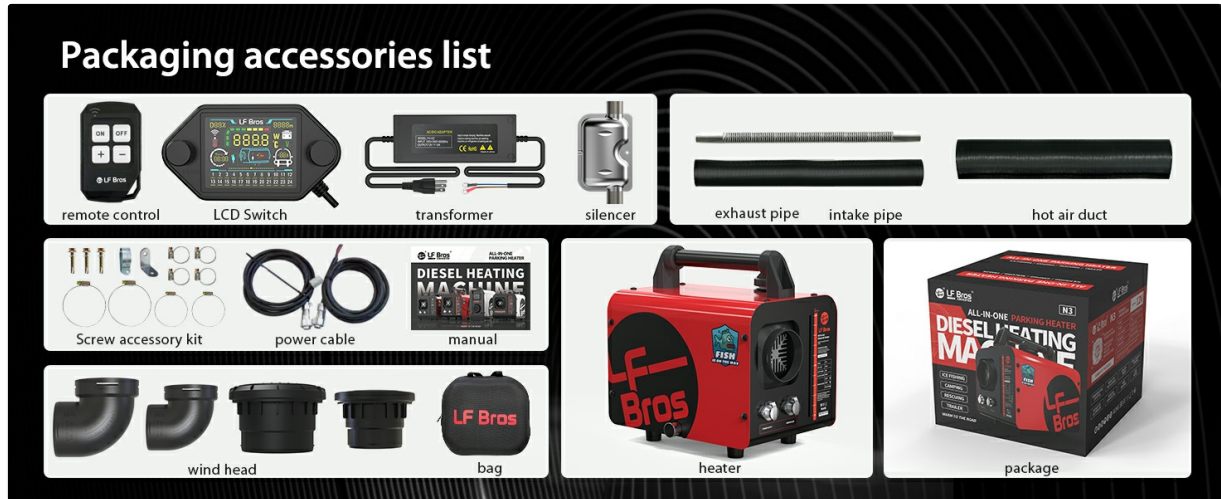
- **Ventilation:** Ensure adequate ventilation when operating the heater. Do not use in enclosed, unventilated spaces.
- **Fuel:** Use only diesel fuel. Do not use gasoline or other volatile fuels. Store fuel in a safe, approved container away from heat sources.
- **Exhaust:** Always ensure the exhaust pipe is properly installed and vented to the outside to prevent carbon monoxide buildup.
- **Placement:** Place the heater on a stable, non-combustible surface. Maintain a safe distance from flammable materials.
- **Electrical Connection:** Connect to a properly grounded power source (12V DC or 110V AC via transformer). Do not overload circuits.
- **Children and Pets:** Keep children and pets away from the heater during operation.
- **Anti-Leakage Tank Cover:** The heater features an exclusive internal threaded fuel tank cover designed to prevent oil spills, enhancing safety during transport and use.
- **Low Ignition Failure Rate:** Equipped with an imported Japanese ignition needle for reliable startup.

## 2. PACKAGE CONTENTS

Verify that all items listed below are included in your package:

- LF Bros N3 Diesel Heater Unit
- Remote Control
- LCD Switch Control Panel
- 110V Transformer
- Silencer
- Exhaust Pipe
- Intake Pipe

- Hot Air Duct
- Screw Accessory Kit
- Power Cable
- Wind Head
- Storage Bag
- User Manual (this document)



A visual representation of all components included in the LF Bros diesel heater package, such as the remote control, LCD switch, transformer, silencer, various pipes, and installation kit.

### 3. PRODUCT OVERVIEW

The LF Bros N3 is an all-in-one 5KW diesel air heater designed for versatile heating applications. It features dual 110V/12V power compatibility, a 5-liter integrated fuel tank, and advanced control options including a timer, thermostat, and plateau mode. Its robust design incorporates a thickened aluminum body for efficient heat transfer and a silent oil pump for reduced noise.



The LF Bros N3 all-in-one diesel heater, shown with its digital LCD control panel and wireless remote. This compact unit provides efficient heating for various applications.

### Key Features:

- **Power Output:** 5KW
- **Voltage:** 110V AC / 12V DC
- **Fuel Tank Capacity:** 5 Liters
- **Control:** LCD Switch with Timer and Thermostat
- **Special Modes:** Plateau Mode for high-altitude operation
- **Noise Reduction:** Silent oil pump and upgraded muffler
- **Construction:** Thickened sandblasted aluminum body for durability and efficient heating

## 4. SETUP AND INSTALLATION

### 4.1 Placement

Position the heater on a flat, stable, and non-combustible surface. Ensure there is sufficient clearance

around the unit for proper airflow and to prevent fire hazards. The heater is suitable for outdoor usage or in well-ventilated areas such as garages, workshops, or large tents.

## 4.2 Fueling

Unscrew the fuel tank cap. Carefully pour diesel fuel into the 5-liter tank. Ensure the fuel cap is securely tightened after filling. The unique internal threaded design of the cap helps prevent leaks.



This image highlights the unique internal threaded design of the fuel tank cover, engineered to prevent fuel spills during transport or operation, similar to a car's gas cap.

## 4.3 Exhaust and Intake Connections

Connect the exhaust pipe to the heater's exhaust outlet and route it safely to the outside, away from any windows or vents. Attach the intake pipe to the air intake port. Secure all connections with the provided clamps to prevent leaks and ensure efficient operation.

# SCHEDULE YOUR HEATING TIME WITH 24 HOUR TIMER FUNCTION

Provide you with a warm and sound sleep



24-hour timer  
function



energy  
conservation



## LCD SWITCH

- Colored LCD screen
- 24-hour timing function
- Temperature/power regulation

This illustration details the 'Double Low Noise Protection' features: a silent oil pump and an upgraded muffler with an internal bending tube, designed to significantly reduce operational noise.

## 4.4 Power Connection

The LF Bros N3 heater supports both 12V DC and 110V AC power sources.

- **12V DC:** Connect the provided power cable to a 12V battery. Ensure correct polarity.
- **110V AC:** Use the included 110V transformer. Plug the heater into the transformer, then plug the transformer into a standard 110V wall socket.

## 5. OPERATING INSTRUCTIONS

### 5.1 Powering On/Off

Press the power button on the LCD switch or the remote control to turn the heater on or off. The heater will initiate a startup sequence upon powering on and a cool-down sequence upon powering off.

## WITHOUT HEATER



## WITH HEATER



The LCD control panel is shown with its 24-hour timer function activated, allowing users to schedule heating times for convenience and energy conservation.

### 5.2 Selecting Heating Modes

The heater offers two primary heating modes: Power Mode and Temperature Mode. Short press the Mode/Power button on the LCD switch when the heater is in standby status to switch between modes.

#### Power Mode

In Power Mode, the heater operates continuously at a set power level. The screen will display 'P' followed by the power setting (e.g., P 5.0 for 5KW). Adjust the power output using the control knob on the LCD switch or the +/- buttons on the remote control.

## Intelligent silent oil pump

Precise control of oil volume pumped for more complete combustion. The noise generated during operation is 40% to 60% lower than other brands.



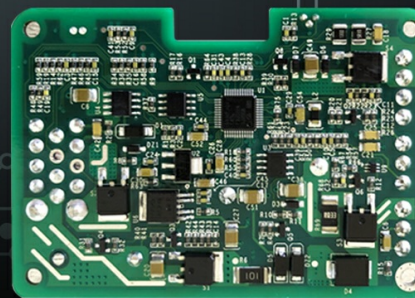
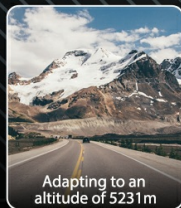
The LCD display illustrates the 'Power Mode' setting, where the heater operates continuously at a user-defined power level, from 1.4kW to 5kW.

## Temperature Mode

In Temperature Mode, the heater maintains a desired ambient temperature. The screen will display 't' followed by the set temperature (e.g., t 24.0 for 24°C). The heater will stop heating when the detected temperature reaches 2°C higher than the set temperature and will restart when the temperature drops below the set temperature. An external temperature sensor provides accurate readings.

## Plateau Mode

The intelligent mother board adjust air-fuel ratio by detecting atmospheric pressure, providing stable operation while at high altitude



This image shows the 'Temperature Mode' on the LCD screen, indicating a set temperature of 24°C. The external temperature sensor helps maintain the desired ambient temperature by cycling the heater on and off.

## 5.3 Plateau Mode

The LF Bros N3 features an intelligent Plateau Mode, which automatically adjusts the air-fuel ratio by detecting atmospheric pressure. This ensures stable and efficient operation even at high altitudes (tested up to 17,000+ ft).

# PLATEAU CONSTANT TEMPERATURE MODE



The heater is depicted in an outdoor, high-altitude setting, demonstrating its 'Plateau Mode' capability. This mode ensures stable operation by adjusting the air-fuel ratio based on atmospheric pressure, tested at altitudes over 17,000 feet.

## 5.4 Timer Function

Utilize the 24-hour timer function on the LCD switch to schedule heating periods. This allows for pre-heating your space or conserving energy by setting specific operating times.

# DOUBLE LOW NOISE PROTECTION

Silent oil pump and upgraded silencer reduce noise more effectively



Silent Oil Pump



Muffler with Internal Bending



This image demonstrates the convenience of the remote control, allowing users to pre-heat their vehicle or space before entry, ensuring a warm environment.

## 6. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your LF Bros N3 Diesel Heater.

- **Cleaning:** Periodically clean the exterior of the heater with a damp cloth. Ensure air intake and exhaust ports are free from obstructions.
- **Fuel Filter:** Inspect the fuel filter for debris and replace if necessary.
- **Exhaust System:** Check the exhaust pipe and silencer for any damage or blockages. Ensure all connections remain secure.
- **Storage:** When not in use for extended periods, drain the fuel tank and store the heater in a dry, protected environment.

## 7. TROUBLESHOOTING

If you encounter issues with your LF Bros N3 Diesel Heater, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
Heater does not start	No power, low fuel, ignition failure	Check power connections and source. Refill fuel tank. Ensure ignition needle is clean (contact support if persistent).
Insufficient heat output	Incorrect power setting, blocked air intake/exhaust	Increase power setting. Check and clear any obstructions from air intake or exhaust.
Excessive smoke	Poor combustion, incorrect air-fuel mixture	Ensure proper ventilation. Check fuel quality. If at high altitude, ensure Plateau Mode is functioning. Contact support if issue persists.
Unusual noise	Loose components, fan obstruction	Inspect for loose parts. Ensure fan is clear of obstructions. The silent oil pump and muffler are designed to minimize operational noise.

For issues not resolved by these steps, please contact LF Bros customer support.

## 8. SPECIFICATIONS

Feature	Detail
Brand	LF Bros
Model Number	N3
Power Output	5KW
Voltage	12 Volts (DC), 110 Volts (AC via transformer)
Fuel Type	Diesel
Fuel Tank Capacity	5 Liters
Special Features	High Altitude (Plateau Mode), Noiseless (Silent Oil Pump), On/Off Timer, Programmable Thermostat, Remote Control
Color	Red
Form Factor	Cabinet (All-in-One)
Indoor/Outdoor Usage	Outdoor
Product Dimensions	15.35"D x 6.2"W x 13.8"H
Item Weight	25.3 pounds
Mounting Type	Floor Mount
Number of Speeds	2

Feature	Detail
Batteries	2 Lithium Metal batteries (included for remote)

## 9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please refer to the contact details provided with your purchase documentation or visit the official LF Bros website. Keep your purchase receipt as proof of purchase for warranty claims.