

AHD MOBILE DVR

Hardware User Manual

(RSC – HC68)



Catalogue








Chapter 1 Accessories and Interface	1
1. MDVR and accessories	1
2. System connection	2
3. Panel introduction	3
4. Interfaces Definition	3
4.1 Power interface	3
4.2 I/O Interface definition	4
4.3 Aviation interface definition	4
Chapter 2 Installation and Application	4
1. SD card installation	4
2. Antennas Connection	5
3. Power Connection	6
4. Camera Connection	6
5. Monitor connection	7
6. I/O wires connection	8
6.1 IR extension connection	8
6.2 Alarm input connection	8
6.2.1 Application of Alarm input (Reverse assistant)	9
6.2.2 Application of Alarm Input (Emergency Alarm)	10
6.3 Serial ports connection	11

Chapter 1 Accessories and Interface

1. MDVR and accessories

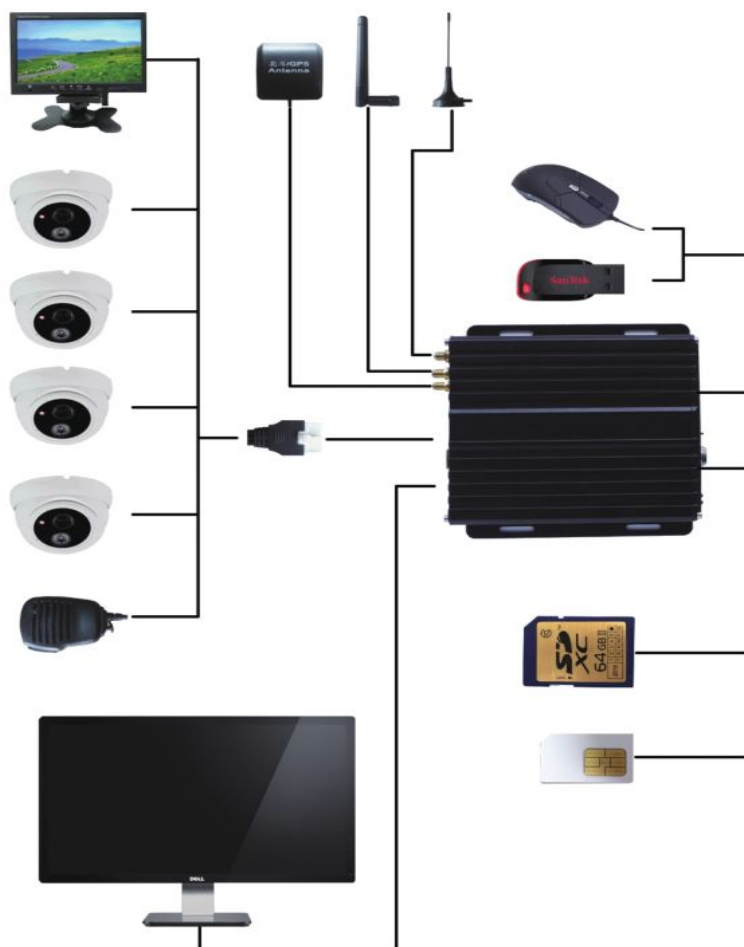
Before you use this product please check the accessories in the packing box. If there is anything missing or damaged please contact your seller. The MDVR and accessories are listed as following:

List of MDVR and accessories

Description	Picture	Quantity
MDVR		1
Power cable		1
I/O cable		1
AV cable		1
3G/4G antenna (Optional)		1
GPS antenna (Optional)		1
WiFi antenna (Optional)		1

<p>Remote control (Optional)</p>		<p>1</p>
<p>IR Extension cable (Optional)</p>		<p>1</p>
<p>Mouse (Optional)</p>		<p>1</p>

2. System connection



System connection

3. Panel introduction



Figure 1. Front panel

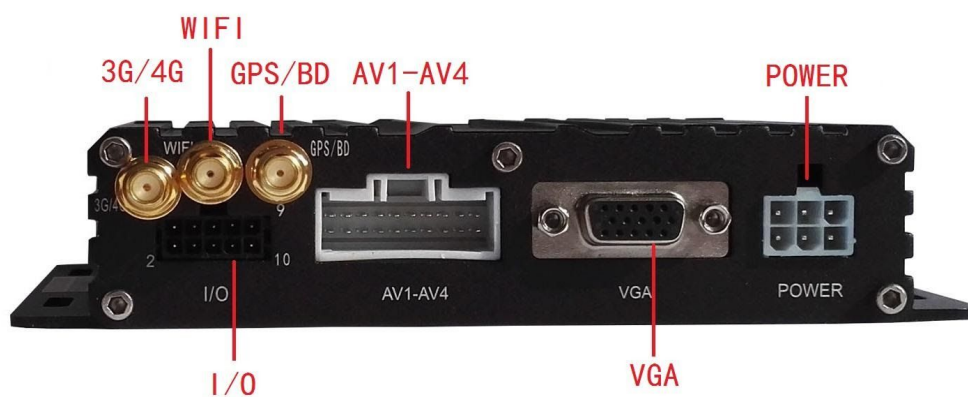


Figure 2. Back panel

4. Interfaces Definition

4.1 Power interface

10-36V	10-36V	ACC
GND	GND	GND

Figure 3. Power interface definition

4.2 I/O Interface definition

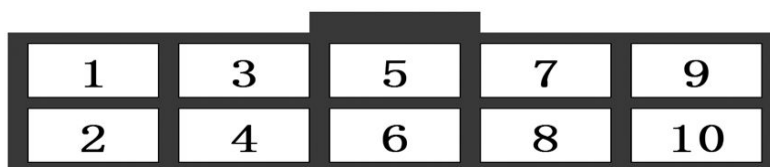


Figure 4. Front view of I/O Interface

I/O Interface definition

A photograph of the I/O interface showing the physical pins with their corresponding colors: Blue, Black, Purple, Purple, Red, Purple, White, White, Grey, and Yellow.

PIN	Color	Definition	PIN	Color	Definition
1	Blue	Alarm output	2	Black	Ground
3	Purple	Alarm input 2(Positive)	4	Purple	Alarm input 1
5	Purple	Alarm input 4(Positive)	6	Purple	Alarm input 3
7	Red	5V Output	8	White	TXD(TTL Level)
9	Grey	IR Extension	10	Yellow	RXD(TTL Level)

4.3 Aviation interface definition



AV-IN Camera Interface

AV-OUT Monitor Interface

Chapter 2 Installation and Application

1. SD card installation

Please insert the key into the lock on the front panel, and switch it to open status, then pull the cover toward right, you will see the SD card slot.



Figure 5. SD card Installation

Please insert the SD card and SIM card into the slot as per the icon indication, Then, close the SD cover and lock it (Please remember to lock it, otherwise, The SD card will not work)



Figure 6. SD card installation

2. Antennas Connection

Please connect the WiFi and GPS antennas as per the picture as followed. We suggest you put the GPS antenna externally at the vehicle's roof to make sure signal connection even when it is weak.



Figure 7. Antennas Connection

3. Power Connection

Please connect the power as per the definition of power interface. Positive pole (RED) connects with power input 10-36V DC, ACC ignition (YELLOW) connects with 5-36V DC.

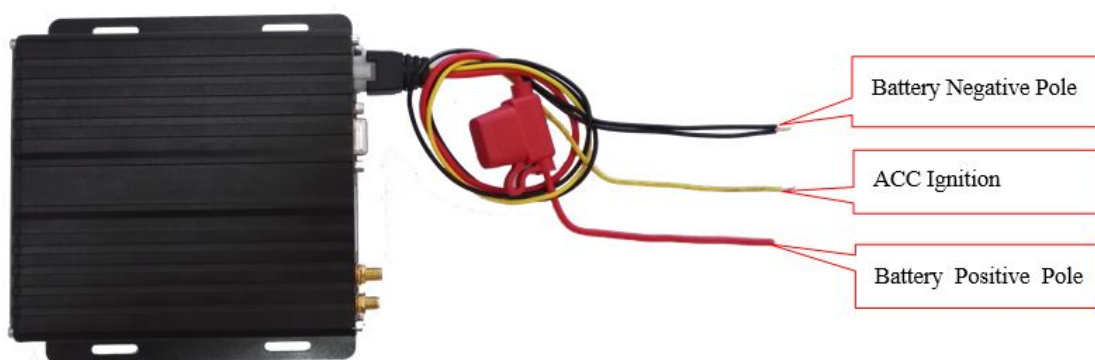


Figure 8. Power Connection

The yellow ignition wire is used to detect the ignition signal. We strongly suggest you connect it with the “RUN” terminal of the ignition switch, or any terminal in the vehicle’s switch box which will have power only when the vehicle was ignited (f.g. the FM radio)

NOTE: When testing the device, please connect both of the red power wire and the yellow ignition wire with the positive pole of the UPS, otherwise, the device will not boot.

4. Camera Connection

You can connect the camera with the AV input cable directly, or by extension cable (optional). The AV cable in the accessories box has mark on each connector, AV 1-4 are for cameras connection.



Figure 9. Cameras connection

PS: Before you connect the cameras, please double check the definition of the AV interface, please make sure your cameras are with same aviation interface definition with the DVR.

5. Monitor connection

The device supports VGA and CVBS output. You can switch the output mode to be the one you need by the mouse or remote control.

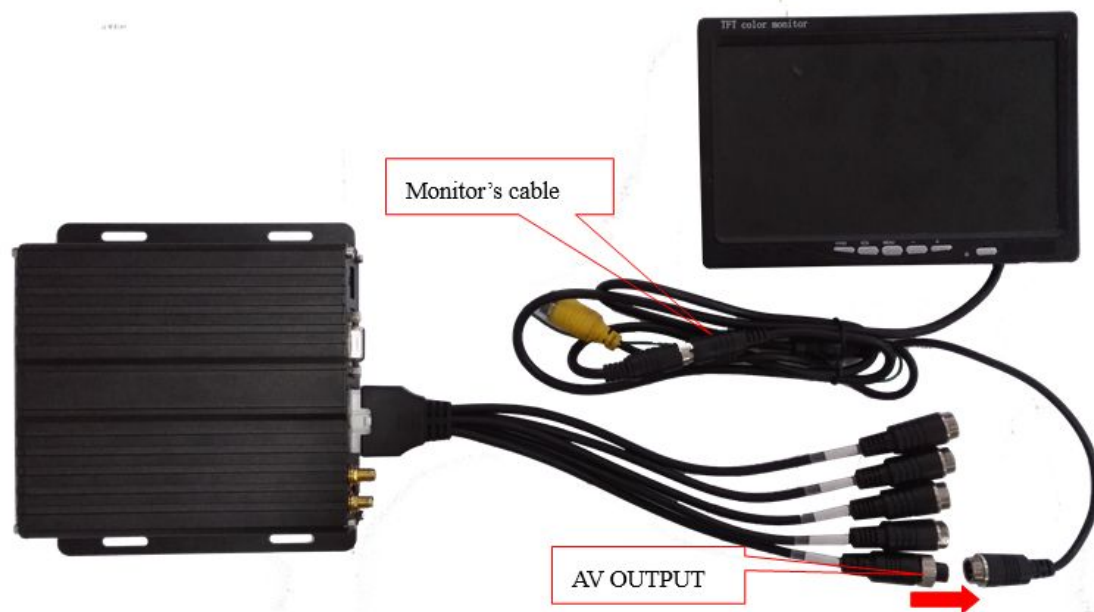


Figure 10. Aviation interface monitor connection

PS: Before you connect the monitor, please double check the definition of the AV interface and make sure your monitor is the same aviation interface definition with the DVR.

6. I/O wires connection

Please connect the wires as the I/O interface definition. You will also find tips of the interface definition in the DVR menu.

6.1 IR extension connection

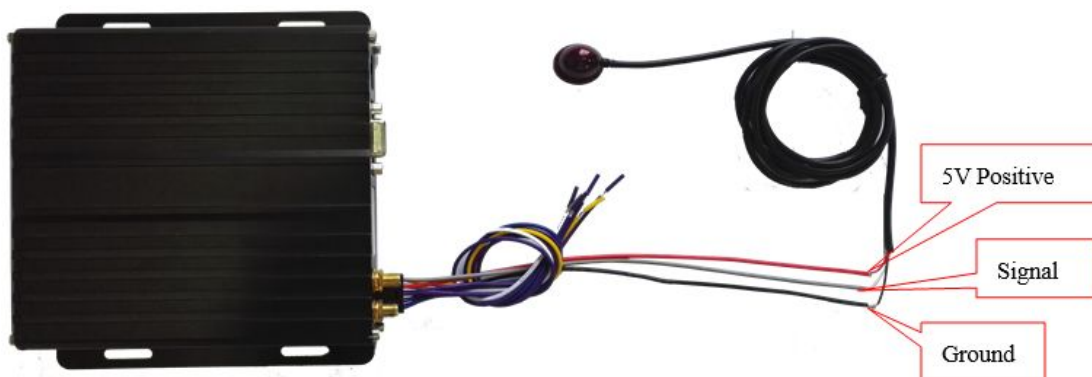


Figure 11. IR extension connection

I/O wires				IR extension cable	
PIN	Definition	Colour	↔	Colour	Definition
2	Ground	Black	↔	Black	Ground
7	5V Output	Red	↔	Red	5V Power
9	IR Extension	Grey	↔	White	Signal

IR Connection

6.2 Alarm input connection

This device provides 4 channels alarm inputs (2 channels Positive trigger, 2 channels negative trigger). You can connect the positive pole of circuit of the reverse light, turn light, door open & close etc with them for applications such as reverse assistant, camera channels switching. You can also connect it with the SOS emergency button for alarm linkage.

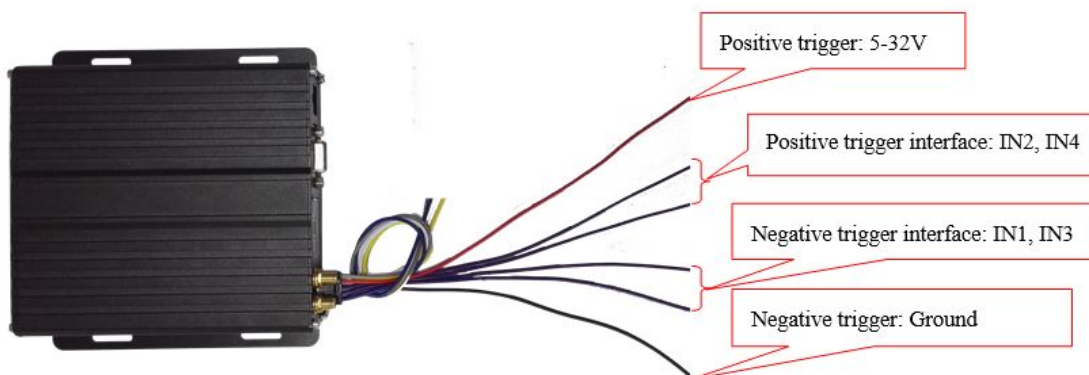


Figure 12. Alarm Input Connection

I/O wires				Alarm Trigger	
PIN	Definition	Colour	↔	Colour	Alarm trigger
3	Alarm input2	Purple	↔	Red	5-32V
5	Alarm input4	Purple			
4	Alarm input1	Purple	-	Black	Ground
6	Alarm input3	Purple			

Alarm input Connection

6.2.1 Application of Alarm input (Reverse assistant)

The device comes with Reverse assistant feature, as an example with Alarm Input2, we connect the wire of alarm input 2 with the positive pole of reverse light's power, see as following:

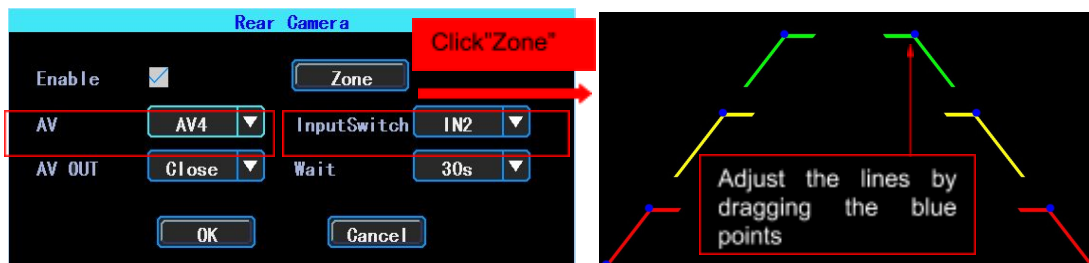


Figure 13. Reverse Assistance Connection

I/O wires				Alarm trigger	
PIN	Definition	Colour	↔	Colour	Alarm Trigger
3	Alarm input 2	Purple	↔	Red	Positive pole of Reverse light

Reverse Assistance Connection

Setup it in the DVR menu “Advanced” → “Rear Camera”, see as following, click “OK” to save your setting.



AV: Please select the reverse camera's channel

InputSwitch: Please select the alarm input number which connects with the reverse light's power

PS: When using reverse assistance, please use IN2, IN4 positive trigger to setup

When you put reverse gear, the DVR will display the reverse camera's channel only. See following:

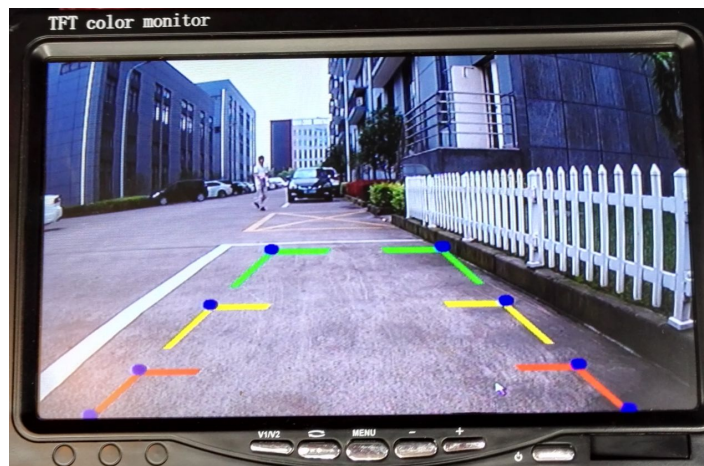


Figure 14. Reverse Assistance

6.2.2 Application of Alarm Input (Emergency Alarm)

You can connect an Emergency Button with the alarm input of the device. When you hit the Emergency alarm button, the device will send alarm information to the server platform. That is alarm linkage. (This application requests the DVR connecting with the server in real time, otherwise, the server platform will not receive the alarm information). We give an example with Alarm Input 1, connect the I/O alarm input wire 1 with one terminal of the Emergency button, and connect the other terminal of the Emergency button with ground.

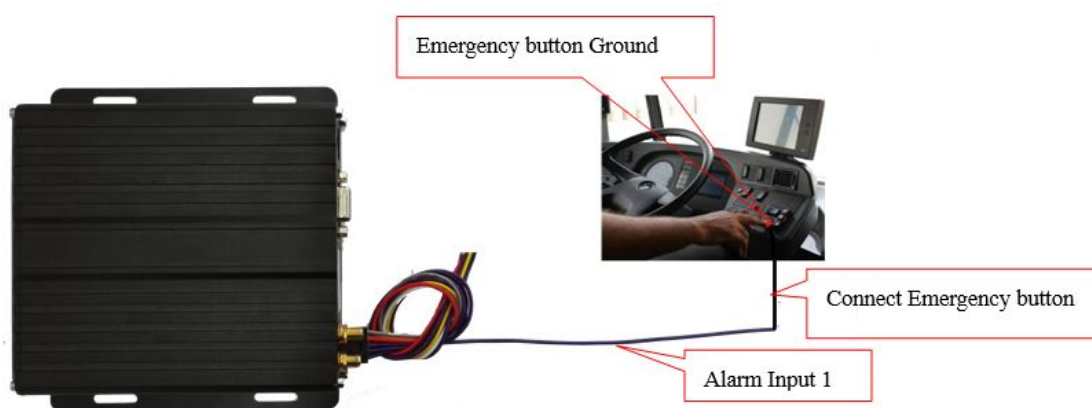


Figure 15. Emergency button connection

PS: (If the connected Alarm input is Positive trigger, the other end of the Emergency button will be 5-32V DC power)

Setup it in the DVR menu "Alarm" → "Input", select AlarmInput1 in the list to setup the alarm parameter. See as following:

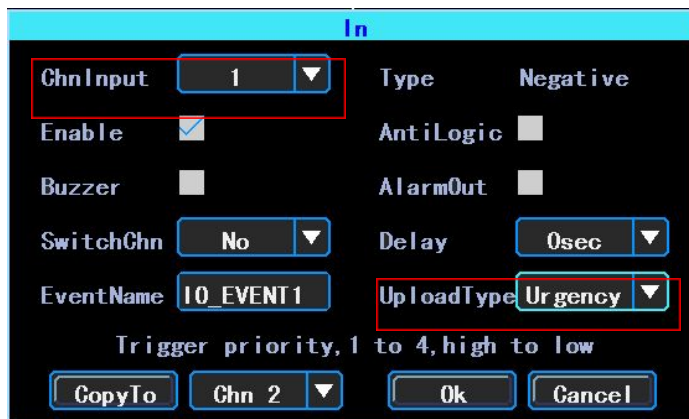


Figure 16. Setup alarm input

ChnInput: This channel is used to connect with the Emergency button.
 UploadType: When you use the emergency button, please set up it to be “Ur gency”, otherwise, set up it to be “No”

6.3 Serial ports connection

The device provides a group of serial ports which are used to connect with some user’s peripherals, the interface is LVTTTL (3.3V) level



Figure 17. Serial ports Connection

I/O wires				Peripherals	
PIN	Definition	Colour	↔	Colour	Definition
2	Ground	Black	↔	Black	Ground
8	TXD(TTL level)	White		Yellow	RXD
10	RXD(TTL level)	Yellow		White	TXD

Serial ports connection

IMPORTANT

This guide provides important information on the use and operation of your RSC HC68 7" monitor and the images/features shown throughout the manual are subject to change without notice due to system and firmware upgrades. Please read all the information carefully prior to using the product for the best performance and to prevent any damage/injuries or misuse of the device(s). Customers are encouraged to have read through this complete user's manual before using the RSC HC68. Any unapproved changes or modifications will void your warranty. Please ensure to have a complete understanding of the following conditions and restrictions.

It is recommended to 'format' your sd card on a monthly basis.

NOTE: Please check your Provincial Motor Vehicle Act and Regulations pertaining to the use of this camera while operating your vehicle. It is illegal in most areas to operate a camera while driving.

CONDITIONS

Please read the following messages to make sure your working environment is suitable if the camera is intended for use in the vehicle.

- If your vehicle does not cut off power to your cigarette lighter port, then you may have to manually turn off or unplug the charger to prevent it from overheating.
- The temperature should be kept between -10°C and 50°C (14°F to 122°F).
- Avoid putting the product in places where temperature or humidity may change rapidly.
- Keep it dry, dustless and avoid lens exposure in direct sunlight.
- Keep product away from heat sources such as electric heaters.
- Do not use the camera near harmful chemicals.
- Do not place product near any strong magnetic objects
- It might influence the normal operation of the product if used at the fringe range of normal temperature. Please turn off the power when not in use.
- Do not disassemble the product.
- Do not shake or strike the product.
- Please obey the local government's environment protection policy.

RESTRICTIONS:

When using this product, the safety precautions below must be taken to avoid possible legal liabilities and damages. Retain and follow all product safety and operating instructions. Observe all warnings in the product operating instructions. To reduce the risk of bodily injury, electric shock, fire and damage to the equipment, observe the following precautions.

PLEASE NOTE that under certain circumstances, audio/video recording may be **PROHIBITED** by law. This device should be used only in compliance with all applicable Federal, Provincial and local statutes.

- DO NOT disassemble this product. Opening or removing covers may expose you to dangerous voltages or other risks. Incorrect reassembly can cause electric shock during subsequent use.
- DO NOT use this product unless knowledge of the law, Federal, Provincial and local governments pertaining to use of the product is fully understood. To infringe on one's privacy, spying intercepting and related activities are illegal and punishable by law. Monitoring one's private activities without consent is illegal and this product is not designed or manufactured for these purposes.
- DO NOT use this product to carry out any illegal activities such as sneak preview, etc. RoadScan Canada Inc shall not be responsible for any consequences of illegal conducts made by users.
- DO NOT put the plastic packaging bags in reach of children or babies. Plastic bags can create a suffocation hazard when placed over the nose and mouth.
- DO NOT plug the AC adapter into the outlet in improper situations.
- Plugging in an AC adapter with wet hands might cause electric shock.
- Plugging in the AC adapter unsteadily might cause fire or electric shock.
- DO NOT cover the AC adapter when it is connected to an outlet, place the adapter near heaters, or put it on the floor which is equipped with a heater. The above mentioned operation might cause fire or incidents.

WARRANTY

RoadScan Canada Inc warrants that this product will be free from defects in title, materials and manufacturing workmanship for one year or otherwise specified on the product packaging. This limited warranty shall commence from the date of purchase. RoadScan Canada Inc products warranty is not transferable and is limited to the original purchaser. If the product is found to be defective then, as your sole remedy and as the manufacturer's only obligation, RoadScan Canada Inc will repair or replace the product. This warranty shall not apply to products that have been subjected to abuse, misuse, abnormal electrical or environmental conditions, normal wear and tear, or any condition other than what can be considered normal use. Warranty Disclaimer RoadScan Canada Inc makes no other warranties, express, implied or otherwise, regarding this product, and specifically disclaims any warranty for merchantability or fitness for a particular purpose.

All products leaving RoadScan Canada's facility have been tested and deemed working accordingly and in good condition. Any mishandling of the product(s) purchased does not provide immediate warranty relief.

It is the owners responsibility to read this manual and warranty coverage prior to making a warranty claim.

RoadScan Canada is the sole determiner if warranty is to be covered.

Photographs and or video will be requested to determine if an item is covered under their respective warranty.

LIMITATION OF LIABILITY

The liability of RoadScan Canada Inc, arising from this warranty and sale shall be limited to a refund of the purchase price. In no event shall RoadScan Canada Inc be liable for costs of procurement of substitute products or services, or for any lost profits, or for any consequential, incidental, direct or indirect damages, however caused and on any theory of liability, arising from this warranty and sale. These limitations shall apply notwithstanding any failure of essential purpose of any limited remedy.