

USER GUIDE

31L DRAWER

FRIDGE / FREEZER



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OVERVIEW

Introducing the iFROST 31L Drawer Fridge/Freezer, a compact and efficient solution for chilling food and drinks on the go. This fridge is perfect for off-grid adventures where reliability is key.







Built with robust insulation, the iFROST 31L Drawer Fridge / Freezer guarantees optimal cooling performance, ensuring your food stays fresh regardless of conditions. It can be powered directly from a 12V or 24V DC power source, like a power station, vehicle's battery or a dual battery setup, making it perfect for 4WDs, caravans, boats, and camping journeys.

The iFROST 31L Drawer Fridge / Freezer slide-out drawer allows easy access, saving space and enhancing usability in tight spots. Ideal for exploring the outback or as an extra fridge at home.

KEY FEATURES

- LG Compressor
- Low Amp Consumption
- 12V/24V input
- Large temperature range (-20°C~20°C)
- Slide-out drawer compartment
- Mounting kit for simple install
- Slimline profile (250mm high)
- Stainless Steel Hardware

PACKAGE CONTENTS

 31L Drawer Fridge/Freezer	 4x Brackets	 12x Screws	 Separator Kit	 User Guide	 4x Nuts
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UNIT DIAGRAM



① DRAWER LATCH

② HANDLE

③ SLIDE OUT DRAWER

④ CONTROL PANEL

⑤ 50A Anderson Input

⑥ AIR VENT

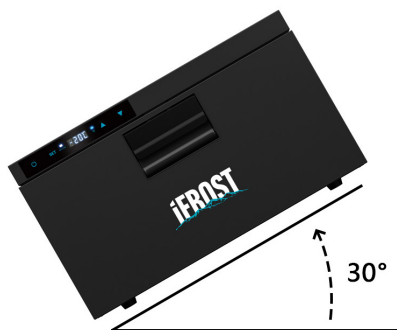
GETTING STARTED

Ensure all the included accessories are intact when you receive your fridge. This unit is specifically designed for 12V/24V DC power and will be damaged if used with other voltages.

The cooling compartment is a single zone section with internal separators to organise the contents of the fridge. The display shows the temperature at the midpoint of the compartment.

WARNING: before storing medication, confirm the fridge cooling capacity meets the specific requirements of the medication.

The unit has been designed and developed to work optimally within an ambient temperature range of -10°C ~ 55°C and up to 90% humidity, the unit can operate continuously at a max angle of 30 degrees. If over temperature protection is activated the fridge will show an E5 fault code.



Prolonged operation with an angle of 30 degrees or more is not recommended, you should limit use in this state to a maximum of 4 hours.

WARNING: Adequate airflow around the air vents is necessary for peak fridge performance.

INSTALLATION

SELECTION OF CABLE SIZE

In general, using thicker wire sizes will enhance performance, while using thinner wires may diminish performance, particularly when they are too small for the application. When contemplating your wiring choices, prioritise thicker and shorter wire lengths to minimise resistance and voltage drop.

We strongly advise that a properly trained/qualified individual conduct this task. Failure to establish a secure connection could result in a short circuit, potentially leading to fire and property damage.

All direct connections to a battery must be properly and securely fused via a 10A fuse. The fuse should be installed as close as possible to the battery. The table below shows the appropriate cable sizes and lengths.

Voltage	Length				
	2M	4M	6M	8M	10M
12V	1.5mm ² (16AWG)	1.5mm ² (16AWG)	2.5mm ² (14AWG)	4mm ² (12AWG)	6mm ² (10AWG)
24V	1.5mm ² (16AWG)	1.5mm ² (16AWG)	1.5mm ² (16AWG)	2.5mm ² (14AWG)	4mm ² (12AWG)

MOUNTING

The iFROST 31L drawer fridge / freezer comes with a stainless steel mounting kit, including screws and brackets, for hassle-free installation. If you intend to use the supplied mounting kit, ensure you allow an additional 5mm of width for the frame and screws.

NOTE: Ensure the fridge is placed in a well ventilated area during use. Failure to do so may cause the fridge to overheat.

OPERATION

POWERING THE FRIDGE

The iFROST 31L Drawer Fridge / Freezer is compatible with DC 12V / 24V systems. Connect a suitable 50A Anderson cable to the Anderson input located at the rear of the unit, and plug the other end into your power source. Once connected, the fridge will receive power and enter standby mode.

POWERING ON

To turn the fridge on, press and hold the power control button for 3 seconds. The display will illuminate, showing the current internal temperature. To turn the fridge off, press and hold the power button again.

NOTE: The iFROST 31L Drawer Fridge / Freezer features a power off memory. If the unit is disconnected from power, the fridge will resume with the previous settings when power is restored.

TEMPERATURE SETTINGS

Use the ▲ and ▼ buttons to adjust the internal temperature between -20°C and 20°C. The display will flash the selected temperature before confirming the setting.

NOTE: Once the desired temperature stops flashing, the current internal temperature will be displayed.

ECO / MAX MODE

Press the SET button to toggle between ECO and MAX modes.

- **ECO mode (green LED)** lowers compressor activity to reduce power consumption. This mode draws less current but cools slower, making it ideal for maintaining temperature over longer trips.
- **MAX mode (white LED)** increases compressor output for faster cooling. This mode draws more current and is best used when a quick temperature drop is needed.

VOLTAGE CUT OFF SETTING

There are 3 voltage cut out settings.

Setting	Display	12V		24V	
		Turn Off	Turn On	Turn Off	Turn On
Low	H1	<8.5V	>9.6V	<21.3V	>22.7V
Medium	M2	<10.1V	>11.4V	<22.3V	>23.7V
High	L3	<11.3V	>12.5V	<24.6V	>26V

To change the setting:

Press and hold the SET button for 3 seconds. Use ▲ and ▼ to cycle through H1, M2, or L3.

- H1 is recommended for lithium batteries
- L3 is recommended for vehicle starter batteries

CHANGING TEMPERATURE UNIT

To change the temperature unit between Celsius and Fahrenheit, press and hold both ▲ and ▼ for 3 seconds until the unit switches.

MAINTENANCE

STORAGE

Your fridge has already been cleaned by iFROST, but it is advisable to clean it again before the first use. We recommend using a damp cloth with warm water. Be careful not to get water into the seals or electrical components. After cleaning, dry the fridge entirely with a cloth.

- Do not use cleaning agents.
- Do not use hard brushes.
- Ensure all power input cables have been removed.
- Dry the fridge/freezer completely after washing.

TROUBLESHOOTING

If your fridge isn't running, please test your power source input. To troubleshoot this, connect the fridge to at least two different power sources for at least 30 minutes each.

If the fridge works correctly when connected to one of the sources, the issue is likely not with the fridge itself. As long as the power is stable and in the correct range, the fridge will operate consistently regardless of where the power comes from. Typical problems include wiring issues, undercharged batteries and connection issues.

If your fridge display is not turning on:

1. Check the input power source (ensure the voltage is neither too high or too low)
2. Inspect the power cables and all connections between the input power source and the fridge.
3. Confirm that both the input power source and the fridge are turned on.

If your fridge is performing poorly:

1. Ensure the drawer is closed properly.
2. Check the input power source (ensure the voltage is neither too high or too low)
3. Confirm adequate ventilation around the fridge vents.
4. Ensure the food's temperature in the fridge is not too high.
5. Verify the temperature setting is correct.
6. Verify the fridge is not in direct sunlight.

FAULT CODES

Fault Code	Fault	Solution
E1	Low / high voltage protection activated	Isolate the fridge for 60 seconds, ensure the input voltage is within the range specified on page 9.
E2	Condenser fan sensor fault	Isolate the fridge for 30 minutes, then reconnect the input source. If you are still experiencing issues, please contact the iTechworld service centre.
E3	Compressor pressure sensor fault	
E4	Low compressor speed fault	Isolate the fridge for 60 seconds, ensure the input voltage is within the range specified on page 9.
E5	Over temperature protection activated	Isolate the fridge for 30 minutes, ensure it is not in direct sunlight. If you are still experiencing issues, please contact the iTechworld service centre.
E6	Internal fault	Isolate the fridge for 30 minutes, then reconnect the input source. If you are still experiencing issues, please contact the iTechworld service centre.

SPECIFICATIONS

General	
Model Name	iFROST 31L Drawer Fridge / Freezer
Capacity	31L
Dimensions	730 x 440 x 250mm
Weight	18kg
Compressor	LG
Power Input	50W
DC Input	Yes
12V Average Amp Draw	0.4A *
12V Max Amp Draw	4.4A *
24A Average Amp Draw	0.2A *
24V Max Amp Draw	2.2A *
Insulation	Cyclopentane
Cooling Range	-20°C~20°C

The iFROST 31L Fridge / Freezer complies with CE and EMC 50498 standard including all Australian deviations.

* Tested at 3°C in 25°C ambient

SAFETY PRECAUTIONS

For safe operation and optimal performance, the iFROST 31L Drawer Fridge / Freezer must be operated correctly. Please carefully read, understand, and follow all instructions and guidelines in this user guide. Failure to follow these instructions may result in damage to the unit, property, death, or serious injury.

Disclaimer: While iTechworld has taken every precaution to ensure the accuracy of the contents of this user guide, iTechworld assumes no responsibility for any errors or omissions.

Furthermore, all specifications and functionality may change at any time without notice.

It is best to view our website for the most up-to date information.

WARNING:

People with physical disabilities, visual, sensory, or mental impairments (including children) should not use this fridge. Children should be supervised to ensure they do not play with the fridge.

WARNING:

Please use the recommended and included cables specified in this user guide.

WARNING:

The fridge is not waterproof, do not expose the unit to moisture or precipitation.

WARNING:

Secure the fridge properly during transportation.

DANGER:

Ensure the fridge is placed in a well ventilated area during use. Failure to do so may cause the unit to overheat.

DANGER:

Do not disassemble or modify the fridge, doing so may result in a risk of electrical shock, fire, death, or serious injury.

DANGER:

Do not damage any of the power cables connected to the fridge, this includes kinking the cables, wrapping the cable around the unit, or pulling the cable around sharp edges.

REGULAR INSPECTIONS:

Regularly check the fridge and all connections for signs of damage.



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THE POWER EXPERT

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At iTechworld, we proudly lead the way in pioneering innovative off-grid power and battery solutions that bring cutting-edge technology to adventure seekers, remote workers, and outdoor enthusiasts across Australia. Since we began our journey all the way back in 2006, our passion has been to develop high-performance lithium batteries, solar panels, power stations, generators, and battery management systems tailored to caravans, camping, 4WDs, and off-grid living.

We believe in empowering people with reliable, portable, and efficient energy solutions, giving them the power they need—wherever their journey takes them. Our commitment to quality is unwavering, with every product rigorously tested to meet Australian conditions and backed by our knowledgeable power experts.

Driven by innovation, reliability, and sustainability, iTechworld is your trusted partner in power solutions, helping you stay powered anywhere, anytime.

iTechworld. The Power Expert.

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