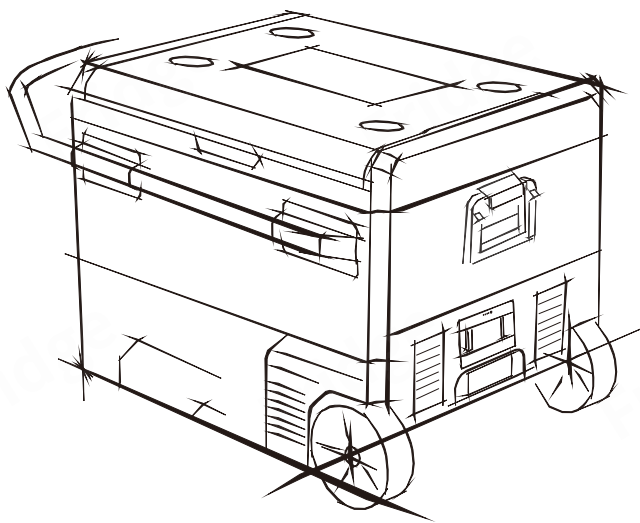


Car Refrigerator

USER MANUAL



Model TWW35 / 45 / 55

Please read this operating manual carefully before starting the device.
Keep it in a safe place for future reference.

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1.Safety Instructions



WARNING! Failure to obey these warnings could result in malfunction of your device and possible injury for yourself and other users.

- Do not operate the device if it is visibly damaged.
- Do not block the gaps of the device with things like pin, wire, etc.
- Do not expose the device to rain or soak it in water.
- Do not place the device near naked flames or other heat sources (heaters, direct sunlight, gas ovens etc.)
- Do not store explosive substances like spray cans with flammable propellants in the device.
- Before starting the device, ensure that the power supply line and the plug are dry.
- Check if the voltage specification on the type plate matches that of the energy supply.
- Once unpacked and before turning on, the device must be placed on a level surface for more than 6 hours.
- Make sure that the device stays horizontally when it is running. The tilt angle must be less than 5° for long time running and be less than 45° for short time running.
- The refrigerator must be well ventilated for heat dissipation and make sure to keep some space around it (Back Space \geq 200mm, Side Space \geq 100mm).
- The device may only be repaired by qualified personnel. Improper repairs can lead to safety hazards. If the power cable is damaged, it must be replaced by the manufacturer, customer service or a similarly qualified person in order to prevent safety hazards.



NOTICE!

- The device can be used by children aged 8 or over, as well as by persons with reduced physical, sensory or mental capabilities or a lack of experience and/or knowledge, providing they are supervised or have been taught how to use the device safely and are aware of the resulting risks.
- Children must be supervised to ensure that they do not play with the device.
- The installation of DC power in the boat must be handled by qualified electricians.
- Disconnect the device or switch it off when you turn off the engine. Otherwise you may discharge the battery.



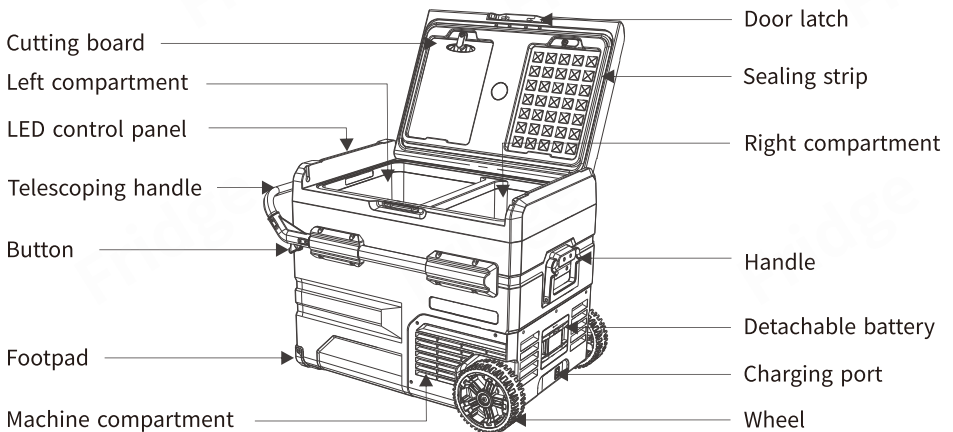
CAUTION!

- Food is suggested to be stored in its original packaging or in suitable containers.
- Set suitable temperature for food or medicine stored in the device. Refer to recommended temperature for common food on Page4.

2.Product Features

- High-efficiency DC compressor and conversion module.
- CFC free and great heat insulation.
- Lithium battery recharged by solar(12~50V), DC12/24V or AC 100~240V (using the adapter).
- Fast cooling to -20°C/-4°F (based on 25°C/77°F room temperature).
- LCD digital display for temperature setting.
- Dual compartments with individual temperature control.
- Three stage battery protection system prevents vehicle run out of battery.
- Specific parts: wire storage baskets, interior drain plug, oversize wheels and telescoping handle, wire storage baskets, detachable battery, cupholder door, interior LED light.

3.Product Structure



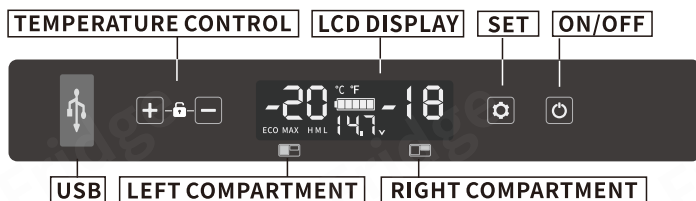
Note:




*there are buttons on both sides of the telescoping hand, press them at the same time to pull the rod.


*Removable battery: press left and right to remove/insert the battery, the battery has a certain weight, it is recommended to hold it with your hand and take it out gently.

*The cutting board can be moved by turning the knob on the top cover, it is suggested to clean and dry it after every use.


4. Function and Operation



- **Power supply:** connect to 12V/24V DC power , 100~240V AC power(using the adapter), or use back-up lithium battery which can be recharged by solar(12~50V).
- **Display Screen Initialization:** connect to the power supply, the buzzer will make a long beep, and the display will be on for 2 seconds then enter the normal operating mode.
- **Power On/Off:** long press  for three seconds to switch ON/OFF.
- **Function unlock:** the panel will be locked automatically when stop pressing any button within 20 seconds, long press **+** **-** at the same time for 2 seconds to unlock.
- **Temperature Setting:** under the running state, long press **+** and  at the same time for three seconds to switch ON/OFF the left compartment, long press **-** and  at the same time for three seconds to switch ON/OFF the right compartment, two compartments cannot be switched off at the same time.



When both left and right compartments are set in running state, press **+** or **-** to enter left compartment temperature setting, press **+** to increase temperature, press **-** to decrease temperature, and press  to switch left/right compartment. The setting will be saved after stop operating for four seconds(Note: the temperature displayed is the current temperature of the compartments, it' ll take a while to reach the set temperature.)

Temperature setting range: -20~20°C (-4~68°F)

- **Cooling Mode:** under the running state, press  to switch MAX(fast cooling) and ECO (Energy saving Mode).(*Factory setting is MAX.)

ECO

MAX

- **Battery Protection Mode:** under the running state, long press  for three seconds until screen flashes, then press  again to select protection mode H(High), M(Middle) and L(Low) (*Factory setting is H.)

H

M

L

Due to the different output voltages between vehicles, H should be set when the product is connected to car power, and M or L should be set when it is connected to a portable battery or other back-up battery.



The battery gear should be set from H to M or from M to L if there is a voltage protection code F1 shown on the panel. The battery gear should be set to H if the product keeps working after turning off the car engine, or the product may drain the battery.

Voltage Reference:

INPUT MODE	DC 12V		DC 24V	
	CUT OUT	CUT IN	CUT OUT	CUT IN
L	9.0V	10.9V	21.3V	22.7V
M	10.1V	11.4V	22.3V	23.7V
H	11.1V	12.4V	24.3V	25.7V

*the voltage is theoretical value, there may be a deviation in different sceneries.

*USB output: +5V DC/1A, suitable for small devices like mobile phones, tablets, etc.

• **Temperature Unit Setting:** switch off the fridge, long press  for three seconds until E1 displays, then switch to E5 by pressing  again. Under E5 mode, press **+** or **-** to select Celsius or Fahrenheit. (*Factory setting is °C.)










• **Reset:** switch off the fridge, long press  for three seconds until E1 displays, under E1 mode, long press **+** **-** at the same time until the screen displays as below:



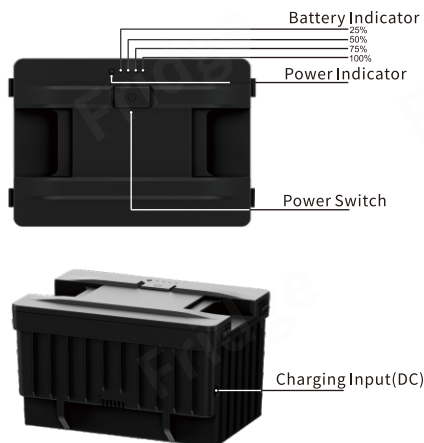
*Note: Except E5, other E settings are used for factory maintenance, reset it if you operate the setting mistakenly.

Recommended temperature for common food:

						
Drinks	Fruits	Vegetable	Delicatessen	Wine	Ice cream	Meat
5°C/41°F	5~8°C/41~46°F	3~10°C/37~50°F	4°C/39°F	10°C/50°F	-10°C/14°F	-18°C/0°F

5. Battery Operation

The refrigerator can be connected to 12V/24V DC power, 100~240V AC power, or use backup lithium battery if DC/AC power are not available. The battery will also be charged simultaneously when the fridge is connected to DC/AC power.



Battery bank:

Model No.: FSAK-002

Battery Capacity: 15600mAh

Rated Voltage: 11.1V

Charging Limited Voltage(DC):12.6V


Charging Limited Current(DC):3A



Warning: do not disassemble the battery!

• **Battery charging:** If you want to charge the battery separately, switch off the refrigerator and connect the battery to 12V/24V DC power, 100~240V AC power or solar(12~50V) (it is suggested that connect to AC power first, after charging 30%, other charging methods can be used).

When the battery is charging, the power indicator turns green, and the four blue battery indicators will show the charging status in a marquee manner; when the battery is fully charged, the power indicator will turn off, the battery indicators are always on.

 **Notice!** Do not charge the refrigerator with DC12V and solar at the same time, otherwise the refrigerator would be damaged!

• **Battery ON/OFF:** Long press the switch button of the battery to turn on/off. When the battery is off, press the switch button to display the charging status (it will go out automatically after 3 seconds.)

Note:

*When the battery is not fully charged with the adapter or solar, it can't be turned off;

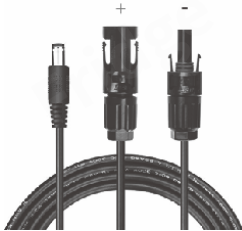
*When the power indicator is green, it means charging; when the power indicator is blue, it means discharging; when the power indicator is off, it means the battery is fully charged.

*If the refrigerator won't be in use for a long time, fully charge the battery and turn it off.

- **Battery power saving:** It is recommended to charge the refrigerator before your departure. Put food and beverages in the refrigerator and cool them to a proper temperature, which will make the lithium battery last longer and save energy. The battery output can be disconnected by unplugging the battery or turning off the battery to prevent self-discharge.

Discharge time(ECO and L mode)	
Refrigeration	About 10 hrs
Freezing	About 5 hrs

- **Instructions for solar charging:** When using solar panel to charge the battery, place the refrigerator in a cool place to avoid overheating that would cause malfunction of the refrigerator. The battery icon on the display will show the charging status when it is charging. The charging input power should be higher than the working power of the refrigerator (about 40-45W), or press the power button to make the refrigerator enter the standby state, otherwise the battery will not be able to charge. It is recommended to use a 100W solar panel.



(Not included in the package)

- **Solar panel(SOLAR) charge connection:** Insert the solar charge cable into the refrigerator's "SOLAR" terminal.
 Max Solar Input Voltage: 50V
 Max Solar Input Current: 10A

- **Instructions for in-vehicle use:**

Engine start: select H, M or L mode (refer to Page 3 Battery Protection), and use car port power to operate the refrigerator.

Engine flameout: When using the car battery to charge, most cars will stop power supply after the engine is turned off, while some cars will continue to supply power. At this time, the battery protection should be adjusted to H, otherwise the car battery may be exhausted, resulting in insufficient power to start the car.

6.Cleaning and Storage

■Cleaning:

- Unplug the device first to avoid electric shock.
- Use wet cloth to clean the device and dry it.
- Remove the cover and drain from the hole at the bottom of the device.
- Do not soak the device in water and do not wash it directly.
- Do not use abrasive cleaning agents as these can damage the device.

■Storage:

If the device will not be in use for a long time, please follow the steps:

- Turn off the power and remove the plug.
- Remove all the items stored in the device.
- Remove the cover and drain from the hole, wipe off excess water with a soft rag.
- Leave the lid slightly open to prevent odors from forming.
- Put the device in a cool and dry place.

■Defrosting:

Humidity can form frost in the interior of the cooling device or on the evaporator, which will affect the cooling performance. Defrost the device regularly to avoid this.

- Switch off the device.
- Take out the contents of the device.
- Keep the lid open.
- Remove the cover and drain from the hole.
- Wipe off the defrosted water.



Never use hard or sharp tools to remove ice or to loosen objects which have frozen in place.

7.Warranty and Maintenance


If the device gets malfunctional, limited warranty will be provided for 1 year from the date of purchase, except following situations:

- Contrived damage.
- Damage caused by force majeure such as earthquake, conflagration, etc.
- Damage from inappropriate use or violating this instruction.
- Damage or malfunction caused by disassembling.

8. Troubleshooting

Issues	Suggestions
Refrigerator does not work	Check if the switch is on.
	Check if the plug and socket are connected well.
	Check if the fuse has been burnt.
	Check if the power supply is malfunctioned.
	Switching on/off the fridge frequently may cause start delay of the compressor.
Refrigerator compartments are too warm	The door is opened frequently.
	A large amount of warm or hot food was stored recently. Wait for the refrigerator to reach its selected temperature.
	The refrigerator has been disconnected for a period of time.
Food is frozen	The temperature was set too low, please increase the temperature
There is a “water flow” noise from inside the fridge	It's a normal phenomenon, caused by the flow of refrigerant.
There are waterdrops around the refrigerator casing or door gap	It's a normal phenomenon, the moisture will condense to water when it touches a cold surface of the refrigerator.
The compressor is slightly noisy when starting	It's a normal phenomenon, the noise will be reduced after the compressor works stably.
Code F1 displayed	Possible cause: low voltage to fridge. Adjust the battery protection from H to M or from M to L.
Code F2 displayed	Possible cause: condenser fan is overloaded. Disconnect power to fridge for 30 minutes & re-start.
Code F3 displayed	Possible cause: the compressor starts too frequently. Disconnect power to fridge for 30 minutes & re-start.
Code F4 displayed	Possible cause: compressor not kicking in. Disconnect power to fridge for 30 minutes & re-start.
Code F5 displayed	Possible cause: overheating of the compressor & electronics. Disconnect power to fridge for 30 minutes & re-start.
Code F6 displayed	Possible cause: no parameter can be detected by the controller. Disconnect power to fridge for 30 minutes & re-start.
Code F7 or F8 displayed	Possible cause: temperature sensor is faulty. Contact manufacturer for service.

9. Technical Information

Mode	TWW35	TWW45	TWW55
Rated Voltage	DC 12V/24V, AC100~240V(using the adapter), Solar(12~50V)		
Rated Power Input	90W		
Capacity	35L/1.3Cu.Ft.	45L/1.6Cu.Ft.	55L/2.0Cu.Ft.
Noise Emission	≤45dB		
Climate Class	T/ST/N/SN		
Temperature Range	-20°C ~ 20°C (-4°F ~ 68°F)		
Dimensions (D*W*H)	600*400*440mm (23 5/8*15 3/4 *17 5/16 inch)	600*400*505mm (23 5/8*15 3/4 *19 7/8 inch)	600*400*570mm (23 5/8*15 3/4 *22 7/16 inch)
Weight	18kg/39.7lb	20kg/44.1lb	23kg/50.8lb
Testing/ Certification			

*Due to product improvement, the technical information might be different from actual information, please refer to the rating label on the product.

■ Disposal:

Place the packaging material in the appropriate recycling waste bins wherever possible.



If you wish to finally dispose of the product, ask your local recycling center or specialist dealer for details about how to do this in accordance with the applicable disposal regulations.