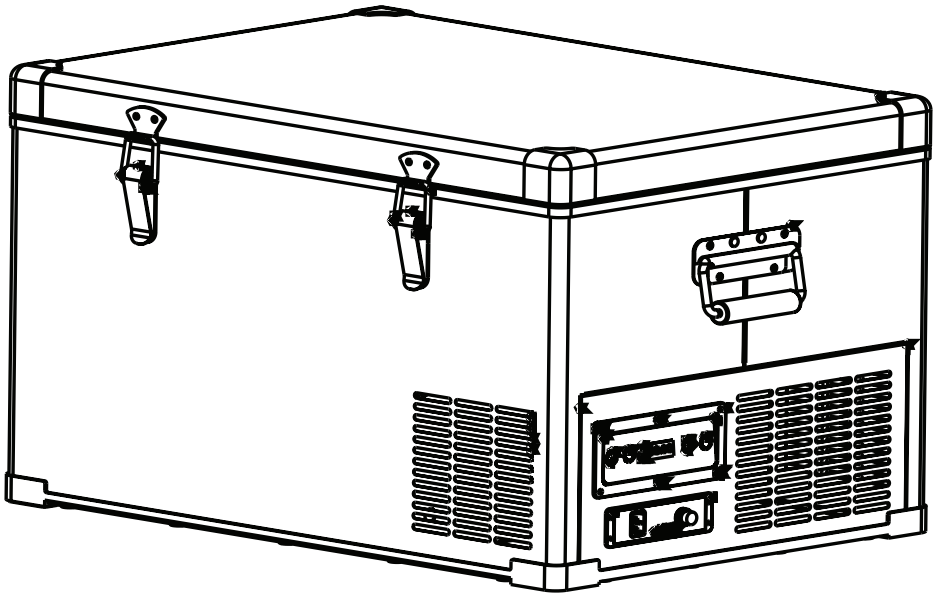


AKAI

Makes Sense



45 L Portable Fridge/Freezer

INSTRUCTION MANUAL

MODEL: AK-FF45L

AFTER SALES SUPPORT
(AU) 1300 886 649 (NZ) 0800 836 761



Contents

	Page
Important Safety Instructions	03
Product Overview	07
Getting Started	08
Instructions	09
Operating Instructions	10
FAQs & Troubleshooting Guide	13
Other Useful Information	15

Important Safety Instructions

READ CAREFULLY AND KEEP FOR FUTURE REFERENCE

Read this manual thoroughly before first use, even if you are familiar with this type of product. The safety precautions enclosed herein reduce the risk of fire, electric shock and injury when correctly adhered to. Keep the manual in a safe place for future reference, along with any warranty information, your purchase receipt and packaging carton. If applicable, pass these instructions on to the next owner of the appliance.



Pay particular attention to messages that follow this safety alert symbol or the words **DANGER**, **WARNING** or **CAUTION**. These words are used to alert you to a potential hazard that can seriously injure you and others. The instructions will tell you how to reduce the chance of injury and let you know what can happen if the instructions are not followed.



WARNING: Risk of fire

This symbol alerts you to take care as the appliance contains flammable materials: isobutane as refrigerant and cyclopentane as insulation blowing gas. While tetrafluoroethane (R134a) is a gas with a high level of environmental compatibility, it is nevertheless flammable. Do not expose the appliance to high heat, sparks and open flames.

Refrigerant matters

WARNING: Do not damage the refrigerant circuit! Never use an appliance with a damaged refrigerant circuit! If the refrigerant circuit becomes damaged during transport or installation, avoid proximity to open fires and all types of heat and ignition sources. Thoroughly ventilate the room in which the appliance is located.

The room for installing the appliance must be at least 1m³ per 8g of refrigerant. The amount and type of refrigerant in the appliance can be found in the technical specifications on page 16 and on the appliance rating plate. It is hazardous for anyone other than an authorised service person to service this appliance. In Queensland, the authorised service person MUST hold a Gas Work Authorisation for hydrocarbon refrigerants to carry out servicing or repairs which involve the removal of covers.

Responsible disposal

At the end of its working life, do not throw this appliance out with your household waste. Electrical and electronic products contain substances that can have a detrimental effect on the environment and human health if disposed of inappropriately. Observe any local regulations regarding the disposal of electrical consumer goods and dispose of it appropriately for recycling and recovery of the refrigerant and blowing agent.


WARNING! This refrigeration appliance contains flammable refrigerants and insulation blowing gases, which must be removed before disposal. Contact your municipal authorities for any codes or regulations concerning the disposal of such materials.

DANGER! Risk of child entrapment: When discarding this or another refrigerator, pull the plug out of the socket, cut the connection cable (as close to the appliance as you can) and remove the doors to prevent playing children to suffer electric shock or to get trapped inside the appliance. If the discarded appliance has a spring lock (latch) on the door or lid, make the spring lock unusable to prevent it from becoming a death trap for children.

Important Safety Instructions (Cont.)

To reduce the risk of fire, electric shock or injury, always follow basic safety precautions and accident prevention measures when using this appliance, including the following:

Electrical safety

- **Voltage:** Plug the appliance in a 100-240 V~, 50/60 Hz, properly earthed household power outlet, which must be in good working order, or a 12/24 V  car cigarette lighter plug. Make sure your outlet voltage and circuit frequency correspond to the voltage stated on the appliance rating label.
- **Power connection:** Do not use an extension cord. Plug the power plug directly into a separate power point that cannot easily be turned off accidentally, and that is easily accessible so you can switch it off when required.
- **Power cord:** Do not kink or damage the power supply cord(s). Do not try to lengthen it. Do not use a cord that shows cracks or abrasion damage along its length or at either end. Any damage to the cord may cause a short circuit, fire and/or electric shock. If the power cord is damaged, it must be replaced by the manufacturer or its service agent.

WARNING: When positioning the appliance, ensure the supply cord is not trapped or damaged.

WARNING: Do not locate multiple portable socket outlets or portable power supplies at the rear of the appliance.

- **Disconnection:** Never unplug the unit by pulling the cord. Always grip the plug firmly and pull straight out from the power point.
- **Only use this unit with the supplied adaptor or cable.**

Usage conditions and restrictions

- **Car and domestic use only:** This appliance is intended to be used in cars, vans, camper vans, other vehicles - with the included DC power cord. When used with the AC adaptor, this unit is intended for indoor domestic use only, which includes use in households, staff kitchen areas in shops, offices, in farm houses and in other working environments, use by clients in hotels, motels, bed and breakfast establishments, other residential type environments and in catering and similar non-retail applications. It is not suitable for industrial or commercial use.

Do not use this appliance for anything other than its intended purpose, and only use it as described in this manual. Do not attempt to alter or modify this appliance in any way.

- **Usage restrictions:** This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety.
- **Children:** Supervise children to ensure they do not play with the appliance. Close supervision is necessary when any appliance is used by or near children. Never allow children to operate, play with or crawl inside the appliance.

Important Safety Instructions (Cont.)

- **WARNING!** Do not use any **electrical appliances** (such as ice cream makers) inside refrigeration appliances, unless they are approved for this purpose by the manufacturer.
- **Connection:** Ensure proper connection of the power source and the refrigerator at all times.
- **Liquid:** Do not pour any liquid directly into the unit.
- **Do not expose this unit to rain.**
- **Condensation:** Condensation or ice may appear around the door gasket and the front of the cabinet if the fridge is left to run for a long time - this is normal. Please clean the condensation or ice using a dry towel.
- **Intended use:** The fridge is designed for temporary storage of cold or frozen food for outdoor camping or car rides, not for long term freezing of food.
- **Below freezing point:** To save energy and avoid condensation or ice issues, do not run the unit with a setting lower than 0 degrees Celsius or 32 degrees Fahrenheit long term.
- **Defrosted water:** Defrosted water may leak from the inner compartment of the unit if the fridge is powered off or in standby mode for a long period of time. This is normal. Please clean the inside of the unit with a dry towel after defrosting.
- **Fridge/Freezer safe:** Anything stored in this unit must be fridge/freezer safe for storage at the set temperature. Do not store electrical appliances or cables in this unit.

Cleaning and maintenance

- **Disconnect:** Switch off and unplug the appliance from the power source before cleaning, maintenance or servicing. Failure to do so can result in electric shock, injury or death. Do not connect or disconnect the plug when your hands are wet.
- **Flames:** Do not let open flames or ignition sources enter the appliance.
- **Flammable/explosive substances:** Never clean this appliance with flammable fluids. Do not store or use volatile, flammable or explosive substances such as aerosol cans with a flammable propellants in or close to this or any other appliance. The fumes can create a fire hazard or explosion.
- **Solvents:** Do not use solvent based cleaning agents or abrasives on the interior as these may damage or discolour the surfaces of the appliances.
- **WARNING!** Do not use **mechanical devices** or other means to accelerate the defrosting process, other than those recommended by the manufacturer. Never use a sharp or metal instrument to remove frost or clean the fridge. Use a plastic scraper, if necessary.
- **Service:** Do not attempt to repair, modify or replace any part of the appliance unless specifically recommended in this manual. Refer all other servicing to a qualified service technician, or contact the after sales support centre for advice.

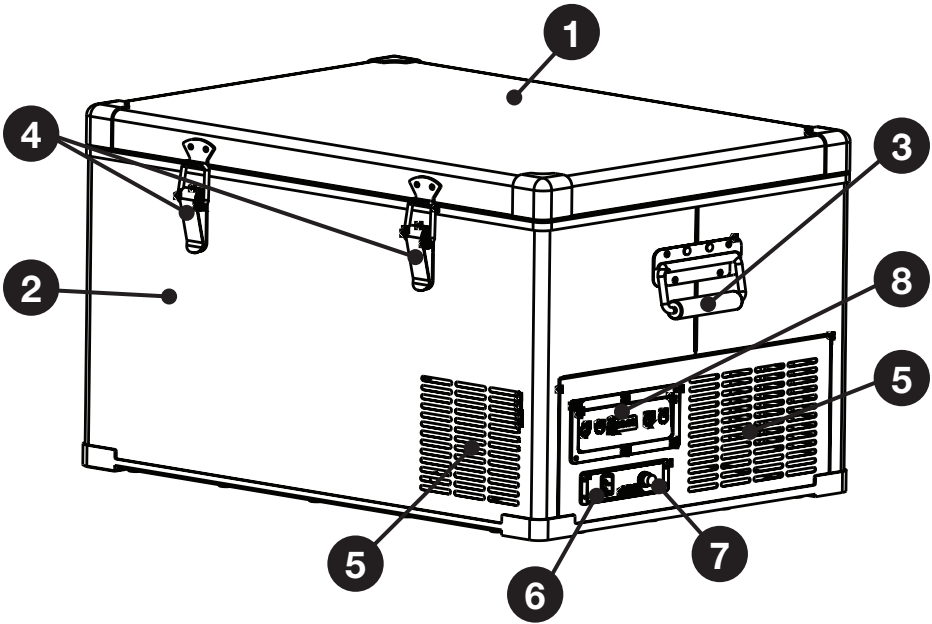
Important Safety Instructions (Cont.)

Installation

- **Heavy:** This appliance is heavy, take care when moving it. To avoid back or other injury, consider a two person lift or mechanical aid when installing it. Failure to do so can result in back or other injury.
- **Keep it upright:** Do not tilt the fridge more than 45° from upright when moving it.
- **Handle with care:** Do not apply force to any part such as the condenser or door.
- **WARNING: Ventilation:** To ensure proper ventilation, keep any ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstructions. Ensure adequate air circulation around the appliance to prevent overheating. Use spacers (if supplied) to prevent warm parts (compressor, condenser) coming into contact with the wall.
- **Level:** Install the appliance level in order to ensure proper operation.
- **Location:** Install the appliance in an area that meets the following requirements:
 - **Ambient temperature:** The ambient temperatures must correspond to the climate class (T) indicated on the rating plate of the appliance (16°C–43°C).
 - **Floor surface:** The floor must be sturdy, level (or nearly level) and strong enough to support the unit when it is fully loaded. If you must position the appliance on carpet, use a plastic carpet protector underneath the appliance.
 - **Areas to avoid:** Avoid areas where the appliance would be exposed to direct sunlight, sources of heat (stove, heater, radiator, etc.), extremely cold ambient temperatures or excessive moisture and high humidity (such as outdoors or exposed to wind, rain water spray or drips). Installing it in the coolest area of the room will save energy consumption and running costs.

Product Overview

Scope of delivery



Portable refrigerator/freezer

- 1 Cover
- 2 Body
- 3 Handle (one on each side)
- 4 Latches
- 5 Air Outlet
- 6 DC Jack
- 7 Fuse
- 8 Control panel
- 9 DC 12/24 V Power Cord (not shown)
- 10 AC Adaptor (not shown)

Other inclusions (not shown)

- Instruction manual
- Warranty certificate

NOTE: Due to continued product improvement, images and illustrations in this manual may vary slightly from the product purchased. All images in this manual are for reference purposes only. Parts are not necessarily pictured to scale.

Getting Started

Unpacking

- **Packaging materials:** This product has been packaged to protect it against transportation damage. Remove all packaging materials from around and inside the appliance and keep the original packaging carton and materials in a safe place. It will help prevent any damage if the product needs to be transported in the future, and you can use it to store the appliance when it is not in use. In the event that the carton is to be disposed of, please recycle all packaging materials where possible. Plastic wrapping can be a suffocation hazard for babies and young children, so ensure all packaging materials are out of their reach and disposed of safely.
- **Parts:** Check to ensure you have all the parts listed in the Product Overview section.
- **Damage:** When unpacking, check the appliance carefully for damage. If it is damaged, do not install the appliance. Contact our after sales support centre for advice on examination or return of the damaged appliance.
- **Power cord:** Unwind the DC power cord, and the AC adaptor to their full lengths and inspect them for damage. Do not use the appliance if the appliance or either cord has been damaged or is not working properly. In case of damage, contact our after sales support centre for advice on examination, repair or return of the damaged product.
- **Read the manual:** Before installing your new fridge/freezer, read all safety instructions, especially the sections on installation and electrical safety on pages 4–6.
- **Clean:** Make sure the fridge/freezer is disconnected from the power supply before cleaning the interior and exterior surfaces, and all internal accessories, with a damp, soft cloth. This will remove any dust from transit and storage and help remove the typical smell of a brand new product. Then dry thoroughly.
IMPORTANT: Do not use harsh or abrasive detergents or powders as these will damage the finish.
- Your new fridge is now ready for use.

Introduction

This portable fridge/freezer is ideal for storing chilled and frozen foods for camping and road trips. It can be installed into your car to keep fruit, meat, seafood, drinks, ice cream and more, fresh and cold while you're on the go.

The unit can be used at home using the included AC adaptor and a household wall socket, however, it is ideal for use in a car using the included DC power cord attached to the inbuilt cigarette lighter. It is recommended that before taking this unit on the road, you first chill it at home using a household socket, for faster cooling once it is in the car.

Instructions

First Use

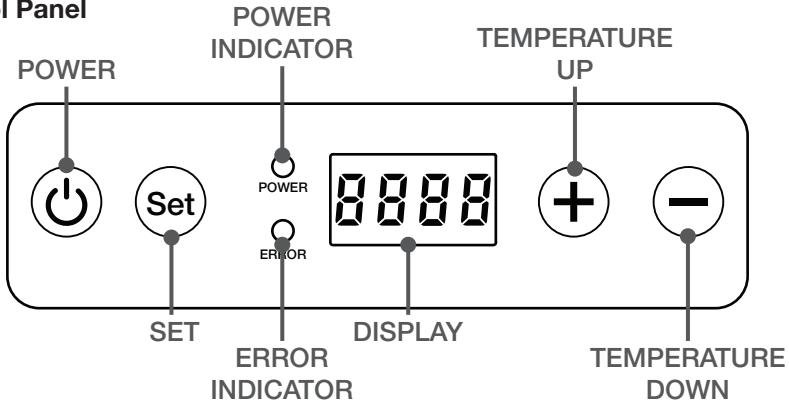
- Before first use, please clean this unit, following the instructions on page 15.
- The air vents should not be blocked.
- For most efficient operation, ensure that the unit is being operated in a well-ventilated area away from heat or direct sunlight.

Connecting to power

- **WARNING!** It must be possible to disconnect the appliance from the power supply; the plug must therefore be easily accessible after installation.
- **Before plugging in your new fridge/freezer, let it stand upright for at least 12 hours.** This will allow the refrigerant gases to settle into the compressor and reduce the possibility of a malfunction in the cooling system.
- **DANGER:** Never handle plugs and switches with wet hands, or while standing on a wet surface.
- This product includes two methods of connection; it can be connected to either the DC cigarette lighter cord (to be plugged into the car's cigarette lighter - 12 V $\overline{\text{---}}$ / 24 V $\overline{\text{---}}$) or the AC adaptor (to be plugged into a household socket - 100-240 V \sim).
- We recommend plugging this unit into a household socket and chilling it for 2-3 hours before installing it in your car, to reduce the cooling time.
- The appliance's DC socket is located at the side of the unit.
- For safety reasons the refrigerator is equipped with an electronic system to prevent polarity reversal. This protects the fridge against short-circuiting when connected to a battery.
- When plugged into a wall socket, the appliance must be earthed. The plug of the power supply cord AC adaptor is equipped with a contact for this purpose. Do not under any circumstances cut or remove the third (earth) prong from the power cord. If the plug does not fit your outlet, consult a licensed electrician for advice to have the outlet changed.
- Plug the unit into a dedicated, properly installed and earthed wall outlet. Ensure that your outlet voltage and circuit frequency correspond to the voltage stated on the appliance rating label.
- Secure the power supply cord behind the unit. Do not leave it exposed or dangling to prevent injury and accidental disconnection from the power supply.
- **When first starting up, and after a period out of use, allow the unit to cool down on the maximum setting (-18°C) for at least 2 hours before placing food in the fridge.**

Operating Instructions

Control Panel



FIRST USE

- The first time you turn the unit on, set the temperature control to the coldest setting (-18°C) for 2–3 hours before placing perishable food in the cabinet. Then, you can adjust the temperature to the desired level.

Connection

- This unit can be connected in two different ways; to a car battery, through the cigarette lighter socket available in most vehicles (12/24 V $\overline{\text{---}}$), or through AC mains supply (100-240 V \sim). See page 9 for more information.
- To connect the unit to a car battery, use the DC charging cable to attach the fridge/freezer to the car's cigarette lighter, using the outlet on the unit.
- To connect the unit to the AC mains power supply, use the included adaptor to attach the fridge/freezer to an appropriate household socket, using the using the outlet on the unit.
- We recommend chilling the unit for 2-3 hours at home, before moving the unit to the car and using the DC power supply, for more rapid cooling.
- It is recommended that you chill foods in your home fridge/freezer before transporting them in this unit, for maximum efficiency.

Switching On/Off

- Press and hold the POWER button to turn the unit on, or switch it to standby mode. The POWER INDICATOR light will illuminate

Operating Instructions (Cont.)

Setting the Temperature

- To set the temperature, press the “Set” button to enter temperature setting mode, before pressing the [+] or [-] buttons. The temperature on the display screen will adjust and flash.
- Once there have been no further temperature adjustments for 5-6 seconds, the temperature on the display will flash twice to indicate that it has been confirmed. The ambient temperature of the fridge/freezer will be shown on the display screen.
- **NOTE:** The temperature can only be adjusted once the “Set” button has been pressed. The [+] and [-] buttons will not function otherwise.
- The temperature can be adjusted from -18°C to 10°C.
- The default temperature is set to -18°C.

Celsius/Fahrenheit Adjustment

- Press the “Set” button once to enter temperature setting mode, then press it for a second time to enter Celsius/Fahrenheit setting mode. Use the [+] and [-] buttons to switch between Celsius (°C) and Fahrenheit (°F).
- Once there have been no further adjustments for 5-6 seconds, the unit on the display will flash twice to indicate that it has been confirmed. The set unit will then appear on the display screen.

Battery Protection Settings

- When the battery voltage drops to the set value, the refrigerator will automatically turn off to protect the battery from over-discharge. Once the battery charge reaches the restart voltage, the unit will start again.
- **NOTE:** When the battery protector is closed, the battery should be fully charged to avoid repeated restarts of the unit.
- Press the “Set” button for a third time to enter the ABS voltage setting state, and adjust between high (“Hi”), medium (“ned”) and low (“Lo”) gear of ABS with the [+] and [-] buttons.
- Once there have been no further adjustments for 5-6 seconds, the value on the display will flash twice to indicate that it has been confirmed.

Memory Function





- If the power is turned off, the fridge will restart using the same mode and temperature when it is used again.




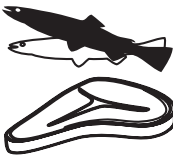
NOTE:

- If an error occurs, a buzzer will sound and the ERROR INDICATOR light will illuminate. See page 14 for more information on error codes and their meanings.

Operating Instructions (Cont.)

- The unit may not work at the set temperature on particularly hot days, or if the door is opened too frequently. To ensure efficient operation, do not open the door unnecessarily or for prolonged periods of time.
- For most efficient operation, ensure that the unit is being operated in a well-ventilated area away from heat or direct sunlight. Also make sure that the temperature has not been set too low for the type of food/drink you are storing (see the table of recommended temperatures below), and that any hot items have cooled sufficiently before they are added to the unit.

Food type	Recommended Storage Temperature
 Water	5°C
 Other drinks	5°C
 Fruits	5°C~8°C
 Vegetables	3°C~10°C

Food type	Recommended Storage Temperature
 Cooked Food	4°C
 Red wine	10°C
 Quick-frozen food	-10°C
 Meat and Seafood	-18°C

FAQs & Troubleshooting Guide

If you experience a problem with your fridge, check in the following table for solutions to help you solve the problem. If after these checks you still have a problem with your fridge, please contact our after sales support centre for advice.

Problem	Possible cause
The unit does not operate.	<ul style="list-style-type: none"> • It is not plugged in. Ensure it is properly plugged in and there is power at the socket (plug another appliance into the outlet to check). • Check that the power button on the operation panel is turned on. • The circuit breaker tripped or has blown a fuse. • The ventilation is blocked or abnormal.
Poor cooling performance	<ul style="list-style-type: none"> • Check if the unit is closed properly. • Check if the door seal is damaged or deformed. • Check if there is poor ventilation. • Check that the temperature is set properly.
The appliance seems to make too much noise.	<ul style="list-style-type: none"> • A rattling noise may come from the flow of the refrigerant, which is normal. • A “click” noise is normal due to starting up, tilting, undervoltage, overvoltage, etc. This is a normal startup phenomenon of the compressor, and should dissipate with time. • As each cycle ends, you may hear gurgling sounds caused by the flow of refrigerant. • Contraction and expansion of the inside walls may cause popping and crackling noises. • The appliance is touching a wall or other object. Move it slightly.
Moisture forms on the inside or outside walls of the fridge.	<ul style="list-style-type: none"> • Hot and humid weather increases the internal rate of frost build-up. This is normal. • Open the door less often and make sure it is always properly closed.

FAQs & Troubleshooting Guide (Cont.)

When there is a malfunction, the error indicator on the control panel will start flashing in order to warn you that something is wrong. Please contact our after sales support centre if this occurs.

Error Code	Error Type
Error light flashes once	Battery voltage protection.
Error light flashes twice	External fan overcurrent protection.
Error light flashes three times	The compressor has failed to start.
Error light flashes four times	There is a minimum speed error.
Error light flashes five times	Controller overheat protection.
EER1 (on LED screen)	NTC1 open circuit.
EER2 (on LED screen)	NTC1 short circuit.

Other Useful Information

WARNING!

To reduce the risk of electric shock or injury, always switch off the appliance and disconnect it from the power supply before cleaning or maintenance.

Cleaning the unit

- Switch off and unplug the fridge/freezer, before removing any food/other items, and the partitions.
- Wash the inside surfaces and the interior accessories with a damp, warm cloth moistened in a water and baking soda solution (about 2 tablespoons of baking soda to 1 litre of water). Wring excess water out of the cloth before cleaning around the temperature control or any electrical parts. Rinse and wipe dry with a soft cloth.
- Clean the outside of the unit with a damp, well wrung out cloth. Keep the door gasket (seal) clean.
- After everything is dry, place appliance back into service.

WARNING!

- Never clean the unit with an abrasive, acid, oil or solvent based cleaning agent, or with abrasive pads or scourers. Never use flammable fluids or sprays for cleaning as the fumes from these substances can create a fire hazard or explosion.
- Never clean the appliance with a steam cleaner. Moisture could accumulate in the electrical components, danger of electric shock! Hot vapours can lead to the damage of plastic parts.
- The appliance must be completely dry before it is placed back into service.
- Ethereal oils and organic solvents can attack plastic parts, e.g. lemon juice or the juice from orange peel, butyric acid, or cleansers that contain acetic acid. Do not allow such substances to come into contact with the appliance parts.

Defrosting the appliance

You will need to defrost this appliance when a thick coating (more than 5 mm) of frost starts to appear on the inside of the unit - especially after prolonged use at sub-zero temperatures. To do so, switch off the unit and disconnect it from its power source. Leave it to sit for about two hours, or until the ice has melted, then pour/wipe the accumulated water from the appliance. Do not use sharp or hard tools to remove ice or frost. Ensure the fridge/freezer is completely dry before reattaching it to the power supply.

Storage

- Before storage, switch off and unplug the unit from the power supply.
- Defrost and dry the appliance, as described above.
- Store the unit in the original packaging, or wrap it with a plastic bag or piece of material and keep it in a dry, cool place, out of children's reach. Leaving the door slightly ajar when storing may help avoid dampness and mould.





Other Useful Information (Cont.)

Storage, service and repair

Do not attempt to alter or modify this appliance in any way. Do not attempt to repair or replace any part of the appliance unless it is specifically recommended in this manual.

All other servicing should be referred to a qualified technician and only genuine spare parts must be used.

Technical specifications

Portable Fridge/Freezer	
Model number	AK-FF45L
Voltage	12/24 V  or 14.5 V 
Current	6 A Max.
Climate class	T
Electrical protection class	III
Refrigerant	R134a (38 g)
Insulation blowing agent	Cyclopentane
Capacity	45 L
Dimensions (approx.)	612 (L) x 430 (W) x 397 (H) mm
Net weight (approx.)	17.2 kg
AC Adaptor	
Model number	GM95-145600-D
Specifications (input)	100-240 V~, 50/60 Hz, 2.5 A
Specifications (output)	14.5 V  , 6 A
DC Charging Cable	
Specifications	12/24 V 

Compliance

This product has been fully tested and meets all requirements as set out by standards AS/NZS 60335.1 and AS/NZS 60335.2.24.



The RCM Mark (Regulatory Compliance Mark) indicates that the product complies with the relevant guidelines of the ACMA as well as corresponding government requirements for the safety of electrical devices.

Other Useful Information (Cont.)



USE ONLY WITH
< GM95-145600-D >
SUPPLY UNIT

This marking indicates only to use this product with the supplied adaptor.

T

This marking indicates that the appliance is suitable for use in tropical climates under ambient temperatures of 16 °C to 43 °C.

NOTE: Due to continued product improvement, images and illustrations in this manual may vary slightly from the product purchased. All images in this manual are for reference purposes only. Parts are not necessarily pictured to scale.

Responsible disposal



Packaging materials are recyclable. Please dispose of them responsibly for recycling.



At the end of its working life, do not throw this appliance out with your household waste. Electrical and electronic products contain substances that can have a detrimental effect on the environment and human health if disposed of inappropriately. Observe any local regulations regarding the disposal of electrical consumer goods and dispose of it appropriately for recycling.

Contact your local authorities for advice on recycling facilities in your area. Or find recycling scheme services listed on Planet Ark's website at www.recyclingnearyou.com.au, or call Planet Ark on 1300 733 712.

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Warranty returns

Should you for any reason need to return this product for a warranty claim, make sure to include all accessories with the product.

Product does not work?

If you encounter problems with this product, or if it fails to perform to your expectations, make sure to contact our After Sales Support Centre on (AU) 1300 886 649 or (NZ) 0800 836 761 for advice.

For an electronic copy of this manual, please contact our after sales support centre.

Distributed by Tempo (Aust) Pty Ltd ABN 70 106 100 252

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