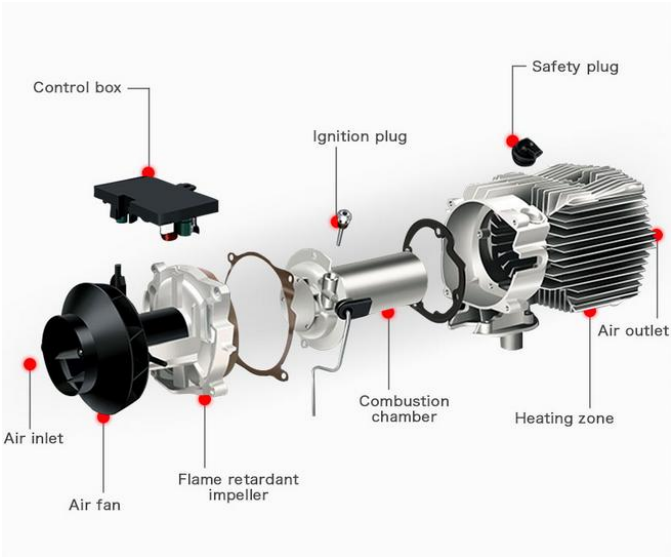
2.0 Smart Heater

User Manual

1.Function:

Get rid of damage to car causing by the sudden drop of temperature, improve the temperature inside the car, and preheat the engine coolant to avoid the engine wear at low temperature. Conducive to car interior thawing, car start, car glass defrost fog.

2. Internal Structure



3.Heater type:

1.Horizontal All-in-One



2. Outdoor TB30



3.Vertical All-in-One



4 .Split Heater



4.Switch controller and Remote Control type

Modle	Modle number	Switch	Remote control
Bluetooth App	S-A2200BS		
	S-A2302B		

5.How to download an app?

APP : **For Android** **For IOS**

Android: Scan to download Android app or search '**Sunster** ' in Google Play.
IOS : Scan to get IOS app or search '**Sunster** ' in App store.

6. Smart Remote Control Operation Instructions

6.1.1 S-A2200BS



【 ⏻ 】： Power button;
【 ▲ 】： Gear/temperature/item adjustment key;
【 ▼】 : Gear/temperature/item adjustment minus key;
【M】: Mode switch/setting Key screen display area

Working Mode

① In gear mode , 1 ~ 10 The gear position can be adjusted within the gear range;

② Temperature control module Mode Next, 8 ~ 36℃ Fan Wai Neko Tune Festival set up Place Temperature, control system switch of files Bit Follow drive room Inside of temperature Degree Changes, when temperature Degree High or low When low, control switch Will be Dynamic Save money Row position, fast DA To the set temperature, making the heater run more intelligently , economy.

③ when In operation Trade middle out now In case of failure, pass control open Off Display window Mouth flash Flashing display fault generation code easy to Even add allow Really intuitive try to find arrive Fault exist.

Instructions:

● **On/off:** Press [⏻】Turn on the power; in the powered-on state, press 【 ⏻】to shut down the power;

● **Mode switch:** In temperature control mode, press [M 】 Switch to the gear mode. In the gear mode, press 【 M 】 Switch to temperature control mode;

● **Gear adjustment:** press [▲ 】 Operation gear/temperature +1, maximum 10 gears/36℃, press【 ▼】 to switch to gear/temperature - 1, minimum to 1 gear/8 ℃;

●Basic settings:Reference video

●Engineering mode : When the device is powered on, press and hold [▲】 【 ▲】 3s Enter engineering mode, press Move【 ▲ 】 Item +1, press【 ▼】 Item-1, data items are displayed in the display area in engineering mode;

000: Heater mainboard version number;	001: fault code;	002 temperature;	Shell003: voltage;	Supply004: Heater operating position;
005: Cab temperature;	006: Altitude;	007: Oil pump mode;	008: Remote control matching;	009: Bluetooth name;

010: Restore factory settings;

Remote control quick pairing : When the device is powered on , press 【 ▲ 】 3s The screen displays 'P - 0 1'. Press any button on the remote control at this time to successfully match. After success, it will automatically return to the running interface.

✧ clear remove superior Second-rate remote control match match number According to: Electric Inspection hour long according to【 ⏻ 】boundary noodle Show Display “CLr ” on beginning clear Except, straight to screen screen Show Show" SUC” loose open according to key clear remove remote control match match number according to become achievement;

● **Bluetooth Matching:** Switch to engineering mode 009, the interface displays "4 is the Bluetooth name", then open the APP to search for settings, find the Bluetooth name corresponding to this switch, and click Match. success After automatic return run interface;

●Word cut Change : Press and hold [M] [▼ 】 3s to switch , RU stands for Russian, EN Indicates English, GE For German, OF Indicates that the voice is turned off;

● **Pump oil Mode** : First Second-rate power ups close machine shape state Press down Live【 ▼】 7s, screen Screen display Show open beginning 30 0 s count Open beginning Pump Oil, pour Timing Knot bundle Pump Oil Close machine , middle way stop according to move 【 ⏻ 】 Knot bundle Pump oil and close machine;

6.1.2 S-A2302B



Operation mode description:

Ventilation mode: only the fan works, no heating. The wind speed can be set from 1 to 10 gears.

Gear mode: heating according to the set gear, the setting range can be 1 to 10 gears.

Strong heating mode: the heater runs at the maximum output power, and the maximum continuous operation time is 2 hours

Temperature control mode: the current operation gear is automatically adjusted according to the difference between the set temperature and the current ambient temperature. The lowest operating gear is gear 1, and it does not stop. The temperature setting range is 8~36° ℃.

Constant temperature mode: the operation mode is the same as the temperature control mode. When the ambient temperature is 2℃ higher than the set temperature, the heating stops. The heater is in standby mode. When the ambient temperature is 2 ℃ lower than the set temperature, the heater is automatically turned on and continues to heat.

Operation method:

Power on: In shutdown mode, directly press the power button to turn on the power. After powering on, the LCD screen displays the current status.

Power off: In the running state, directly press the power button to turn off the heater. The LCD display window will turn off the LCD screen after completing the shutdown action.

Mode switch: In the running state, press the knob to switch between different modes.

Parameter adjustment: Rotate the knob to adjust the setting gear or temperature.

View the current carbon monoxide value: In the running state, press the knob twice in a row to view the current carbon monoxide value, and press the power button to exit. (This detection value needs to be used with a specific carbon monoxide remote control A2422)

Setting mode

In the running state, press and hold the power button for 3s to enter the setting mode. Rotate the knob to switch the setting items. The specific setting items are as follows:

F0: Current time setting

F1: Timing start time setting

F2: Timing start after running time setting

F3: Timing function on or off setting

F4: Voice broadcast voice setting

F5: Ambient temperature compensation setting

F6: Fuel tank oil level setting

F7: Fuel pump type setting

F8: Constant temperature mode function setting
F9: Temperature unit switching setting
FA: Backlight brightness level setting
Fb: Full tank icon setting
FC: Carbon monoxide alarm value setting (need to connect to carbon monoxide remote control A2422)

Function settings

--Time setting: In the running state, press and hold the power button for 3s to enter the setting mode. At this time, F0 is displayed in the upper left corner of the LCD screen. Rotate the knob to switch the setting items.

Press the knob to enter the setting item. When the setting item flashes, rotate the knob to adjust the setting content. The time format is HH:MM format, 24-hour system.

After the setting is completed, press the knob again to save, and finally press the power button to exit the setting.

--Announcement language switching: In the running state, press and hold the power button for 3s to enter the setting mode. At this time, F0 is displayed in the upper left corner of the LCD screen. Then rotate the knob to F4 and press the knob to set. At this time, the language type flashes. Rotate the knob to switch the language type. After the setting is completed, press the knob again to save, and finally press the power button to exit the setting. The factory default is English.

--Temperature compensation setting: When the ambient temperature displayed by the heater deviates greatly from the actual ambient temperature, the error can be reduced by setting the temperature compensation value. The factory default value is 0℃. The operation is as follows:

In the running state, press and hold the power button for 3s to enter the setting mode. At this time, F0 is displayed in the upper left corner of the LCD screen. Then rotate the knob to F5, press the knob to set, and the setting value flashes. Rotate the knob to adjust the temperature compensation value, the adjustment range is -9℃~9℃. After the setting is completed, press the knob again to save, and finally press the power button to exit the setting. The factory default is 0.

--Oil tank volume/oil pump type switch: This function can estimate the oil consumption according to the set oil tank volume and oil pump type, according to the running time, and then use the oil tank icon to approximately display the remaining amount on the running interface. The operation is as follows:

In the running state, press and hold the power button for 3s to enter the setting mode. At this time, F0 is displayed in the upper left corner of the LCD screen. Then rotate the knob to F6/F7, press the knob to set, the setting value flashes, rotate the knob to modify, after the setting is completed, press the knob again to save, and finally press the power button to exit the setting.

-- Constant temperature function setting: The constant temperature function is only applicable to the setting on or off on the app, and there is no need to set it separately on the heater.

-- Temperature unit switching: In the running state, press and hold the power button for 3s to enter the setting mode. At this time, F0 is displayed in the upper left corner of the LCD screen. Then rotate the knob to F9, press the knob to set, and the setting value flashes. Rotate the knob to switch the temperature unit between Fahrenheit and Celsius. After the setting is completed, press the knob again to save, and finally press the power button to exit the setting.

-- Backlight brightness level setting: In order to reduce the impact of the control panel backlight on the user in a dark environment, when the control panel has no operation for 120 seconds, the backlight will automatically reduce the brightness. The reduced brightness can be set, and the factory default value is 100. The setting method is as follows:

In the running state, press and hold the power button for 3s to enter the setting mode. At this time, F0 is displayed in the upper left corner of the LCD screen. Then rotate the knob to FA, and then press the knob. The backlight brightness level value flashes. Then, rotate the knob to adjust the backlight brightness value. The adjustment range is 0~100. The value of 100 means that the backlight brightness does not decrease, and the value of 0 means that the backlight goes out. After the setting is completed, press the knob again to save, and finally press the power button to exit the setting. Press any button to light up the backlight.

--Full tank function: When the oil level of the tank icon changes, you can refill the icon through this operation. The operation is as follows:

In the running state, press and hold the power button for 3s to enter the setting mode. At this time, F0 is displayed in the upper left corner of the LCD screen. Then rotate the knob to Fb, press and hold the knob to fill it, and finally press the power button to exit the setting.

--Remote control matching/clearing: In the off state, press the knob 3 times in succession. When the LCD screen displays P-1, then press any button of the remote control in turn. When it automatically shuts down, it means that the matching is successful.

When the control panel is powered off, press and hold the power button, then turn on the power. After 7s, the LCD screen will display to clear the remote control matching information.

--Forced oil pumping: When the heater is installed for the first time or the fuel line is not completely filled with fuel, the forced oil pumping mode can be used to quickly fill the pipeline with fuel.

The operation method is as follows:

Disconnect the switch power supply and wait for more than 10 seconds, then turn on the power. After the LCD screen display goes out, press and hold the knob for about 5 seconds to enter the forced oil pumping mode. The oil pump will work at a higher frequency. The LCD screen starts counting down from 300s. When the countdown ends, exit the forced oil pumping mode or press the power button to exit the forced oil pumping mode.

--Set the carbon monoxide alarm value: In the running state, press and hold the power button for 3s to enter the setting mode. At this time, F0 is displayed in the upper left corner of the LCD screen. Then rotate the knob to FC. The default value is 0 (this function is turned off). Press the knob to set it. The setting value flashes. Rotate the knob to modify. The adjustment range is 0~500. After the setting is completed, press the knob again to save, and finally press the power button to exit the setting. When the carbon monoxide value reaches the set alarm value, the switch alarms, and when it reaches 500, it automatically shuts down. (It needs to be used with the A2422 carbon monoxide remote control, otherwise this function is invalid).

Check the operating parameters:

In the operating state, press and hold the knob for 3s to enter the engineering mode and check the operating status of the heater. The specific parameters are as follows:

En01: Fault code (if any)

En02: Furnace temperature
En03: Power supply voltage
En04: Current operating gear
En06: Altitude
En05: Panel ambient temperature
En08: Remote control matching
En09: The last four digits of the Bluetooth ID number.

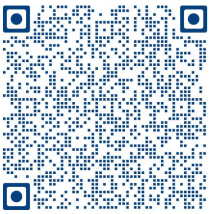
7.Description of E code display

Error Code	Type of fault	Solution
E01	Supply Voltage Overrun	Check the battery output voltage whether between in 9V and 16V for the 12V Heater and between 18V and 30V for 24V Heater
E03	Ignition unit fault	Check the Ignition plugin whether disconnected if not Replace it with a new one
E04	pulse pump fault	Check the pump plugin whether disconnected if not replace it with a new one;Check whether the main wiring harness is broken
E05	Overheating	Check the air inlet and outlet whether block
E06	Fan fault	Check the Fan plugin whether disconnected if not replace it with a new one
E07	Air intake sensor abnormality	Mainboard failure, replace the mainboard
E08	Lack of fuel	Check the fuel tank whether empty and add it
E09	Overheat sensor fault	Check the sensor plugin whether disconnected if not replace it with a new one
E10	Startup failure	Check the fuel tank whether empty and add it or Check the fuel pipe whether blocked
E11	Carbon monoxide exceeds the standard (connect A2422)	If the CO concentration in the environment exceeds the standard, open the windows for ventilation in time and evacuate the current environment immediately.

About us

Sunster is the factory's own brand and has a complete and mature technical team and production line. Sunster's product R&D team develops new products and updates product solutions every year, working with hundreds of employees to provide better heating solutions for global users, solve user problems, and make cost-effective products that customers really need. All products are certified by CE, WEE, FCC, EAC, UKCA and other authoritative organizations.

We have a 24-hour online after-sales service team. If you encounter any problems, you can directly contact the store customer service, or send an email to our after-sales email: cs@sunster.tech
For business issues, please contact :sunster@sunster.tech



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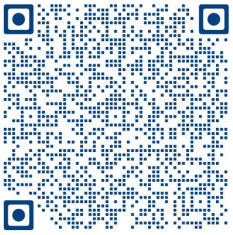

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