

WBU-900 / WBU-900C  
User Guide

# WIRELESS DIGITAL BACKUP CAMERA

INSTALLS IN MINUTES



  
**WHISTLER**

# INTRODUCTION

## **Welcome**

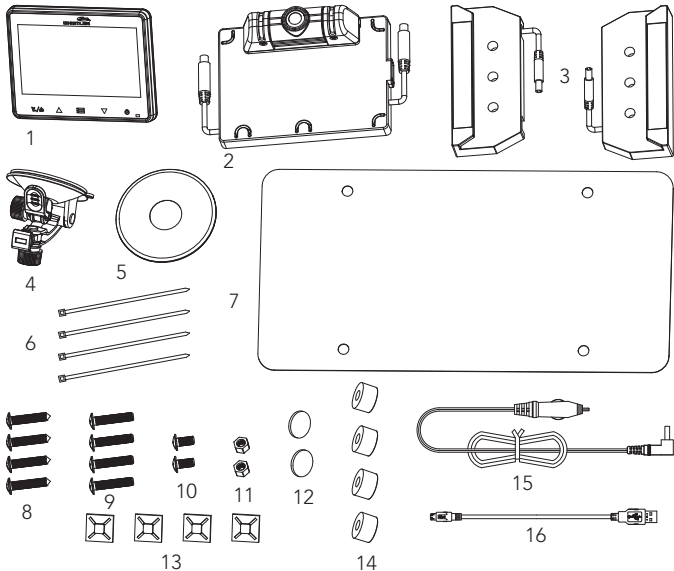
Thank you for choosing a Whistler product. We are dedicated to providing products that represent both quality and value. Please read the User Guide carefully before using this product.

The Back-Up Camera displays images behind the vehicle and can be used when backing up or anytime you need to view behind the vehicle (even when the vehicle is in park).

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# COMPONENTS



- |                             |                            |
|-----------------------------|----------------------------|
| 1. Monitor                  | 10. 2 short machine screws |
| 2. Camera                   | 11. 2 machine nuts         |
| 3. Solar cell               | 12. 2 cushions             |
| 4. Suction cup mount        | 13. 4 cable tie mount      |
| 5. Dash Disk                | 14. 4 spacers              |
| 6. Tie wraps                | 15. Power cord             |
| 7. License back-plate       | 16. USB cord               |
| 8. 4 long screws (Domestic) |                            |
| 9. 4 long screws (Import)   |                            |

# GETTING STARTED

Remove camera assembly from box and make sure all components are included.

## **Charge the camera:**

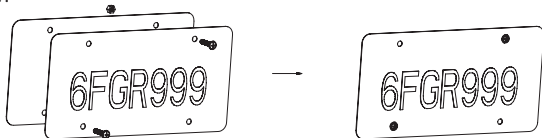
1. Connect the supplied USB cord to the micro USB port of the camera assembly.
2. Plug the USB cable into any standard USB charger with an output rating of 500ma or higher.
3. Charge 4 to 5 hours.

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 vehicle in a garage for more than one month, or are otherwise not exposing the camera to sunlight on a regular basis, you may need to recharge it via the micro USB charge port.

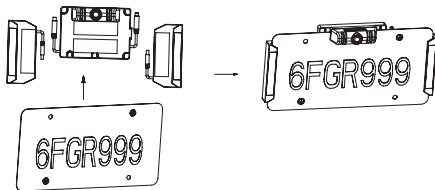
**NOTE:** If vehicle will be stored for prolonged periods of time greater than 2 months, please disconnect both solar cell connections to shut off the camera and prevent the battery from discharging.

# ASSEMBLY / INSTALLATION

**IMPORTANT:** As license plate tolerances vary slightly in width and height, it is important that you follow the steps as outlined below:

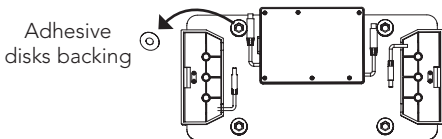


1. Remove license plate from vehicle and place on top of the supplied license back plate.
2. Insert 2 short machine screws into 2 of the mounting holes and finger tighten 2 machine nuts onto them in order to hold the plates together for steps 3 thru 5.
3. Peel the backing from the adhesive strips on the solar panel bases and carefully slide onto each side (left and right) of the plate assembly being careful not to make contact with the adhesive until the base is fully inserted.
4. With the solar mounts centrally positioned, apply pressure to set the adhesive tape.
5. Peel the backing from the adhesive strips on the camera base and carefully slide onto the long edge of the license plate assembly positioned centrally between the license plate mounting holes. Apply pressure to set the adhesive tape.

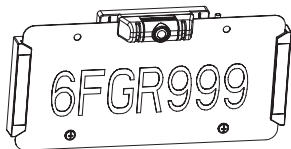


# ASSEMBLY / INSTALLATION

- Remove the 2 short machine screws and nuts used earlier and set aside.
- Peel the backing from the adhesive disks and apply one spacer over each license plate mounting hole.



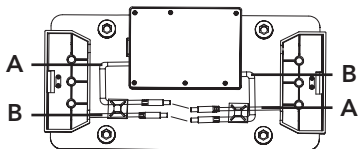
- Apply pressure to set the adhesive tape.
- If two of the license plate mounting holes are not required for attachment to your vehicle, insert the short machine screws and tighten with the supplied machine nuts.



- If needed, 2 cushions are provided to protect your vehicle. Attach to the back of the spacers containing the machine nuts.

# ASSEMBLY / INSTALLATION

11. Connect the solar panel connectors to the mating connectors from the main camera housing and place the tie wrap adhesive pads as shown. Use 2 tie wraps to neatly hold the cables in place and cut the excess length of the tie wrap if desired. Follow illustration for correct wiring. Connect the A wires and connect the B wires.



12. Test the system in the "OPERATION" section of this guide before attaching the assembly to the vehicle with the appropriate license plate mounting screws for your vehicle type.
13. Ensure pairing between the backup camera and the monitor before mounting to your license plate.

**NOTE:** Domestic and Import license plate screws are included and should be compatible with the vast majority of vehicles. Should your vehicle require a special diameter or thread, please consult your dealer.

## **Tips to optimize the solar charge:**

1. Be sure that the solar panels are clean, and dust/dirt-free.
2. Park in a location where the sun will shine directly on the solar panels for at least 1-2 hours a day.
3. One hour of good sunlight daily offsets the daily power consumption of the camera.



# CAMERA ANGLE

The camera angle should be adjusted to provide an optimal view of objects behind the vehicle.

Adjust the camera angle as required:

- To adjust the camera angle, tilt the camera to the correct angle.
- The camera should be adjusted to a horizontal position relative to the ground, so as to provide optimal view of objects behind the vehicle.
- Carefully tighten the 2 screws  $\frac{1}{2}$  turn to prevent the camera angle from moving during vibrations from driving.

# MONITOR MOUNT

Find a mounting surface inside the vehicle for the monitor where it can be easily seen, and does not obstruct your vision when driving.



**NOTE:** To maximize the effectiveness of the suction mount, the mounting location surface temperature should be between 50° and 100°F. Avoid application below 50°F.



**NOTE:** Before permanently mounting the monitor, test the reception of the camera signal in several selected locations within easy reach as one may have better reception than another. If mounting to the dashboard, the dash disk must be used to ensure a smooth surface for the suction cup to attach.

1. Clean and dry the mounting surface before applying suction cup or Dash Disk.
2. Press the suction mount against the mounting surface and push the suction lock lever down. Make sure it is attached securely.
3. Slide the monitor onto the monitor arm. The monitor angle can be adjusted by loosening the monitor angle adjustment knobs, tilting the monitor, then tightening the knobs.
4. Plug the monitor cigarette lighter/accessory socket power cord into a 12-volt DC power port.

# OPERATION

## Testing the System

1. With power applied to the monitor, the button backlight will illuminate to indicate the monitor is ON and in Standby mode.
2. The Blue LED will blink briefly to indicate that it is attempting to communicate with the camera. When connected to the camera, the blue LED will turn solid. It may take a moment for the camera to begin sending the video information, allow time for the image to be displayed.
3. The Image is set to time out in 30 seconds however if you wish to shut the image off manually, touch the multi-function button anytime that video is present to stop the video transmission and put the camera back into its power conserve mode.
4. If 12-volt DC power port is live all the time, to shut the button backlight off, touch and hold the  button for 3 seconds. The monitor retains this setting and must be turned back on in order to receive video. This can be done easily with a touch of the  button. Standby is confirmed when the button backlight remains ON.






**NOTE:** If the monitor has been shut off with  button, removing the power source and reapplying will not turn your monitor on as the OFF function is stored in memory and the unit must be turned ON by touching the  button.

**NOTE:** If using a switched 12-volt DC Power port, it is not necessary to power off the monitor unless you do not wish to receive an image automatically when starting your vehicle.

# OPERATION

5. If your 12-volt DC power port is switched on with your ignition, the unit will automatically request an image from the backup camera each time you start your vehicle. When the vehicle is shut off, power is removed from the monitor and the button backlight will shut off.
6. Route and secure all wires as needed.

**NOTE:** If your monitor does not automatically pair with the camera after initial charge, the following steps are to be used.

1. Disconnect both solar cell connections.
2. Power on monitor.
3. Touch  button then  or  to place finger cursor over SETUP, then touch / to select.
4. Connect both solar cell connections to turn on the camera and complete the pairing process.

# FUNCTION

## Functions of the Touch Buttons (left to right)



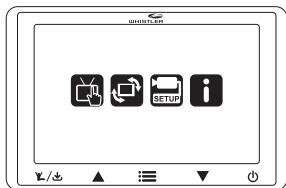
- ↶/⬇️: Touch to enable or cancel the transmitter; touch for 3 seconds to turn on/off the backup assist lines. Touch to select a corresponding function.
- ▲: Touch to move to or adjust a corresponding function
- ☰: Touch to enable/cancel the menu.
- ▼: Touch to move to or adjust a corresponding function.
- ⏻: Touch briefly to turn on, touch and hold for 3 seconds to turn on/off.

### Adjusting Monitor Settings:

1. Touch the ☰ button to bring up the ☰ Options.
2. Touch ▲ or ▼ arrow to scroll through the different functions.
3. Touch the ↶/⬇️ button to enter the function.
4. Touch the ▲ button to increase or the ▼ button to decrease settings.
5. To change the view on the screen, scroll to Rotation then touch the ↶/⬇️ button to select 1 of 4 image rotations. (It is best to have a video image displayed when making this selection)
6. To exit, touch the ☰ button or wait for the 15 second timer to exit automatically.
7. To turn the guidelines On or Off, with an image on the display, touch the ↶/⬇️ button for 3 seconds then release.

# MONITOR SETTINGS

## Menu Operations:



Enter the main Menu Interface  and 4 options are available including Image Parameters, Image Rotation, SETUP and Software Information. Press  and  to select corresponding option, and then touch the  button to enter the option:

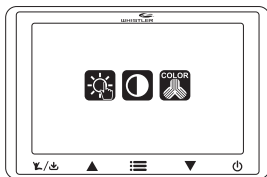
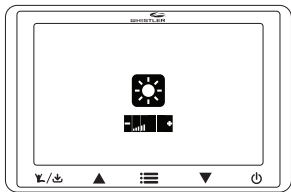


Image Parameters (Brightness, Contrast, Color) Setting Interface are shown above:

# MONITOR SETTINGS



Brightness/Contrast/Color Settings are similar. Take Brightness as an example, when Brightness is chosen, press ▲ or ▼ on the interface to adjust the brightness as shown above:

Select "Image Rotation", and then touch the ↶/↷ button to rotate or mirror the image. (It is best to have a video image displayed when making this selection).

Select "SETUP", and touch the ↶/↷ button to enter SETUP Mode; then, power on the camera by connecting the solar cell cables to finish the SETUP.

**NOTE:** When it's connected with the receiver for the first time, the SETUP operation is required. Please select the option "SETUP" from the receiver, and it will reveal "PAIR ICON". Then, please connect the transmitter with solar panels, and the transmitter will enter SETUP mode. After the SETUP operation, "OK" will appear on PAIR ICON of the receiver to indicate the successful pairing. In this case, the receiver can receive corresponding image information.

Select "Software Information", and touch the ↶/↷ button to display the software version information.

# INFORMATION


Battery Icon is on the top left corner of the monitor, and indicates the relative capacity of the built-in lithium battery when a video image is present.

Signal strength of the received image is on the top right corner of the monitor when a video image is present.

## **The Camera and Video Transmitter:**

The Camera / Video transmitter is equipped with the built-in rechargeable lithium battery and is connected with two solar panels that trickle charge the built-in lithium battery when sunlight is available to minimize or eliminate the need for needing to manually recharge during the year.

A USB charging port is provided to initially charge the battery prior to mounting on your vehicle as well as to recharge if needed. Your rechargeable battery when fully charged will last for several months of average use with NO SUNLIGHT (average use is defined as 4~6 times per day). With the addition of sunlight, the solar cells will charge your battery thereby extending the cameras ability to provided usage day after day and month after month without requiring you to recharge it manually.


When the Monitor is turned ON, or when the button backlight is ON and the  button is touched, a wake-up signal is sent to the camera and upon seeing this signal, it will awake the camera and transmitter in order to send an image to the monitor for 30 seconds, and then enter the Sleep Mode again.



# TROUBLESHOOTING

If the monitor does not turn on when power is applied:

- 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 vehicle is running or the key in the ON position).
- Check to make sure the fuse and power cord are in working order
- With power applied to the monitor, touch the power button.

If the monitor does not display images within a few seconds of pressing the  button:

- The battery in the camera may be depleted and require recharging.
- The signal may be weak due to positioning of the camera and monitor (try re-positioning the monitor to another location).

If the video image is poor:

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

If the image appears to shake when the vehicle is moving:

- Check the camera mounting screws to the vehicle and retighten if needed.
- Check the camera tilt adjustment and retighten the screws if loose.

If the video image does not last 30 seconds:

- Recharge the battery in the camera.

# DISCLAIMER

The Whistler Digital Wireless Backup Camera is intended to assist responsible drivers, but it does not relieve a driver from full responsibility for the operation of the vehicle. It is the driver's sole responsibility to avoid contact with any objects, animals, or persons. By mounting and/or using the Whistler Digital Wireless Backup Camera, you agree that you are solely responsible for the operation of your vehicle and that The Whistler Group is not responsible for any property damage, personal injury, or loss of life that may result from the operation of your vehicle.

## **Notice to Drivers in California and Minnesota:**

State law prohibits drivers in California and Minnesota from using suction mounts on their windshields while operating motor vehicles. Other dashboard mounting options should be used. (See California Vehicle Code Section 26708(a); Minnesota Statutes 2005, Section 169.71).

## **Notice:**

Some states or local governments 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 compliance.

# CARE AND MAINTENANCE

## Cleaning

Do not clean or wipe the Back-Up Camera with solvents or chemical materials. If necessary, remove dirt or stains using a soft cloth dampened with a mild detergent solution.

## 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-amp fuse.
4. Replace the center pin and cap. Turn the cap clockwise.

## Disposal

The Back-Up Camera is designed to provide years of service. The Back-Up Camera should be recycled or safely disposed of at a local recycling center.

# FCC AND IC INFORMATION

**IMPORTANT:** FCC (Federal Communications Commission) requirements state that changes or modifications not expressly approved by Whistler could void the user's authority to operate the equipment.

## **FCC Part 15.19 Warning Statement**

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## **FCC Part 15.21 Warning Statement**

**NOTE:** The grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.

## **FCC Part 15.105 Warning Statement**

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

# FCC AND IC INFORMATION

**RF warning statement:**

The device has been evaluated to meet general RF exposure requirement. To maintain compliance with FCC's RF exposure guidelines, this equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

**FCC ID : HSXBU01M / HSXBU01C**

**IC Warning:**

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

**RF warning statement:**

The device has been evaluated to meet general RF exposure requirement. To maintain compliance with RSS-102 — Radio Frequency (RF) Exposure guidelines, this equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

**IC:1698A-BU01M / 1698A-BU01C**

# SPECIFICATIONS

## CAMERA

**Operational Current (when transmitting):** <220mA

**Pixels:** 640 x 480

**View Angle:** 110°

**Image Sensor:** 1/4" CMOS VGA

**Image Quality:** Max 25 fps.

**Camera Assembly:** IP65

## TRANSMITTER

**Frequency:** 2400 ~ 2485.5MHz

**RF transmission distance:** >328 ft. (>100 m)

**Operation/storage temperature:** 14° to 122°F (-10° to 50°C)

## MONITOR

**LCD display screen size:** 4.3 in.

**Power cord fuse:** 1A

**Operational Current:** <250mA

**Standby Current:** 50mA.

**Effective Pixels:** 480 x 272

**Working temperature:** -10 to +50C