

Drive-IT
Back Up Camera

ROYAL[®]

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Back Up Camera

BC3000

BC3000

User Manual



ROYAL[®]

Consumer Information Products, Inc.
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Made in China

SOLAR POWERED
WIRELESS BACKUP CAMERA

License Plate Holder with Camera

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BC3000IM0420

Welcome

Thanks for your purchasing BC3000 Solar Wireless Backup Camera.

Please read this User Manual before using/installing it.

BC3000 can display the view behind a vehicle (esp. car). and can be used when backing up or any time you want to view behind the car (even while your car is in park).

BC3000, suitable for passenger cars, conditionally suitable for other relative vehicle.

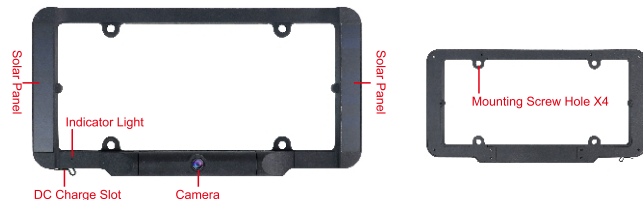
Notice:

The system and User Manual may be updated at any time. Manufacturer reserves the right to modify and update the system specifications/functionality without prior notice.

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1. License Plate Holder with camera and solar panels



2. Monitor



3. Additional Monitor Mounts (included)



4. Cigarette Lighter Power Adapter



5. DC charging cord



6. Install Screws



7. Screwdriver



8. User Manual

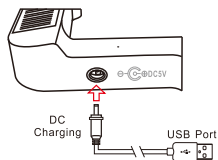


02. GETTING STARTED

Remove BC3000 product packing or assembly and make sure all components are included.

CHARGE THE CAMERA WITH THE LICENSE PLATE HOLDER BEFORE USE

1. Connect the supplied DC cord to the charging port of the Camera.
2. Plug the cable USB port into any standard USB charging adapter with an output rating more than 5V/1000mA.
3. Charge 8 to 10 hours.



- * During the whole DC charging, the red indicator light will keep on. It will turn off when finishing the charging.
- * When the DC charging is done for a period of time, you can vibrate

the camera and immediately touch the **Touch-Switch** button on the monitor to see the increase in charging. The battery capacity icon on the screen shows the actual status of the camera's built-in battery power.

Under normal use, the camera maintains a charge with exposure to sunlight. A battery status indicator is provided on the monitor when the camera is in use. If you're storing your car in a garage (or not exposing the camera to sunlight on a regular basis) for more than one month, you may need to recharge it via the DC charging port.

Check the wireless function

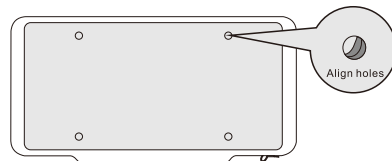
1. Shake the camera in the air.
2. Touch the **Touch-Switch** quickly and check the image after the monitor is powered.

Note:

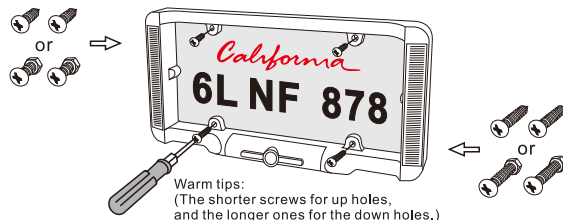
Camera has to be waken up from sleeping status by little vibration.

* In the process of use, there is wireless interference from outside sometimes. If no connection normally, the device will shut off automatically 10 seconds later. Then please touch the **Touch-Switch** to turn it on.

03. LICENSE PLATE HOLDER INSTALLATION



1. Align the license plate with the hole



2. Install the license plate holder on the car using screws, then tighten the screws

04. MONITOR MOUNT

1. The monitor can be fixed to the dashboard, windscreen, or air-vent.



2. How to install the mounts:

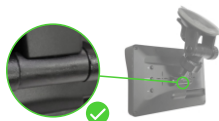
1) The dashboard mount is already attached to the monitor and can be stuck to the dashboard. Choose and clean a suitable location on the dashboard, remove the paper from the monitor stand sticky pad and firmly press the stand mount onto the dashboard.



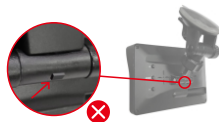
2) If using the windscreen mount, please replace the dashboard mount by utilising the supplied screwdriver.



Note: (Observed from the back of the monitor, If the roller cam is facing inward and the roller cam is in close contact with the groove of the bottom case of the monitor, the installation direction is correct.)



(As shown in the figure, the monitor is viewed from the opposite side. If the roller cam faces outward, The installation direction is wrong.)



Choose a suitable place on the windscreen and mount the suction cup ; with the suction lever in the released position, press the suction cup against the windscreen. Press the suction lever toward the suction cup to lock the mount. To adjust the angle of the monitor, loosen the collar on the ball joint & retighten in the desired position.



3) If utilising the air-vent mount, please remove the dashboard mount and complete the following instructions:

① Make sure that the cross of the base lines up with the cross on the rear of the monitor



the cross groove of the monitor

the cross position of the threaded base

② Use L-shaped screwdriver to tighten the vent screw



③ Insert the ball into the nut



ball

nut

vent mount

④ Press the vent mount ball firmly into the threaded base



⑤ Rotate the nut and tighten clockwise



⑥ Move the lever up/down to clamp to the vent



3. Connect the monitor to vehicle power via the cigarette lighter power adapter.

05. CAMERA ANGLE ADJUSTMENT

Please vibrate the camera, power the monitor, touch the **Touch-Switch** on the monitor to show the rear image situation of car, then adjust the camera angle accordingly to the most suitable position.



ADJUSTABLE ANGLE FOR FLEXIBILITY

adjustable range 114°

When rotating the camera: hold the license plate holder with one hand, and rotate up or down the outer frame of the camera with the other hand to make the suitable Angle.

06. OPERATION

Using the device BC3000

1. Switch the DC power port with car ignition, the monitor will start work accordingly, the video signal will be sent from camera and will be displayed on the monitor.
2. If you want to see the backup image when driving your car, just touch the **Touch-Switch** on the top of monitor.
3. When the vehicle is shut off, power is removed from the monitor and the monitor will shut off automatically, and the camera will stop work.



Note:

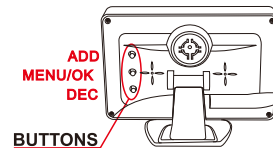
- * If you want the Backup Camera BC3000 to keep working after the setting time of image-display (for example, you cannot finish reversing your vehicle during the first setting time), you have to touch the **Touch-Switch** once again.
- * After you have been staying inside vehicle quietly (eg. sleeping) with vehicle engine stopping, you want to see the backup image but only put your vehicle

key on the ACC-ON position (no starting the engine), there is no image on the monitor after touching the **Touch-Switch**. So you have to give the vehicle a light vibration (such as re-open and shut car door, or tap somewhere lightly), then touch the **Touch-Switch** to start work.

07. BUTTON & SETTING

Function of the monitor backup buttons

1. **The middle button**-----[MENU/OK]:
Short Press to enter monitor menu setting.
Long Press (press and hold for 3 seconds) to confirm the chosen item in the menu setting interface.
2. **The Up button**-----[ADD]:
Short Press to change/add parameter value at the menu setting interface.
3. **The Down button**-----[DEC]:
Short Press to change/decrease parameter value at the menu setting interface.



Rotating the image and switching between 'normal' and mirror image view:

When the monitor is displaying the camera image short press [MENU/OK] to enter the main menu interface, select the "Image Mirror" icon and long press [MENU/OK], to set 'upwards' or 'downwards' image. After setting, short press twice to exit the setting.

Select the "Image Mirror" icon and long press the middle button [MENU/OK] to enter the mirror setting interface, short press [ADD] or [DEC] button to set mirror or normal image. After setting short press [MENU/OK] twice to save and exit.

NB. Please use mirror image (default view) for reversing and rear view applications. (**Short Press** means press and hold 1 second, and **Long Press** means 3 seconds).



Only Short Press DOWN button [DEC] to switch the Parking guide Lines display modes (Display or No display)!



Menu Operations:

1. Main Menu

While the monitor is showing the rear image, short press the middle button [MENU/OK] to enter the main menu interface, and 5 options are available (Pairing, Image Parameters, Image Mirror, Parking Guideline Position Adjustment, Software Information).



Pairing



Image Parameter



Image Mirror



Parking Guideline Position Adjustment



Software Information

Meaning	Pairing	Image Parameter	Image Mirror	Parking Guideline Position Adjustment	Software Information
Operating	Default setting, no need to operate again.	To adjust Brightness Contrast, Color. Operation details as Image Parameter info.	Set Upwards/Downwards or Original/Mirror Image. Operation details as Image Mirror contents.	The parking guideline can be adjusted up and down as needed. Operation details as Parking Guideline Position Adjust info.	Select "Software Info", press [ADD] or [DEC] key to display software version information.

2. Image Parameter

While the monitor is showing the rear image, short press the middle button [MENU/OK] to enter the main menu interface. From the 5 options. Select Image Parameter, long press the [MENU/OK] button again, 3 Images (Brightness/ Contrast/ Color) setting interface are shown below:



Brightness



Contrast



Color

1) Brightness Setting

Select the Brightness icon, press [ADD] or [DEC] button to adjust the brightness as shown below:



2) Contrast Setting

Select the Contrast icon, press [ADD] or [DEC] button to adjust the contrast as shown below:



3) Colour Setting

Select the Colour icon, press [ADD] or [DEC] button to adjust the colour as shown below:



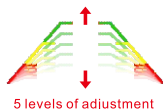
3. Image Mirror

Select the "Image Mirror" icon and long press the middle button [MENU/OK] to enter the mirror setting interface, short press [ADD] or [DEC] button, to set rightwards or leftwards image. After setting, short press [MENU/OK] twice continuously to exit the setting, the image setting will be saved for future use.

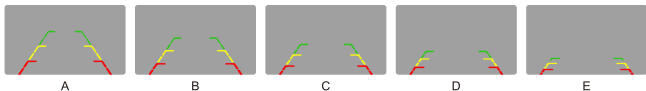
4. Parking Guideline Position Adjustment

(By default, there is no need to adjust the gear position at the factory. In case the auxiliary line is too high or too low, it can be adjusted to the best height as needed.)

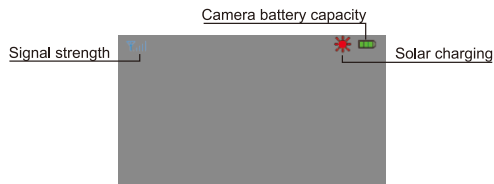
The parking guideline position can be adjusted up or down, to mark the image area more realistic. There are 5 levels for choice.



Select the "Parking Guide Position Adjustment" icon, then long press the middle button [MENU / OK] to enter the setting interface, short press the [ADD] or [DEC] button to choose the most suitable one from 5 levels, then short press [MENU / OK] twice continuously to exit the setting.



08. INTERFACE ICON & Meaning



 Signal strength  Solar charging  All-in-one Camera battery capacity



Low Battery Prompt:

When the built-in battery power is going to be lower enough because of using up, you have to charge the battery by DC to USB cord. Otherwise, the camera will not work, and the monitor cannot connect it.

09. INFORMATION

Battery Icon is on the top right corner of the screen, indicates the relative capacity of the built-in lithium battery of the camera when a video image is present.

Signal strength of the received image is on the top left corner of the screen when a video image is present.

Red Indicator Light

When the monitor is powered on and still stay standby mode, the Red indicator Light doesn't work. When touching **Touch-Switch**, the Light will blink quickly. When the monitor works, the light will extinguish.

Wireless Camera

The Camera & Video transmitter are built-inside the BC3000 device, and is equipped with the built-in rechargeable lithium battery, which is connected with the solar panel.

When the monitor is turned on, work command is sent to the camera, upon receive this signal, the camera will work from standby mode at once, and send image video to the monitor for the setting time.

A DC to USB charging cable is provided to charge the battery initially prior to mounting on your vehicle, as well as to recharge if needed.

10. SPECIFICATION

CAMERA

Operational Current(when transmitting): <280mA

Sleeping Current: <0.06mA

Pixels: 640×480

View Angle: Horizontal Angle 135° (V90° / D165°)

Image Sensor: 1/3" CMOS

Image Quality: Max 30 fps

Battery Capacity: 4200mAh

Camera Assembly: IP 67

TRANSMITTER

Frequency: 2400 ~ 2485.5 MHz

Effective Transmission Distance 57.5ft (17.5m) Max.
(Installed in vehicles for test)

Working Temperature: 14°~ 140°F (-10°~ 60°C)

MONITOR

LCD Display Screen Size: 4.3 inches

Operation Current: <150mA

Effective Pixels: 480×272

The Setting Time of Image-Display: 45 Seconds each time

DC (CIGARETTE) ADAPTER

Input: DC 10-30V

DC Output: 9V/1A

USB Output: 5V/2.1A

Power Cord Fuse: 3A

11. TROUBLE SHOOTING

◆ If the monitor doesn't turn on when power is applied:

1. Check to make sure the power source is active (if your cigarette lighter is switched with vehicle ignition, your monitor will only work when the engine is running or the key in the ON position).
2. Check to make sure the fuse and power cord are in working order.

◆ If the monitor doesn't display images within a few seconds after touching the starting button:

1. The battery in the camera may be depleted and require recharging.
2. In the process of use, there is wireless interference from outside. so if you can't turn on the camera over 10 seconds after touching, please touch the **Touch-Switch** again to turn it on.
3. If cannot display image after the two methods speaking above, please try re-pairing:
Shortly press MENU key, long press MENU key to confirm the pairing state when it is turned on. Under normal circumstances, the pairing will take about 5 seconds, and the wireless signal will automatically reconnect, the monitor will display the rear image accordingly.

◆ If the video image is poor:

Check that the camera lens is clean from road grime, snow, or ice.

◆ If the video image does not last the setting time:

Recharge the camera battery.

◆ If no image after touching Touch-Switch in quiet environment (no vibration at all) , such as testing BC3000 in office or laboratory.

Vibrate the camera, touch the powered Monitor **Touch-Switch** quickly (not over 3 minutes from vibration) to wake up the sleeping camera make it enter standby status.

* Under the actual situation of installation, test, and use of car, the environment is different totally. Little vibration must happen when open door, people touching the vehicle, even the engine work.
So the camera will stay at standby status.

◆ If the battery capacity icon on the monitor shows that the camera's battery is low,

Check if the camera solar panels are covered with mud, water, dirt, etc. Please use soft cloth moistened with a neutral detergent solution to remove dust or stains, so as not to affect the solar power generation efficiency.

12. CARE & MAINTENANCE

Cleaning

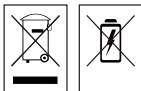
Do not use solvents or chemical materials to clean or wipe BC3000 camera (including the lens and all solar panels) If necessary, use a soft cloth moistened with a neutral detergent solution to remove dust or stains. Please clean the dirt or stains of the solar panel.

Fuse Replacement

1. Turn the cap on the tip of the power plug counterclockwise (no tools needed).
2. Remove the cap, center pin and fuse.
3. Replace the fuse with a new 1-am fuse.
4. Replace the center pin and cap. Turn the cap clockwise.

Disposal

BC3000 product packing is designed to provide years of service. It should be recycled or safely disposed of at a local recycling center.



13. DISCLAIMER

BC3000 Solar Powered Wireless Backup Camera is intended to assist responsible driver, but it doesn't relieve a driver from full responsibility for operation of the vehicle. It is the driver's sole responsibility to avoid contact with any objects, animals, especially persons. By installing and/or using BC3000 Solar Powered Wireless Backup Camera, you agree that you are solely responsible for the operation of your vehicle, the BC3000 supplier is not responsible for any property damage, personal injury, or loss of life that may result from the operation of your vehicle.

Note:

*Some USA states or local government may have regulations or laws that restrict the use of anything that might impair the clear view of a license plate. Check local laws for explanation.



WARNING: This product can expose you to chemicals including Phthalates, which is known to the State of California to cause reproductive harm. For more information go to P65Warnings.ca.gov.

Warranty:

FILL OUT THE PRODUCT REGISTRATION FORM ON THE ROYAL WEB PAGE AT: [http:// www.royal.com](http://www.royal.com).

BE SURE TO KEEP A COPY OF YOUR SALES RECEIPT!

STANDARD WARRANTY

ROYAL CONSUMER INFORMATION PRODUCTS, INC. ("Royal"), at 1011 U.S. Highway 22 West, Suite 202 Bridgewater, NJ 08807 USA WARRANTS that your NEW Product is free of defects of workmanship and materials. If there is a defect or malfunction of this product, Royal will repair it free of charge as follows:

PARTS: New or comparable rebuilt parts in exchange for defective parts for ONE (1) YEAR from date of customer purchase.

LABOR: Royal provides labor warranty for (90) ninty days from date of end-user purchase. Product must be sent postage prepaid and insured to Royal in accordance with the warranty procedures outlined below. At completion of the repair, the consumer will be responsible for the cost for any parts or services no longer covered under the warranty.

14. WARRANTY INFO

This warranty does not apply to persons who purchased this product second-hand or used.

This warranty does not include adjustments, parts and/or repairs required by circumstances beyond the control of Royal, including but not limited to fire or other casualty, accident, neglect, abuse, misuse, abnormal use or battery leakage damages.

THERE ARE NO OTHER EXPRESSED WARRANTIES EXCEPT AS STATED HEREIN. AFTER THE PERIOD OF EXPRESSED WARRANTY SET FORTH HEREIN, THERE ARE NO EXPRESSED OR IMPLIED WARRANTIES AND THOSE EXCLUDED INCLUDE THOSE OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE. Royal shall NOT be held liable for CONSEQUENTIAL DAMAGES resulting from any failure, defect or malfunction of this product. Some States do not allow limitations on how long an implied warranty lasts and some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

WARRANTY PROCEDURES

TO OBTAIN SERVICE UNDER THE TERMS OF THIS WARRANTY:

Please do the following:

1. Send a copy of your original sales receipt showing original purchase date, along with your mailing and shipping addresses, the model name of the product and a note describing the nature of the problem and a note describing the nature of the problem to:

Royal Consumer Information Products, Inc.
Warranty Processing
50 Hilton Street
Easton, PA 18042-7391 USA

Do Not Return the Product to This Address!

2. You will receive a return authorization number via U.S Mail within 7-12 business days from the date your return request is received if it is determined that there is a basis for a replacement product. The return authorization form you receive will list the return procedures, applicable charges, if any, and the correct shipping address for the returned product.

15. SUPPORT

PRODUCT SUPPORT HOTLINE:

For questions on use of this product or this warranty call 1-800-272-6229 (in the U.S. and Canada) or in Mexico call 01-800-849-4826, Monday through Friday during normal business hours. You can also e-mail Royal at: hotline@royal.com