



Car Refrigerator

FCR/FC-15 FCR/FC-30 FCR/FC-40 FCR/FC-50

Car Refrigerator Manual

Thank you for choosing smart car refrigerator products. Please read this manual carefully before using. Keep the manual in a safe place.

Please hand on this manual together if you deliver the refrigerator to another person.

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Manual Notifications

WARNING !

- Safety instructions: Improper operation may cause fatal or serious injury, and damage to the refrigerator.
- Safety instructions related to current or voltage. Failure to follow this instruction may lead to injury or damage to the refrigerator and impair the function of the product.

CAUTION !

- Safety instructions: failure to observe this instruction can lead to injury.

Safety Instructions

WARNING !

1 The manufacturer hereby declares not responsible for damage caused by the following actions.

- Overvoltage and mechanical breakage lead to refrigerator damage.
- Retrofitting the refrigerator without the permission of the manufacturer.
- Failure to follow the manual instructions.

WARNING !

2 Warning - Fatal Hazard from Electric Shock

- Never touch the damaged power cable directly with your hands, especially when it is connected to AC mains supply. It's very dangerous!
- Disconnect the refrigerator and other power consuming devices from the battery before connecting the quick charging device.
- Check that the voltage specification on the type plate corresponds to that of the energy supply.

- Do not try to open the circuit part of the product.

CAUTION !

- If you are operating your refrigerator on board a boat from a mains connection of 100- 240 V \sim , you must install a residual current circuit breaker between the 100 - 240 V \sim mains and the refrigerator.
- Seek advice from a trained technician.

CAUTION !

- Battery contains acid and corrosive substances. Careful with using.
- Do not store any corrosive substances.
- Do not place obstructions in or near the compressor refrigeration system of the product.
- Do not use electrical devices inside the refrigerator.
- If this device's power cable is damaged, it must be replaced by the manufacturer or a similarly qualified person in order to prevent safety hazards.

Operating the device safely

CAUTION !

- Product working voltage: DC 12V/24V
- The refrigerator is suitable for cooling and freezing food. The model FC/FCR 15/30/40/50 are all single zone refrigerators.

WARNING !

- The temperature display is based on the temperature at the center of the container.
- Compressor refrigerators can be used for home, car or boat, and can also be used for camping.

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WARNING !

- The refrigerator can work properly when the ambient temperature is between -5° C to +45° C and the maximum humidity is 90%.
- The refrigerator works properly under the maximum inclination angle 30 degrees. (Note: If the inclination angle exceeds 15 degrees, the noise will increase when the refrigerator is working, but no influence to the refrigeration function).
- The raw materials used in the production process all meet the restrictions and requirements of all kinds of laws and regulations.

Operation

1 Before initial use

CAUTION !

- Please check whether the accessories are available at the first when opening the package.
- Please place the product in a dry place, and pay attention to prevent rainwater from spilling.
- Please do not use the product with the main power supply device outdoors, and be carefully not to wet the power supply device.
- There is a 12/24V DC power supply interface on the power supply device. Do not place the device near naked flames or other heat sources (heaters, direct sunlight, gas ovens etc.).
- Ensure that there is sufficient ventilation so that the heat that arises during operation does not build up. Make sure that the device is sufficiently far away from walls and other objects so that the air can circulate. Ensure that the ventilation openings are not covered.

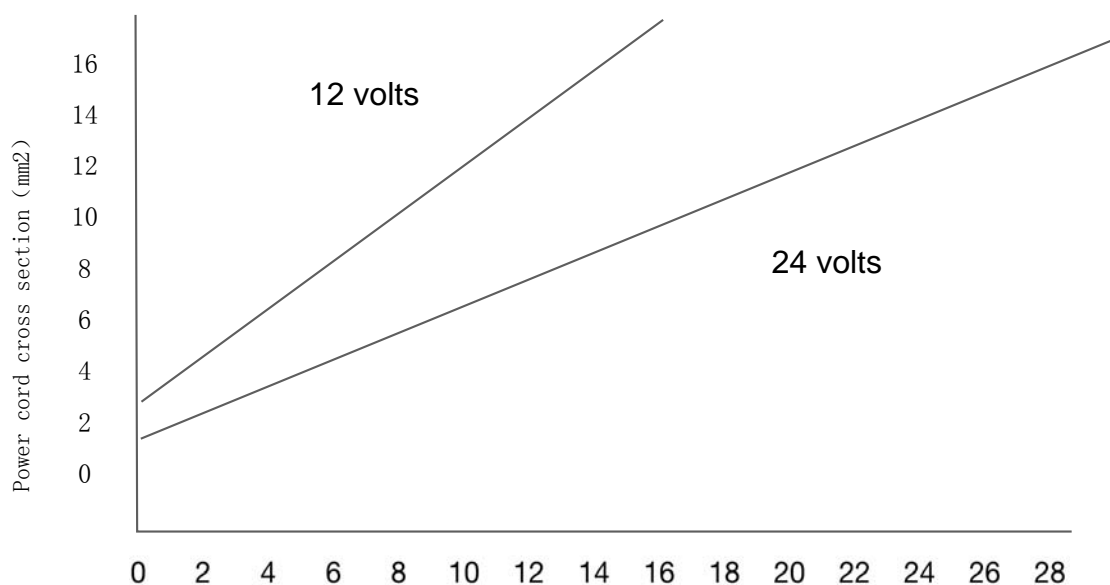
2 Power-on operation

Warning--danger of damaging the refrigerator

- The refrigerator can be directly plugged in 12V DC power supply or 24V DC power supply.
- Before connecting the power, please check whether the output voltage of the power supply meets the working voltage range of the product.

Warning--electric current danger

- Connect the DC power cable directly to the battery with a 10A fuse. Please note that the positive power cable is connected to the positive pole of the battery, and the negative power cable is connected to the negative pole of the battery.
- In order to prevent the voltage loss from affecting the cooling effect of the product, the power cable should be as short as possible. Always ensure that the power cable is straight through. Therefore, avoid the use of additional switch plugs or connecting box.
- If the power cable is too short, or it does not match the power cable of the refrigerator model you are using, please purchase a power cable that meets the corresponding regulations or extend the power cable from a designated product dealer.
- When choosing the cross section of the power cord, please refer to the following table:



CAUTION !

- Disconnect the refrigerator and other power consuming devices from the battery before connecting the quick charging device.
- The refrigerator consumes a certain amount of current during operation. Therefore, when the refrigerator is not used for a short period of time, please turn it off directly.

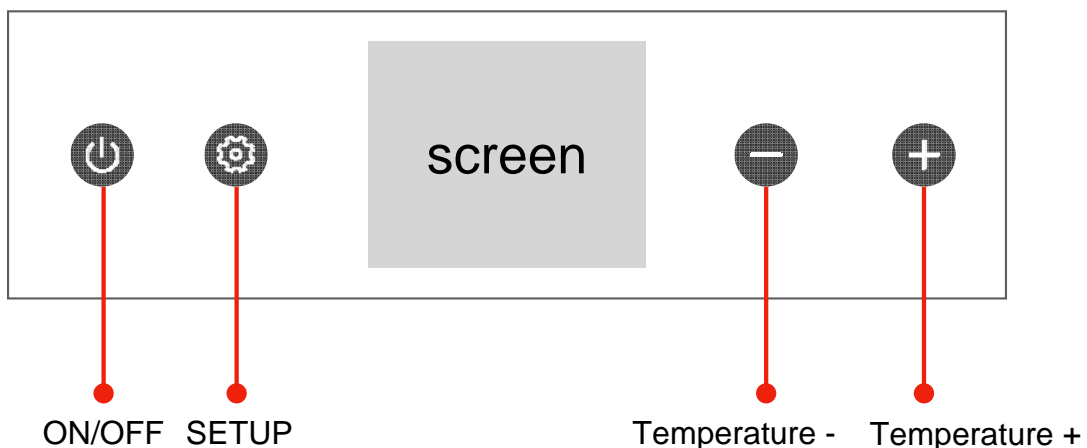
3 Battery protector

- For safety reasons, the refrigerator is equipped with an electronic system to prevent polarity reversal. This protects the refrigerator against short-circuiting when connecting to a battery.
- In order to protect the battery, when the battery voltage is insufficient, the circuit control system on the refrigerator will automatically turn off, which can effectively protect the battery. The relevant start voltage and disconnect voltage data as below.

Hazard warnings

- In order to protect your battery from being completely depleted and affecting other uses, it is recommended to set the voltage level to "Hi" or "Nd".
- Never handle plugs and switches with wet hands or if you are standing on a wet surface.

Use of refrigerators



1 Power On/Off

- Switch on the refrigerator, press the on/off button, then the LCD display lights up and the compressor starts to work.
- Long press the on/off button for 3 seconds, the buzzer will beep for 1 second, then the LCD display lights off and the compressor will stop working.

2 Setting temperature

- Press the setting button, the buzzer will beep for 500ms, and the temperature display on the LCD screen will start to flash. At this time, you can start to set the internal control temperature of the refrigerator. Press the "+" and "-" button to set, the temperature range is $-22^{\circ}\text{C} \sim +10^{\circ}\text{C}$ ($-7.6^{\circ}\text{F} \sim 50^{\circ}\text{F}$);
- Press the setting button again, or do not press any button for 10 seconds, the temperature display stops flashing, the device temperature has been fixed, and it starts to adjust to the selected temperature.

3 Running mode setting

- Long press the setting button for 3 seconds, the buzzer will beep for 1 second. The $^{\circ}\text{C}$ ($^{\circ}\text{F}$), max (eco), H (M, L) of the LCD display start to flash, and you can set the below functions.
- Press the setting button, the battery protection level [H, M, L] displayed alternately, you can set the battery voltage protection level.
- Press the temperature[-], [$^{\circ}\text{C}$, $^{\circ}\text{F}$] displayed alternately, you can set the temperature scale.
- Press temperature [+], [max and eco] displayed alternately, and the control mode can be set.
- No operation for 10 seconds, the display stop flashing, and the refrigerator works according to the newly set parameters.

4 Bluetooth connection settings

- Switch on, press or long press the setting button, the Bluetooth of the refrigerator starts broadcasting.
- The Bluetooth icon on the LCD screen lights up, and the mobile app can be connected to Bluetooth.
- After connecting, you can set the refrigerator through the app.
- After turn off the mobile app, the Bluetooth connection display will be automatically cancelled.

Input power	Voltage gear	Compressor ON/OFF voltage (V)
12V	Low on	11.4 ± 0.3
	Mid on	12.2 ± 0.3
	Hi on	12.6 ± 0.3
	Low off	10.1 ± 0.3
	Mid off	11.2 ± 0.3
	Hi off	11.8 ± 0.3
12<->24V	12V/24V Switching voltage	17 ± 0.3
24V	Low on	23.5 ± 0.3
	Mid on	25.3 ± 0.3
	Hi on	26.0 ± 0.3
	Low off	22.0 ± 0.3
	Mid off	24.1 ± 0.3
	Hi off	24.6 ± 0.3

Battery protection voltage gear parameter table

5 Energy saving tips

- Choose a well ventilated installation location which is protected against direct sunlight.
- Allow warm food to cool down first before placing it in the cooling device to keep cool.
- Defrost the refrigerator regularly. Or defrost the refrigerator once a layer of ice forms.

- Avoid unnecessarily low temperatures.
- Do not leave the lid of the refrigerator open longer than necessary.
- If you do not use the refrigerator for a long time, please keep the refrigerator as follows:
- Unplug the DC power cord from the DC port or remove the power cable from the battery.
- Clean the refrigerator. Keep the refrigerator lid open to against moisture and mustiness.

Cleaning and Maintenance

1 Cleaning

- The device can be used directly without cleaning.
- If necessary, clean it with a soft cloth dampened with warm water.

! CAUTION !

- Please clean the refrigerator regularly during use!
- Never handle plugs and switches with wet hands or if you are standing on a wet surface.
- Please do not use corrosive or acidic cleansers to clean the inner container of the refrigerator.
- Do not use hard cleaning tools such as brushes for cleaning.
- Please wipe the refrigerator with a dry cloth after cleaning.

2 Maintenance

! Warning! The effect of damaging the refrigerator

- Humidity can form frost in the interior of the cooling device or on the evaporator, which will reduce the cooling capacity.
- When defrosting, please do not use sharp tools or tools that may damage the refrigerator evaporation plate or plastic parts. Please defrost at an appropriate time.
- To defrost the refrigerator, proceed as follows:
- Please take out the contents of the cooling device and place them in another cooling device to keep them cool. Switch off the device.
- Leave the cover open and wipe off the defrosted water.

Other Settings

1 Charging port and lighting

No.	Name	Function Description
1	USB charging port	DC5V/2A output, only for USB charging. Note 1: When the device is connecting DC power supply without protection, no output on the USB port. Note 2: When switch off the device, as long as it is under DC power supply protection, the USB port still has output. Note 3: When the maximum output is 2A, charging of high-power USB devices is prohibited.
2	Lighting	White LED, the light is on when the door is opened, and the light is off when the door is closed. Note: When switch off the device, as long as the power supply is not undervoltage, the inner light can still be used.

Troubleshooting

1 Temperature detection fault

- When the temperature detection fails, the display shows an error message [F1° C], it means the NTC function is defective, which can only be repaired by an authorised repair centre.
- When the fault indicator flashes, it means the DC power supply voltage is lower than the currently set "Battery Voltage Protection" gear. The battery needs to be charged or set the "Battery Voltage Protection" gear lower for using continuously.
- The flashing red light indicates an error message during the operation of the refrigerator. The frequency of flashing depends on the type of error. Each flash will last for a quarter of a second, and there will be a pause after a series of flashes, as shown in the following table. The error indicator will flash repeatedly every 4 seconds.

Frequency of Flashing	Fault	Possible Causes
1	Operating voltage too low	Voltage is lower than 9.6V and needs charging
2	Fan current too high	The current in the fan load circuit exceeds 1A
3	Compressor does not work	The pressure difference in the refrigeration system is too large (>5bar)
4	Compressor rotational speed too low	The refrigeration system is overloaded, the motor cannot maintain the minimum speed of 1800 rpm
5	Part of circuit overheated	The ambient temperature is too high or the ventilation is not good

- Note: In case of the above 2, 3, 4, and 5 failures, you can switch off the device and restart it after sufficient time.
- If the fault persists, you need to contact an authorised repair centre.

2 Bad cooling effect and high internal temperature

Fault	Possible Causes	Suggested Remedy
The compressor has been working for a long time or in working condition all the time	Ambient temperature is too high	Move the device to a place with suitable ambient temperature
	Poor ventilation or insufficient air supply	Move the device to another place to ensure a good ventilation environment
	Condenser is dirty	Clean the condenser
	Fan failure	Replace the fan
The compressor works intermittently	The battery is exhausted	Charge the battery

3 Abnormal Noise

Fault	Possible Causes	Suggested Remedy
Loud drone	A certain part of the device cannot be moved freely (leaning against the wall)	Carefully remove the pressed part
	There is an obstruction between the air inlet/outlet vents on the device and the wall	Clean the obstruction
	Fan noise The device is tilted more than 15 degrees	Make sure the fan is free of any dust and dirt, and place the device as flat as possible

Technical Data

Model	FC-15	FC-30	FC-40	FC-50
Dimensions	632*360*303 mm	635*392*446 mm	635*392*526 mm	635*396*606 mm
Capacity	15L	30L	40L	50L
Cooling System	Low-noise/high-performance compressor, pasted tube evaporation plate			
Temperature Range	-22° C ~ +10° C			
N.W. (kg)	11kg	19kg	20.5kg	22.5kg
Stable working current DC12V/24V	6.5A 3.0A	7.0A 3.2A	7.5A 3.4A	7.8A 3.6A
Product Material	Plastic shell and outer cover, high-quality evaporation plate, PU insulation layer			
Accessories	Instruction manual/DC power cable			

Model	FCR-15	FCR-30	FCR-40	FCR-50
Dimensions	632*360*303 mm	635*396*446 mm	635*392*526 mm	635*396*606 mm
Capacity	15L	30L	40L	50L
Cooling system	Low-noise/high-performance compressor, pasted tube evaporation plate			
Temperature range	-22° C to +10° C			
N.W. (kg)	12.1kg	20.1kg	21.6kg	23.6kg
Stable working current DC12V/24V	6.5A 3.0A	7.0A 3.2A	7.5A 3.4A	7.8A 3.6A
Battery model	18650 lithium battery, battery capacity 15600, charging time 8H-10H, working time 5H			
Product material	Plastic shell and outer cover, high-quality evaporation plate, PU insulation layer			
Accessories	Instruction manual/DC power cable			

Product Safety Certification

- Certification: CCC, CB, GS, CE, RoHS, EMC, SAA, FCC, etc.
- The company reserves the rights to choose versions, technical modifications and delivery options.
- This refrigerator is a non-fluorine refrigerator, and the refrigerant is R134a.
- Restriction of Hazardous Substances Directive (RoHS)
- To meet the laws, regulations and other requirements related to the restriction of hazardous substances in electrical and electronic products of the People's Republic of China, our company classifies hazardous substances in this product, and declares as follows:

Parts Name	Harmful Substance					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr(VI))	Polybrominated biphenyls (PBB)	Polybrominated Diphenyl Ether (PBDE)
Body and its components	O	O	O	O	O	O
Door body and its components	O	O	O	O	O	O
Insulation Materials	O	O	O	O	O	O
Compressor	O	O	O	O	O	O
Compressor controller	X	O	O	O	O	O
Refrigeration components	O	O	O	O	O	O
Refrigerant	O	O	O	O	O	O
Electrical components	O	O	O	O	O	O
Power cord and connection line	O	O	O	O	O	O
Packaging and printing materials	O	O	O	O	O	O

This table is compiled in accordance with SJ/T11364.

O: Indicates that the content of the hazardous substance in all homogeneous materials of the part is below the limit requirement of GB/T26572.

X: Indicates that the content of the hazardous substance in all homogeneous materials of the part exceeds the limit requirement of GB/T26572.

*All parts and their homogeneous materials containing hazardous substances in the detailed list cannot be replaced by hazardous substances due to the limitation of the technological development level of the industry. They meet the strict requirements of the EU RoHS for the restriction of hazardous substances. Please feel free to use them.

Warning: In order to protect the environment, when this product or its components are scrapped, as a consumer, you have the responsibility to separate it from life-cycle and send it to an appropriate recycling. The recycling site will classify, disassemble or recycle it in accordance with relevant national regulations. For detailed information about the recycling of this product, please consult your local government or waste disposal agency.