AstroAI IPF15

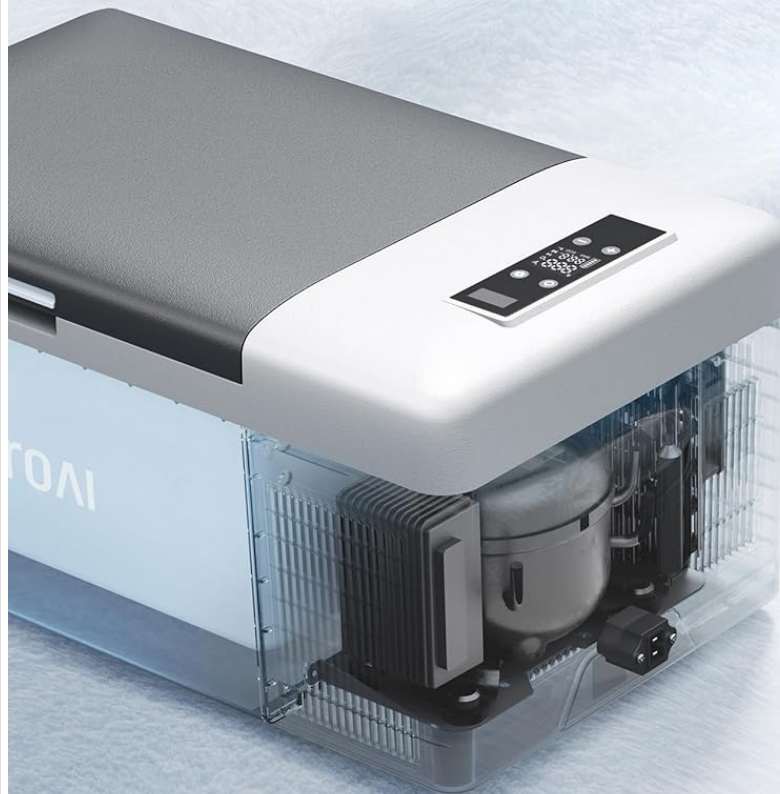# AstroAI 15L Portable Car Refrigerator and Freezer (Model IPF15) Instruction Manual

Brand: AstroAI | Model: IPF15

1. PRODUCT OVERVIEW

The AstroAI 15L Portable Car Refrigerator and Freezer is a versatile cooling solution designed for various applications, including car, RV, truck, van, boat, camping, travel, and home use. It functions as both a refrigerator and a freezer, capable of maintaining temperatures from -4°F (-20°C) to 68°F (20°C). Its robust design and efficient compressor ensure fast cooling and reliable performance, making it ideal for keeping food, drinks, and other perishables chilled or frozen on the go.

Cools Down to 32°F Within 15Mins

Powerful Compressor, Fast Cooling

Fruit 39°F

Meat 28°F

Data Based on 68°F Ambient Temperature When Not Loaded

68°F
32°F
10°F
-4°F
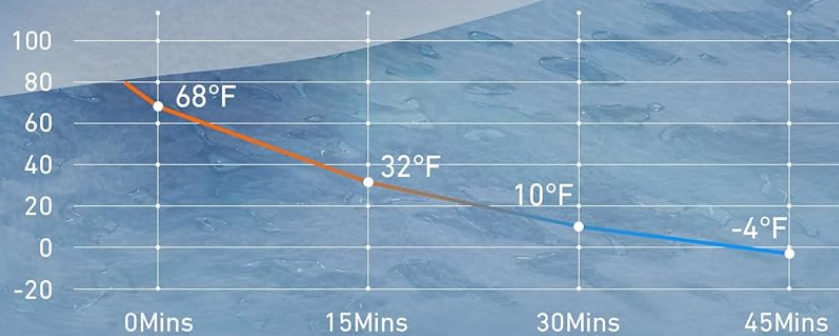
0Mins · 15Mins · 30Mins · 45Mins

Image: The AstroAI 15L Portable Car Refrigerator, a compact black and gray unit with a digital display, shown in an outdoor setting with various items inside.

2. SAFETY INSTRUCTIONS

- Read all instructions before operating the appliance.
- Do not operate the appliance if the power cord is damaged.
- Ensure proper ventilation around the unit. Do not block air vents.
- Avoid placing the appliance in direct sunlight or near heat sources.
- Do not immerse the appliance in water or expose it to heavy rain.
- Always disconnect power before cleaning or maintenance.

- Keep the appliance upright for at least 12 hours after transport before initial use to allow the compressor fluid to settle.
- Use only the provided power adapters.

3. PACKAGE CONTENTS

- 1 x AstroAI 15L Portable Car Refrigerator
- 1 x 12V/24V DC Power Cord
- 1 x 100V-240V AC Adapter
- 1 x User Manual

4. PRODUCT FEATURES

- **High Capacity:** 15L (16 Quarts) interior, dimensions 13.8"L x 9.6"W x 7.1"H.
- **Fast Cooling:** Powerful compressor cools to 32°F (0°C) in 15 minutes and -4°F (-20°C) in about an hour (when empty).
- **Dual Power Options:** Includes 12V/24V DC adapter for vehicles and 100V-240V AC adapter for home use.
- **MAX/ECO Modes:** Switch between MAX mode for rapid cooling and ECO mode for energy-saving.
- **Battery Saving Modes:** Three selectable levels (low, medium, high) to protect your vehicle's battery from excessive discharge.
- **Functional Design:** LED display for easy operation, USB port for phone charging, UL-listed cords with replaceable fuses.

Battery Protection for Safe Travel
3 Selectable Voltage Levels, Never Deplete Your Battery Again

Voltage		H-level	M-level	L-level
12V DC	Cut in	12.4V	11.4V	10.9V
	Cut out	11.1V	10.1V	8.5V
24V DC	Cut in	25.7V	23.7V	22.7V
	Cut out	24.3V	22.3V	21.3V

Image: The interior of the AstroAI 15L Portable Car Refrigerator, showcasing its ample storage space for various items like drinks, fruits, and vegetables.

5. SETUP

1. **Unpacking:** Carefully remove the refrigerator and all accessories from the packaging.
2. **Initial Placement:** Place the refrigerator upright on a flat, stable surface. Allow it to stand for at least 12 hours before plugging it in to ensure the compressor fluid settles.
3. **Power Connection:**
   - For vehicle use: Connect the 12V/24V DC power cord to the refrigerator's DC input port and then to your vehicle's cigarette lighter socket.

- For home/AC use: Connect the 100V-240V AC adapter to the refrigerator's AC input port and then to a standard wall outlet.

4. **Ventilation:** Ensure there is adequate space (at least 6 inches) around all sides of the refrigerator for proper ventilation.

Image: The AstroAI 15L Portable Car Refrigerator demonstrating its versatility with both AC power for indoor use and DC power for vehicle use.

6. OPERATING INSTRUCTIONS

1. **Power On/Off:** Press and hold the **Power Button** (🔌) for 3 seconds to turn the unit ON or OFF.

2. **Temperature Adjustment:** Use the **"+"** and **"-"** buttons to increase or decrease the desired temperature. The display will show the current internal temperature.

3. **MAX/ECO Mode Switch:** Press the Settings Button (⚙) to toggle between MAX (fast cooling) and ECO (energy-saving) modes.

4. **Battery Protection Mode:** Press and hold the Settings Button (⚙) for 3 seconds to cycle through Low (L), Medium (M), and High (H) battery protection settings.

5. **Fahrenheit/Celsius Switch:** Press and hold the **"+"** and **"-"** buttons simultaneously for 3 seconds to switch between Fahrenheit (°F) and Celsius (°C).

<div style="border:1px solid #000; text-align:center; padding:8px;">Your browser does not support the video tag.</div>

Video: A demonstration of the AstroAI 15L Portable Freezer's control panel, showing how to power it on/off, adjust temperature, and switch between MAX/ECO modes. The video highlights the quiet operation of the unit.

7. TEMPERATURE SETTINGS

The AstroAI 15L Portable Car Refrigerator offers a wide temperature range from -4°F (-20°C) to 68°F (20°C), allowing it to function as both a freezer and a refrigerator. The unit can cool to 32°F (0°C) in approximately 15 minutes when empty, and reach its lowest temperature of -4°F (-20°C) within about an hour.

Recommended Temperature Settings for Common Food Items

Food Type	Temperature (°F)	Temperature (°C)
Meat	0°F	-18°C
Frozen Food	0°F	-18°C
Seafood	26°F	-3°C
Vegetables	37-50°F	3-10°C
Cooked Food	39°F	4°C
Water	41°F	5°C
Canned Drinks	41°F	5°C
Fruits	41-46°F	5-8°C
Soft Drinks	46-50°F	8-10°C
Alcoholic Drinks	55°F	13°C

Adjustable Temperature for Varying Needs

Freezing Mode
No Ice Needed
❄ -4~32 °F
Steak Sea Food Ice Cream

Cooling Mode
Preserve Freshness
❄ 32~68 °F
Beverages Vegetables Milk

Image: Visual representation of the AstroAI 15L Portable Car Refrigerator's adjustable temperature range, showing optimal temperatures for freezing and refrigerating various food and drink items.

8. Power Modes (MAX/ECO)

The refrigerator features two operating modes to optimize performance based on your needs:

- **MAX Mode:** Provides maximum cooling power for the fastest temperature drop. Ideal for initial cooling or when rapid chilling is required.
- **ECO Mode:** Optimizes energy consumption for extended use, especially when powered by a battery. This mode reduces power draw while maintaining the set temperature efficiently.

Image: An illustration detailing the power consumption and cooling performance of the AstroAI 15L Portable Car Refrigerator in both MAX and ECO modes.

9. Battery Protection System

To prevent your vehicle's battery from being fully discharged, the AstroAI refrigerator includes a three-level battery protection system. This system monitors the input voltage and will automatically shut off the compressor if the voltage drops below the selected level. The compressor will restart once the voltage returns to a safe level.

- **High (H) Mode:** Provides maximum protection for your vehicle's battery. The compressor will cut off at a higher voltage.
- **Medium (M) Mode:** A balanced setting for battery protection and extended operation.
- **Low (L) Mode:** Allows the refrigerator to use more of the battery energy before cutting off. Use this mode if you have a dedicated auxiliary battery or a robust power bank.

Factory Default Voltage Protection Levels (H Mode)

Voltage		High Mode	Medium Mode	Low Mode
12V DC	Cut out	11.3V	10.1V	9.6V
	Cut in	12.5V	11.4V	10.9V
24V DC	Cut out	24.6V	22.3V	21.3V
	Cut in	26.0V	23.7V	22.7V

Note: "Cut-out" is the input voltage at which the fridge/freezer will turn off. "Cut-in" is the input voltage at which the fridge/freezer will turn on.

Image: A table illustrating the voltage cut-out and cut-in levels for the AstroAI 15L Portable Car Refrigerator's three battery protection modes (High, Medium, Low) for both 12V and 24V DC inputs.

10. MAINTENANCE

- **Cleaning:** Unplug the refrigerator before cleaning. Use a soft, damp cloth to wipe down the interior and exterior. Avoid abrasive cleaners or harsh chemicals.
- **Defrosting:** If ice builds up, turn off the unit and allow the ice to melt naturally. Remove all contents before defrosting. Wipe dry after defrosting.
- **Storage:** If storing for an extended period, ensure the unit is clean and dry. Leave the lid slightly ajar to prevent odors and mold growth.

11. TROUBLESHOOTING

If you encounter issues with your AstroAI 15L Portable Car Refrigerator, refer to the following common troubleshooting steps:

- **Unit not turning on:** Check power connections (DC or AC). Ensure the power outlet is functional. Verify the battery protection mode is not set too high for your power source.
- **Not cooling effectively:** Ensure vents are not blocked. Check if the ambient temperature is extremely high. Verify the temperature setting is correct. Switch to MAX mode for faster cooling.
- **Error Codes:** If an error code (e.g., E1 for low voltage) appears on the display, consult the user manual for specific meanings and solutions. Often, adjusting the battery protection mode or ensuring a stable power supply resolves these.
- **Unusual Noise:** Ensure the unit is on a flat, stable surface. Check for any obstructions around the fan.

12. SPECIFICATIONS

Specification	Value
Model Name	IPF15
Size	15 L
Capacity	16 Quarts
Item Dimensions (LxWxH)	12.6"D x 22.2"W x 9.8"H
Item Weight	22 Pounds
Voltage	12V/24V DC & 120V AC
Defrost System	Automatic
Special Feature	Fast Cooling
Number of Doors	1

13. WARRANTY AND SUPPORT

The AstroAI 15L Portable Car Refrigerator (Model IPF15) comes with a **3-month warranty** from the date of purchase. For technical support, troubleshooting assistance, or warranty claims, please contact AstroAI customer service through their official website or the contact information provided in your product packaging. Please have your model number (IPF15) and proof of purchase ready when contacting support.