

Truly Wireless Backup Camera Kit

English

User Manual

Introduction

Thank you for purchasing this Solar4B magnetic wireless backup camera kit.

Please read all of the installation instructions carefully before installing the product. Improper installation will void the manufacturer's warranty.

The installation instructions do not apply to all types of vehicles, and are written as guidelines to assist in installing the backup camera kit.

If you have any questions, please contact us by the customer support window at **www.auto-vox.com** or by sending an email to our aftermarket service via **service@auto-vox.com**.

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Package Contents



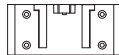
5 Inches Monitor



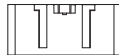
Backup Camera



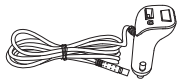
Monitor Suction Mount



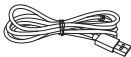
Camera Bracket Base



Magnetic Camera Bracket



Car Charger with Camera Activation Button (3.5 meters)



USB-Micro Charging Cable (1.5 meters)



Monitor Antenna (short)



Camera Antenna (long)



User Manual



Camera Base Screw*4



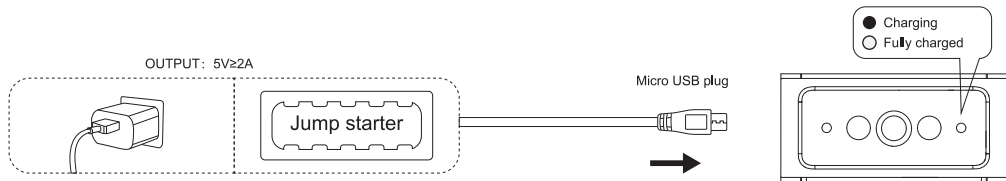
Anti-theft Screw*2



Screwdriver

Pre-installation Note

1. Please follow the manual to install the product, and do not impair the equipment, control units and systems inside the vehicle. Follow local applicable laws and safety regulations for vehicles!
2. Park on an even and safe location and then install the product.
3. Before installing the backup camera on your vehicle, please must test the product following the steps. If there is no problem after the test, charge the camera and prepare for installation.
 - a. Supply power to the monitor. If the indicator light of the monitor illuminates and the monitor displays the Boot logo, the monitor is on and functioning.
 - b. Press the power button to turn on the rear camera.
 - c. When the monitor connects with the rear camera and displays the image, the blue indicator light on the rear camera will always be on.
 - d. When the screen turns off, you can press the button on the car charger or the monitor to activate the system. If there is no image on the monitor, refer to the troubleshooting section.



Charge the Backup Camera

Charge your camera before you install it on your vehicle. It takes 6.5 hours to fully charge. When the camera is charged, the red indicator light is lit. After fully charged, the red indicator light is not on. (In a dim environment, the red indicator light is faintly lit after the battery is fully charged.)

Note: Please use a standard USB charger with a rated output of 2000mA or higher.

Hot tips:

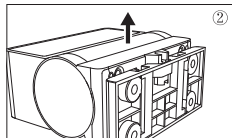
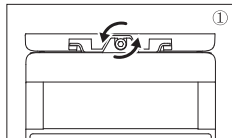
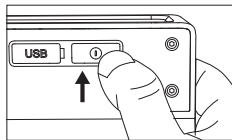
1. If the camera is not used for more than two weeks, press the power button on the bottom of the camera to turn off the camera. This can extend the life of the camera.
2. The fully charged camera can work continuously without the solar panel for more than 15 hours in day mode and 7.5 hours in night mode. If the backup camera is used 3 times per day for 120 seconds per time then a fully charged camera can last about 3 months.

When a low battery icon appears on the monitor, charge the camera promptly to maintain functionality. (Operating times are for reference only and actual times depend on individual operating conditions.)

Tip: By default, the monitor will stop displaying and go into standby mode after 240 seconds.

3. If you use a power bank to charge the device, make sure that its battery capacity is no less than 6600mAh.
4. The camera may be charged while installed in the vehicle using the USB cable or you may remove it for charging by following these instructions.

- ① Unscrew the anti-theft screw of the camera with the supplied screwdriver.
- ② Remove the camera from the camera bracket base. Hold the camera and slide the camera towards the anti-theft screw hole until it disconnects from the camera bracket base.



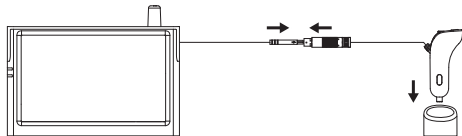
Installation

Install the Monitor

1. The mount holder should be installed on the windshield or a flat surface of the dashboard. If it is installed on a bumpy surface, it may not be secure.
2. Ensure that the mounting location does not impair the visibility of the driver.
3. Clean and dry the area of the windshield or the dashboard before installing the mount holder.
4. Press the suction cup against the mounting surface and push the suction cup lock lever down to lock the suction cup in place.
5. Slide the monitor onto the bracket. The angle of the monitor can be adjusted by loosening the rotary knob.
6. Attach the antenna to the monitor.
7. Insert the monitor car charger into a 12V DC power supply.

Note:

1. In order to ensure good electrical contact, the monitor cable must be fully inserted into the car charger cable without leaving any gaps.
2. If necessary, bundle the additional wires with a cable tie.



Install the Backup Camera

Note: This product supports two cameras. The kit contains one camera. If you require a second camera, please ensure that you purchase a camera of the same specification as the one supplied.

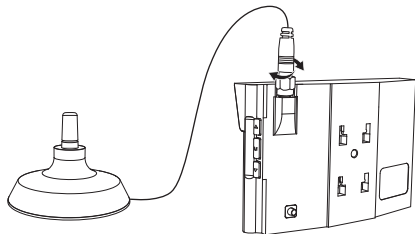
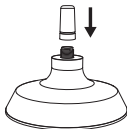
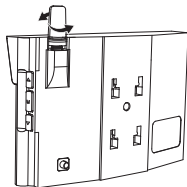
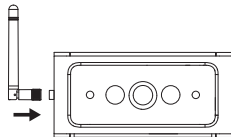
1. The installation location of the backup camera

The installation location of the backup camera is flexible. Find the best installation location depending on the vehicle models to install it. We would like to recommend installing it on the rear upper part of the vehicle, or the roof of the vehicle.

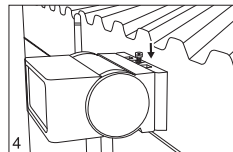
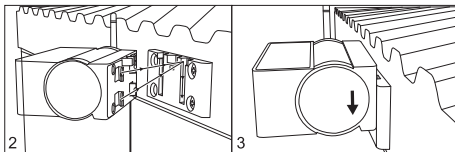
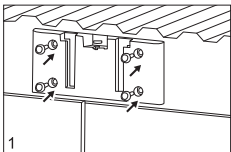
2. Install the backup camera

① Install the antenna on the camera before installation.

Note: If the signal is weak, you could install an extension antenna to enhance the signal (you could order it from our store). Affixing the antenna from the monitor or camera onto the base of the extension antenna by removing the black cover on the base.

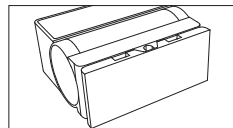
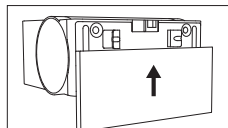


- ② If you install the camera on the rear of the vehicle, please follow the steps to install it.
- A. Use the electric drill or other professional equipment to install the camera bracket base on the vehicle with 4 screws (As figure 1 shows).
 - B. First, align the two buckles at the bottom of the camera bracket with the slot above the camera bracket base, then push down the camera (As figure 2 & 3 show).
 - C. Insert the anti-theft screw into the hole, then tighten the anti-theft screw with the supplied screwdriver (As figure 4 shows).



Note: The screws need to be kept in a safe place to avoid losing them.

- ③ If you install the camera with the magnetic camera bracket, please follow the steps below.
- A. Align the two buckles at the bottom of the camera bracket with the slot above the camera bracket base, then push down the camera.
 - B. Mount the camera on the vehicle. Please make sure the mounting position is made of iron, otherwise the magnetic bracket will not be able to be attached.

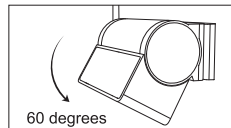
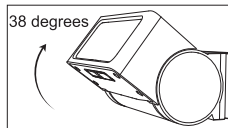


3. Adjust the angle of the camera

The camera angle can be adjusted by 38 degrees Upwards and 60 degrees Downwards.

Install the Solar Panel

This product doesn't contain a solar panel. If you need one, please purchase it separately from AUTO-VOX Store.



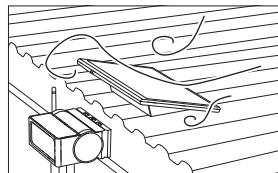
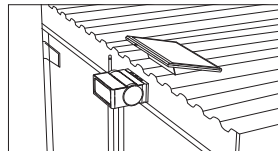
1. Installation location

If the camera is installed on the roof of the vehicle, it is recommended that the solar panel is also installed on the roof.

2. Installation steps

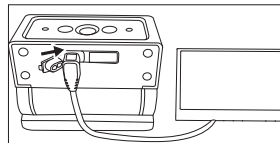
- Choose a location with a flat surface where the solar panel will be fully exposed to sunlight without shadows from other objects.
- Clean and dry the location thoroughly before pasting the sticker.
- Remove the sticker from the rear of the solar panel and stick it in the location chosen.
- Press the base of the solar panel against the mounting surface for at least 15 seconds then allow it to stand for 2 hours to ensure it sticks firmly.
- Once installed, do not remove it otherwise the adhesion properties will be lost.

Note: If installed on the vehicle roof, the leading edge of the solar panel must be downwards, facing forwards to reduce wind resistance and avoid being blown off while the vehicle is travelling.



3. Plug the cable of the solar panel into the charging port on the camera.

Note: When washing the car, please unplug the solar panel and cover the camera charging port with the cap to prevent water from entering and affecting the charging (As shown right).



Operate Instructions

Display the Rearview Image

1. Press the camera button to turn on the camera, the blue light of the camera is always on. (Please make sure the camera battery is fully charged. For details on charging, please refer to "Charging the Camera Battery.")
2. Power on the monitor, and it will display the image automatically.(If no image is displayed, press the button on the car charger or any buttons on the screen to activate the system.)

Camera operating indicator (blue) Definition:

Status	Description	
● ● ● ● ● ●	Off	Camera off, or camera in standby mode
○ ○ ● ● ● ●	Glows 10s then off	No operation or connection, automatically enter standby mode
○ ● ○ ● ○ ●	Flash	Paring
○ ○ ○ ○ ○ ○	Solid On	Connecting with monitor(Rear view is displaying)
○ ● ● ● ● ●	Flash Once	Turn on/off

Monitor Status (Red) Light Quick Reference:

Status	Description	
● ● ● ● ● ●	Off	The monitor doesn't power on or it has been connected to the camera and display view image
○ ● ● ● ● ●	Flash Once	The monitor powers on
○ ● ○ ● ○ ●	Flash	Paring
○ ○ ○ ○ ○ ○	Solid On	No operation or connection, monitor in standby mode

Monitor Operations

▲: Forward/Increase.

M: Menu/Return/Confirm.

▼: Back/Decrease.

Menu Settings

1) Press (M) to access menu mode. The display will show the menu for 3-5 seconds.

2) Press ▲ or ▼ to increase/decrease, or switch between the following menu items:

Pair: to pair the monitor with the backup camera.

B/C Control: Brightness: adjust the monitor brightness.

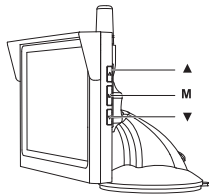
Contrast: adjust monitor contrast.

M/U Control: switch to **Mirror/Normal/Up/Down** image.

Display sleep: Select "**120S/240S**" to enter sleep mode, or "**Never**" to remain on constantly.

Guideline: activate or deactivate guideline.

Reset: return to factory settings.



3) Press (**M**) to confirm the settings and exit the menu.

Basic Functions

1. Choose the Sizes of Guidelines

- 1) Set the guideline "**ON**" on the menu.
- 2) Activate the monitor to show rear view image, and enter into non-menu mode.
- 3) Press and hold the (**M**) button for about 3 seconds until the guidelines flicker.
- 4) Press (**▲**) or (**▼**) to choose from 6 different sizes. Press (**M**) to confirm.

Note: The setting screen will close automatically if no operation is performed for about 5 seconds, then the settings will be saved.

2. Pair the Camera

Cam1 uses CH1 channel by default and is paired before leaving the factory, no need to pair again.

If you need to re-pair/change the camera or install the Cam2, please follow the steps:

- 1) Press (**M**) to enter the menu setting, select "**Pair**".
- 2) Select Cam1/Cam2, press the (**M**) to enter into the selected channel pairing interface, and the indicator light of monitor will flash fast.
- 3) Long press the button on camera for 8 seconds until its blue indicator light flashes, and the pairing will proceed automatically. If paired successfully, the screen will automatically display rear view image, and the blue indicator on the camera will be on continuously.

Note:

- Please turn the camera on after completing the step 1-2, or the pairing will fail.

- The pairing timeout is the default 30 seconds. If the pairing is not completed in 30 seconds, the pairing screen will close automatically and the monitor will enter standby mode. Follow the steps to pair the camera again. If the pairing fails after several attempts, please contact Customer Support for assistance.(Customer support email: service@auto-vox.com)
3. Switch Between Cam1/Cam2 Channel
- If the monitor has been paired with Cam1&Cam2, and the monitor is not on any setting interface, long press (▼) button to switch between Cam1 and Cam2 display.

Note:

- The monitor will show the full image of the CH1 channel as a priority when both cameras are powered.
 - When you adjust Contrast, M/U Control, Guideline setting, it will only save in the current channel, and the other channel is not affected (Brightness, Display sleep, Reset excepted).
4. Day and Night Mode

Day mode

The camera automatically switches to the color mode when the ambient light conditions are good during the day, and the screen displays the color screen.

Night mode

The camera automatically switches to Night Mode at night or under low light conditions. The infrared lights turn on to provide light and the screen displays black and white images.

Note:

When the ambient light suddenly changes from dark to bright for more than 5 seconds, the black and white image will switch to the color image. This can avoid being illuminated by the lights behind when driving at night causing the image to constantly jump from black and white to color images.

Battery Condition Indicator

Indication of Battery Power (The parameters are tested under 25°C without IR night vision and solar panel charging.)

Note: Low temperature may drastically decrease the performance of the built-in battery, and the working time will be halved if the IR night vision is operating.

The battery icon is located in the upper right corner of the display, representing the relative power of the built-in lithium battery.

Battery power status	Relative power	Estimated duration	Note
	≈100%	≈90 days	Fully charged
	≈50%	≈45 days	----
	≈20%	≈20 days	----
	≈5%	≈5 days	Need to charge

Prerequisite: The following data are based on the fully charged camera at different temperatures on a cycle of 120 seconds/time and 3 times per day in daytime mode and no solar charging.

Temperature(°F/°C)	77°F/25°C	32°F/0°C	14°F/-10°C	-4°F/-20°C	-22°F/-30°C
Battery Working Days	≈90 days	≈56 days	≈40 days	≈22 days	≈0 days
Battery Performance(%)	100%	86%	77%	44%	0%

Note: The table is for reference only. The specific battery performance will vary according to local temperature and actual use.

T echnical Specifications

Note:

1. The data for the battery working time are based on lab testing at 25°C on a cycle of 120seconds/time and 3 times per day with the camera in daytime mode and no solar charging.
2. The data for the battery working time are based on lab testing at 25°C on a cycle of 120seconds/time and 3 times per day with the camera in daytime mode and solar charging with the solar panel exposed to sufficient sunlight for an average of 2 hours per day.
3. The optimum temperature range for charging is 5°C ~ 40°C(41°F ~ 104°F). If the battery cell is not within this range the battery should be conditioned in an appropriate location prior to charging until the temperature falls within these parameters.
4. In a low temperature environment(-20°C/-4°F ~ 5°C/41°F) the battery performance will be significantly decreased, resulting in a reduction in useable time.
5. The communication data for the monitor is obtained under conditions of unobstructed outdoor transmission and insignificant electromagnetic interference.

Backup camera					
Working Voltage	DC 3.4-4.2V	Working Current	Max 900mA(@4.2V)	Standby Current	360uA
Battery Capacity	6600mAh	USB Charge Current	2000mA(5V)	Charge Time	6.5 hours
Solar Conversion Efficiency	21%	PV CURR		>320mA(light intensity 21000Lux)	
Working Time 1	3 months(without solar charging)		Working Time 2	12 months(with solar charging)	
Working Temperature	-4° to 149°F(-20° to 65°C)		Storage Temperature	-4° to 149°F(-20° to 65°C)	
Monitor					
Screen Size	5.0 inches	Working Voltage	DC12-24V	Display Brightness	500 cd/m²(Typ.)
Transmission Frame Rate	25 FPS		RF Transmission Distance	230ft (70M)	
Working Temperature	-4° to 149° F (-20° to 65° C)		Storage Temperature	-4° to 149° F (-20° to 65° C)	

Troubleshooting

Q1: The monitor doesn't show image after pressing the button on car charge.

① **Reason:** The car charger is broken.

Solution A: Plug the car charger into the cigarette lighter and check if the car cigarette lighter works fine. If the car cigarette lighter works fine and the red light on the car charger doesn't light up which indicates the car charger is broken, please contact customer support for help.

② **Reason:** The monitor is broken

Solution B: Check if the monitor is powered on. If the red indicator light is on after powering up, it's in standby mode. Press the M button to see if the menu interface appears. If not, the monitor is not working, please contact customer support for help.

③ **Reason:** The monitor is not connected with the rearview camera.

Solution C: When press the button on the car charger, the red indicator light on the monitor is on, but the monitor does not show image. And no image shows when press any buttons on the monitor, it may be caused by the signal disconnection between the monitor and the camera. Please troubleshoot as following steps:

A. Turn on the backup camera.

The camera power may be off. Press the power button on the camera to turn on the camera.

B. Charge the backup camera.

The camera may be low on power, please charge the camera.

C. Re-pair the monitor with the camera. Please follow the steps:

1) Press **(M)** to enter the Menu setting, select "Pair".

2) Select Cam1/Cam2, press the **(M)** to enter into the selected channel pairing interface,

3) Long press the button on the camera for 8 seconds until its blue indicator light flashes, and the pairing will proceed automatically. If paired successfully, the screen will automatically display rear view image, and the blue indicator on the camera will remain on.

Note:

- Please turn the camera on after completing the step 1-2, or the pair will fail.
- The pairing timeout is the default 30s. If the pairing does not finish in 30s, the pairing screen will close automatically, then the monitor enters standby mode, please follow the steps to pair the camera again.

④ **Reason:** The signal reception of the monitor is weak.

Solution A: The monitor has a weak signal. It is recommended to change the location of monitor or use an extension antenna for help. If you need to buy the antenna, please contact customer support to buy it.

Solution B: The antenna connection is loose at both the monitor and camera ends. Please ensure proper installation of the antenna. If they are loose, re-install them at both ends.

If it is still no image showing after above tempts, please contact customer support for help. (Email: service@auto-vox.com)

Q2. The image shakes when you are driving the car.

Reason: The camera mounting screws may be loose.

Solution: Check the the condition of the screws, and tighten the screws according to the situation.

Care and Maintenance

For maintaining its condition and performance, please follow the guidelines below.

1. Power off the monitor and unplug the car charger before cleaning the monitor.
2. Clean the backup camera kit with a soft, dry cloth only.
 - Do not use any liquids or harsh cleaners as these may cause discoloration and/or damage to the surface of the equipment.
 - Do not immerse or allow liquids to enter the equipment.
 - Only operate the backup camera when the equipment is dry.
3. Always store the backup camera system in a dry, dust-free environment as moisture may damage the electronics.
4. Avoid storage under extreme temperature fluctuations as condensation, possibly generated under these conditions, could damage the electronics.

5. Check the camera and monitor fasteners periodically to ensure they are secure and tightened, if necessary.

Note: Before cleaning the monitor, please make sure to cut off the car charging source. Never use solvents such as benzene, thinner or cleaners available commercially to clean the system.

Warranty and Service

Auto-Vox provides a 1-year warranty policy to the original purchaser from the date of purchase. If you encounter any quality issues with the purchased product, you have the option to return the product within 30 days of receiving it, provided it remains in its original condition. We are pleased to offer exchange and refund services under these conditions. We do not accept items that are damaged, broken, disassembled, or modified. Damaged conditions include stains, tears, fragments, scratches, strong odors, cracks, or any other defects resulting from use.

If you receive the product after 30 days, refunds will not be granted. During the 1-year warranty period, should you discover any defects in your new product, Auto-Vox will repair or replace the defective product, and no charges will be applied for parts or labor (limited to repair or replacement of the product itself; it does not cover costs associated with installation, removal, reinstallation, or any damage caused to other equipment or vehicles). To be eligible for the warranty policy, you must meet the following conditions:

- All repairs must be performed by Auto-Vox.
- All warranty claims must be accompanied by a receipt or proof of purchase.
- The product must be purchased through authorized channels.
- The equipment must not have been altered or damaged due to negligence, accidents, improper operation, or installation, use, or maintenance not in accordance with product instructions.

- Components requiring replacement due to normal wear and tear are not covered by the warranty.
- The product is within the warranty period. If we repair or replace a product, the repaired or replaced product will be covered for the remaining time of the original warranty period.

To expedite your warranty claim, you need to:

- Provide a receipt indicating the purchase date.
- Provide a description of the reason for the claim (defect description).

Note: Your product is covered by a 12-month warranty. As a token of appreciation for your ongoing support, we are pleased to extend the warranty period to 18 months if you contact us through the following methods:

You can reach our Customer Support team at **www.auto-vox.com** or contact us via email at **service@auto-vox.com**.

* The final interpretation of the above terms belongs to Auto-Vox.



www.auto-vox.com

Email: service@auto-vox.com

