

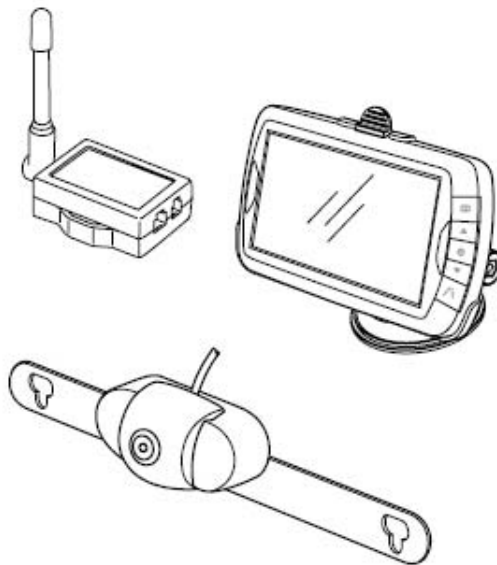


**PERFORMANCE**

Wireless Backup Camera System

Model No.:ACA020&ATB000


## **Owner's Manual** and Warranty Information



**Read these instructions completely before using this product.**

**Retain this Owner's Manual for future reference.**


## SAFETY PRECAUTIONS

 This safety alert symbol indicates that a potential personal injury hazard is present. The symbol is usually used with a signal word (e.g., **WARNING**) which designates the degree or level of hazard seriousness.

The signal word **WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.

The signal word **NOTICE** indicates a situation which can cause damage to the product, other personal property and/or to the environment, or cause the product to operate improperly.

The combination of the safety alert symbol and signal word is used in safety messages throughout this manual and on safety labels on this product.

 **WARNING** All safety messages that follow have **WARNING** level hazards. Failure to comply could result in death or serious injury.

### Back-Up Camera Safety

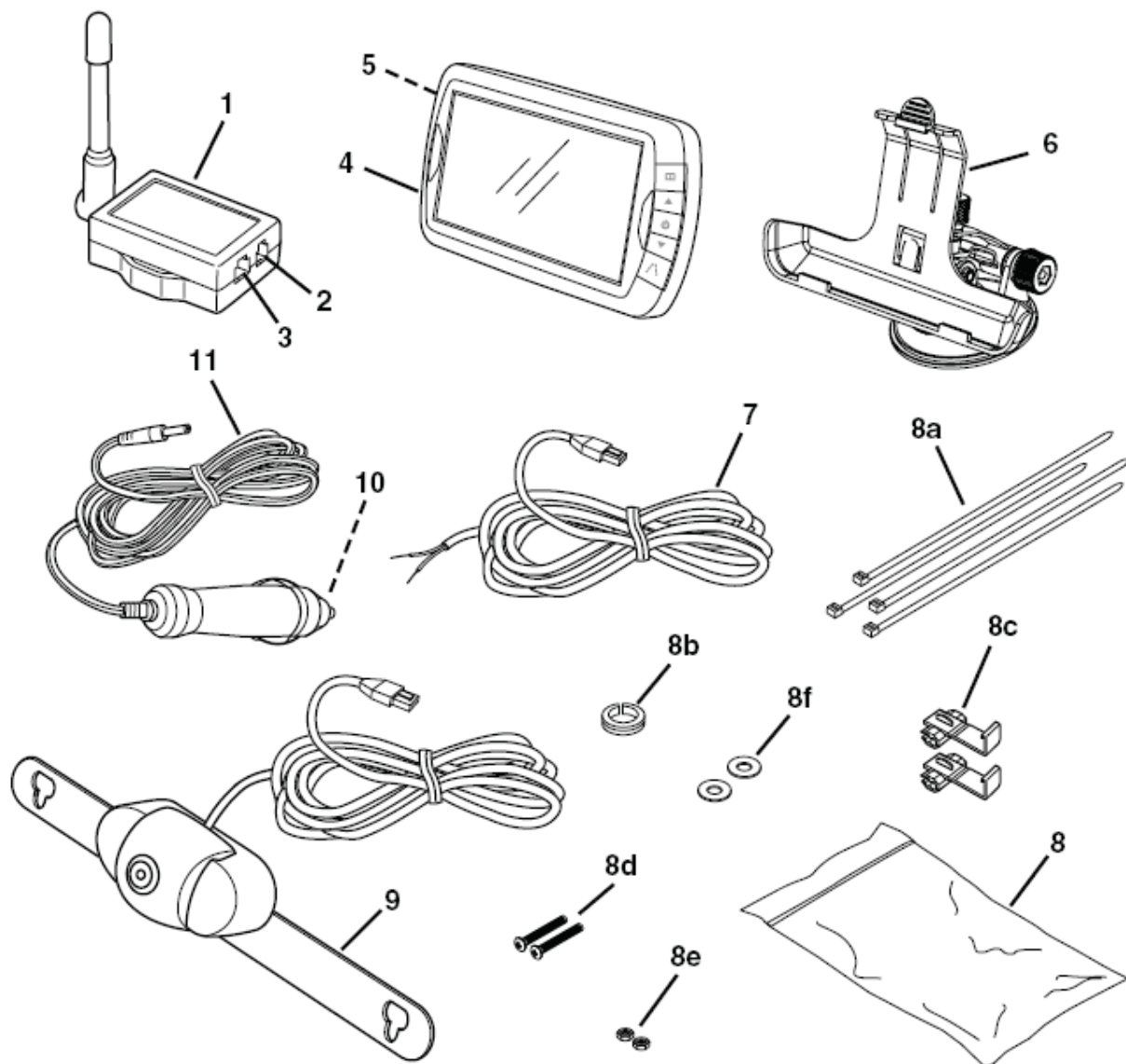
- Please check with your local and state authorities to confirm what is legal regarding the mounting of the Back-Up Camera to your vehicle. It is the responsibility of the vehicle owner to understand state and municipal regulations and ensure compliance.
- When installing the Back-Up Camera, the vehicle must be turned off with the vehicle in park and the park brake applied.
- Do not attempt to install the Back-Up Camera while the engine is operating.
- Do not modify the wiring in any way.
- Only install the Back-Up Camera to a 12-volt DC system. Connecting to anything other than a 12-volt DC system may damage the Back-up Camera components or the vehicle electrical system.
- If you are not confident working with 12-volt DC vehicle wiring, have the Back-Up Camera professionally installed.
- This device as well as other wireless devices may be subject to interference. Interference may be caused by cell phones, Bluetooth headsets, Wi-Fi routers, power lines and other various electrical equipment.
- Keep all power cords and wires away from the vehicle's mechanical controls.
- Do not mount the monitor where it will interfere with your view of the road.
- Do not adjust monitor settings while operating the vehicle.
- Do not install the Back-Up Camera to the front of your vehicle.
- Do not use in a vehicle which has an alarm or horn when driving in reverse.
- Do not paint or spray the camera.

## INTRODUCTION

The Back-Up Camera displays images behind the vehicle, and is used when backing up a vehicle. When the vehicle is driven in reverse, the camera is activated, which sends a signal to the transmitter. The transmitter sends a video signal to the monitor, which then displays the view captured by the camera.

## FEATURES

- Color monitor displays view from the rear of the vehicle
- Wireless monitor can be suction-mounted to windshield or dash for easy visibility
- Adjustable monitor mounting arm
- Adjustable vertical camera angle
- Weatherproof camera with 110° viewing angle
- Reduces the danger of harm or damage due to unseen objects
- System activates automatically when car is shifted into reverse



### Legend

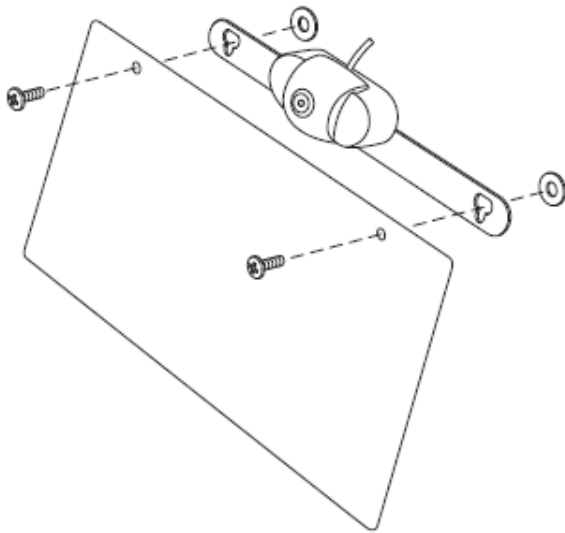
- |                           |                     |  |
|---------------------------|---------------------|--|
| 1. Transmitter            | 8. Hardware Bag     | 9. Camera  |
| 2. Transmitter Power Port | 8a) Ties            | 10. 1A Fuse  |
| 3. Camera Port            | 8b) Plastic Grommet | 11. Monitor Cigarette Lighter/<br>Accessory Socket Power<br>Cord |
| 4. Monitor                | 8c) Wire Connectors |  |
| 5. Monitor Power Port     | 8d) Screws          |  |
| 6. Monitor Arm            | 8e) Locknuts        |  |
| 7. Transmitter Power Cord | 8f) Washers         |  |

## INSTALLATION

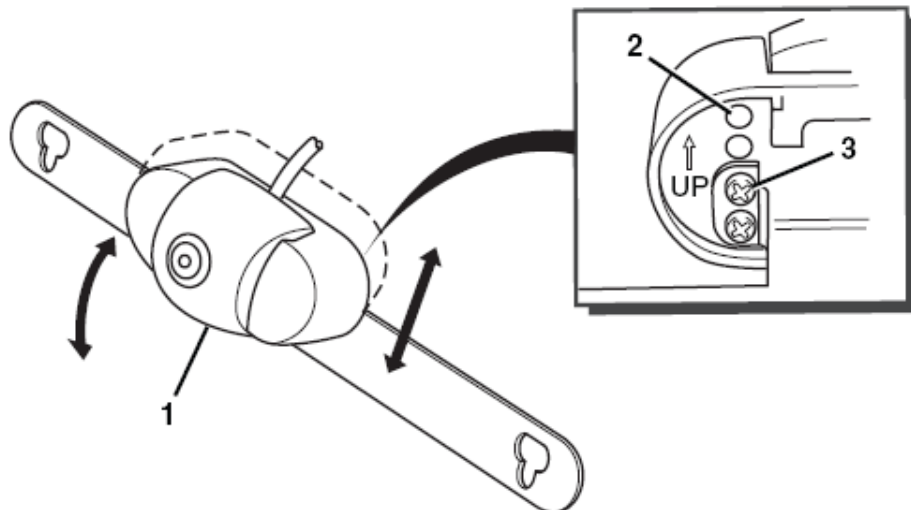
**NOTICE** Some states or local governments may have regulations or laws that restrict the use of anything that might impair the clear view of a license plate. Check local laws for compliance.

**NOTICE** For the Back-Up Camera to be properly installed, it must be wired into the vehicle's taillight harness. If you are not comfortable or knowledgeable with 12-volt DC wiring, have the system professionally installed.

**NOTICE** These instructions are only meant as a general guide due to the number of different makes and models of vehicles. For vehicle-specific questions, contact your vehicle's manufacturer.



1. Remove the screws that hold the license plate to the vehicle.
2. Position the camera mounting plate behind the license plate.
3. Insert the screws through the license plate, the camera mounting plate and the washers. If your hardware is not the correct length, use the supplied hardware.



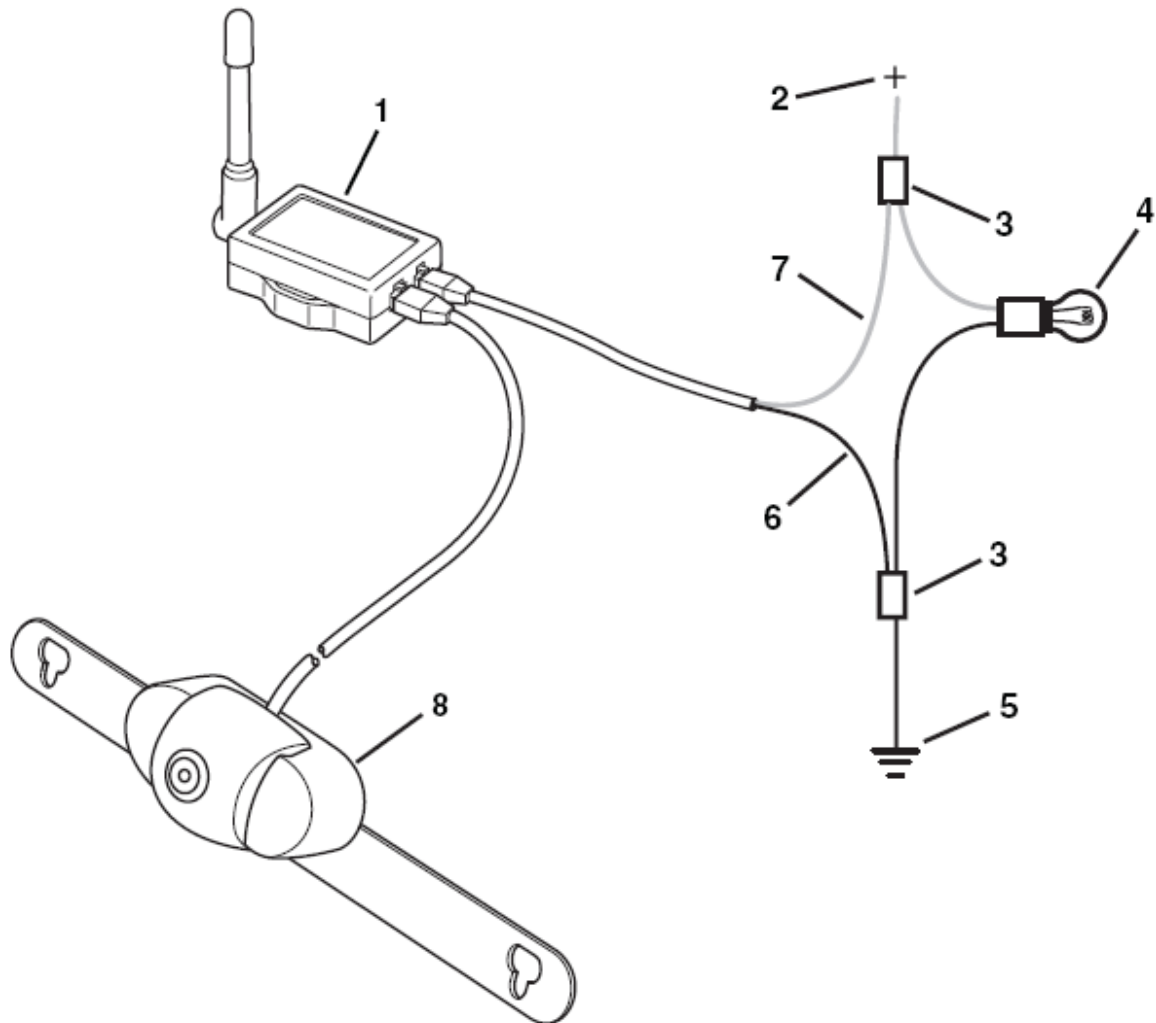
### Legend

1. Camera
2. Screw Holes
3. Camera Adjusting Screws

**NOTICE** The camera angle should be adjusted to a horizontal position relative to the ground, so as to provide an optimal view of objects behind the vehicle.

4. Adjust the camera as required:
  - To adjust the camera angle, tilt the camera to one of the five positions.
  - The camera should be adjusted to a horizontal position relative to the ground, so as to provide optimal view of objects behind the vehicle.
  - To adjust the camera height, remove the camera adjusting screws, move the camera to line up with the desired holes and install the camera adjusting screws. Make sure the arrows on the back of the camera are pointing upward.

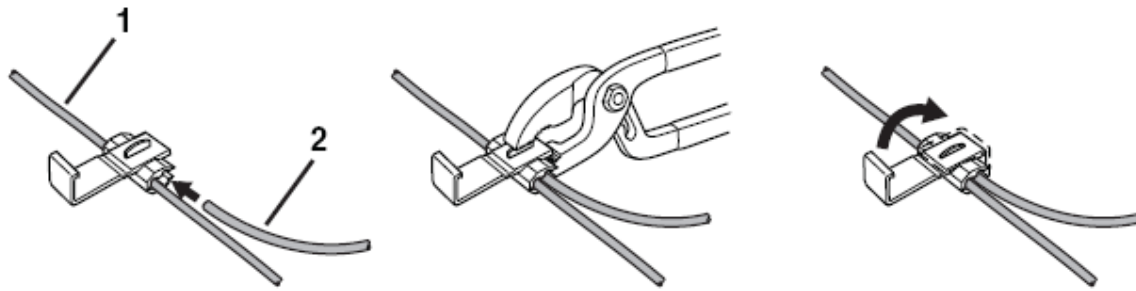
5. Install the license plate screws to secure the camera to the vehicle.
6. Determine which are the positive (+) and negative (-) wires for the reverse lights on the vehicle. You can use either the right- or left-side reverse light wires. For help locating the vehicle's reverse light circuit, contact your vehicle's manufacturer for vehicle-specific wiring diagrams.
7. Remove the vehicle's negative (-) battery cable.
8. Once the proper wires for the reverse lights have been determined, the transmitter wires must be spliced into the vehicle wires using the supplied wire connectors. If you choose to wire the transmitter using a different method, you must be knowledgeable in 12-volt DC electrical practices.



#### Legend

1. Transmitter
  2. Positive (+) Wire from Reverse Light
  3. Wire Connector
  4. Reverse Light
  5. Negative (-) Wire from Reverse Light
  6. Negative (-) Transmitter Power Wire (Black)
  7. Positive (+) Transmitter Power Wire (Red)
  8. Camera
9. The red positive (+) wire from the transmitter splices into the positive (+) wire from the reverse lights and the black negative (-) wire from the transmitter splices into the negative (-) wire from the reverse lights.
  10. Position the connector around the vehicle wire you are splicing into.
  11. Slide the appropriate wire from the transmitter into the connector.





#### Legend

1. Wire from Vehicle
2. Wire from Transmitter

12. Crimp the metal clamp using a pliers to ensure a good connection and then close the lock of the wire connector. Do this for both the positive (+) and negative (-) wires from the reverse light.
13. Mount the transmitter in an area where the wire from the camera can be plugged into it.
14. Reconnect the vehicle's negative (-) battery cable.
15. Plug the transmitter power cord plug into the transmitter power port.

**NOTICE** Depending on your vehicle type, it may be necessary to drill a hole to route the camera wire. Before you drill a hole you MUST CHECK WHAT IS BEHIND THE DRILLING LOCATION. If there are any vehicle components, like electrical parts or fuel system components, behind the drilling location, you must take precaution not to damage them.

16. Route the wire from the camera to the transmitter. Some vehicles may have a hole to route the camera wire through; for example, the hole for the wires for the license plate light.
17. If you need to drill a hole, use a 1/2 in. (13 mm) drill to drill the hole. Install the plastic grommet in the hole. You must use the grommet to prevent the edge of the hole from damaging the camera wire.
18. Insert the camera wire through the grommet and route it to the transmitter.
19. Plug the camera wire plug into the transmitter camera port and secure the wire with wire ties if needed.
20. Find a mounting surface inside the vehicle for the monitor where it can be easily seen, but is not near the rearview mirror assembly or in any other position where it can obstruct your vision when driving.

NOTE: To maximize the effectiveness of the suction mount, the mounting location surface temperature should be between 70° and 100°F (21° and 38°C); avoid application below 50°F (10°C). Do not perform application in direct sunlight.

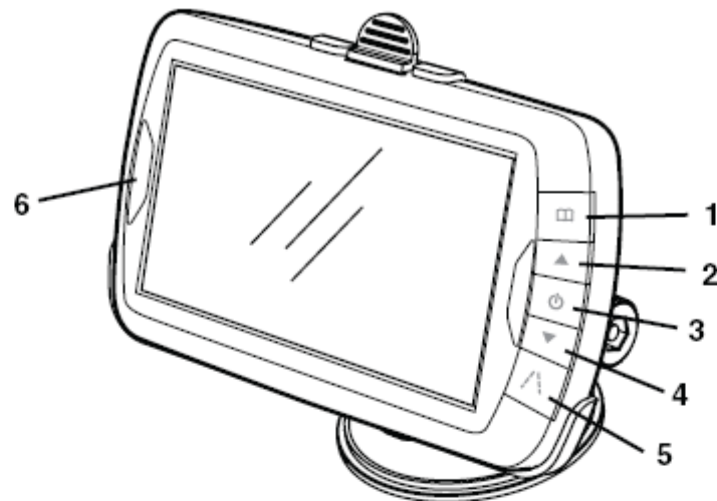
21. Clean and dry the mounting surface.
  22. Press the suction mount against the mounting surface and push the suction lock lever down. Make sure it is attached securely.
- NOTE: After mounting, protect the mounting surface from direct sunlight for 24 hours.
23. Slide the monitor onto the monitor arm. The monitor angle can be adjusted by loosening the monitor angle adjustment knobs, tilting the monitor, then tightening the knobs.
  24. Plug the monitor cigarette lighter/accessory socket power cord into the monitor power port.
  25. Plug the monitor cigarette lighter/accessory socket power cord into a 12-volt DC power port. The screen will flash, then turn off, and the monitor's blue power LED will blink, indicating the monitor is in standby mode (monitor has power and is turned on, but the vehicle is not in reverse).
  26. Route and secure all wires as needed.

## OPERATION

### Testing the System

1. Push the ON/OFF button. The blue LED will light when power is on.
2. With the park brake applied, turn the vehicle ignition switch to the ON position. Do not start the vehicle.
3. Shift the vehicle to reverse to power the transmitter. The blue power LED will light continuously and the monitor will display the image from the camera.
4. If the image does not display, check your connections and make sure the camera view is not obstructed.

## Monitor Controls



### Legend

1. Menu Button
2. Up Button
3. ON/OFF Button
4. Down Button
5. Guidelines Button
6. Blue Power LED

### ON/OFF Button

Press to turn the display on. Press it again to turn the display off.

### Blue Power LED

The LED will be on when the monitor is turned on.

### Adjusting Monitor Settings

To adjust the following monitor settings, make sure the park brake is applied, turn the ignition switch to the ON position and shift the vehicle to reverse.

**NOTICE** In extremely bright conditions, the screen image may take a few seconds to stabilize. Wait until the image has stabilized before backing up.

1. Press the menu button to bring up the settings screen.
2. Press the menu button to scroll through the different adjustments. Press the up button to increase or the down button to decrease settings.
3. The monitor can be mounted in any position. To change the view on the screen, scroll to direction. Press the up or down button to change the view and display the image correctly.
4. To exit, scroll to exit and press the down or up button.
5. To turn the guidelines on or off, press the guidelines button.

## CARE AND MAINTENANCE

### Storage

Store this Back-Up Camera in a cool, dry area and keep it away from direct sunlight, heat, excessive humidity and dampness.

### 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. Examples of places that will accept items like this are: county or municipal recycling drop-off centers or scrap metal dealers.

## SPECIFICATIONS

Camera	
Current consumption (with transmitter)	<500 mA
Pixels	640 x 480
View angle (measured 9.8 ft [3 m] from camera)	110° ± 15°
Transmitter	
Frequency	2414~2468 MHz
RF transmission distance	197 ft (60 m)
Operation/storage temperature	14° to 140°F (-10° to 60°C)
Monitor	
LCD display screen size	4.3 in. (109 mm)
Power cord fuse	1A

### FCC NOTE:

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.

THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS OR CHANGE TO THIS EQUIPMENT. SUCH MODIFICATIONS OR CHANGE COULD VOID AND CHANGE ANNTENA WHICH THE MANUFACTURER PROVIDES. IT IS THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

### IC NOTE:

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."