

# HindSight™

Backup Monitor System



**LCD Monitor &  
CCD Color Camera**

## HindSight™

Backup Monitor System

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## Owner's Manual

VIZUALOGIC®

Fall 2003

## Welcome

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Congratulations on your purchase of a the HindSight Backup Monitor System that will provide your family with many years of safety enhancement. This sophisticated product provides backup camera video for the driver without altering the OEM appearance of your vehicle's interior

Reviewing this owner's manual thoroughly prior to operation will provide you with the best performance and help explain the simple requirements for proper care.

## Important Safety Information:

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*This video product is designed and intended for the purpose of providing backup camera video for the driver. Misuse of this product may constitute a violation of your state's vehicle code. Please check with your local state law regarding the use of such a product.*

## Purchase Information

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Please fill out this section for your reference and retain the original bill of sale to validate your Limited Warranty should service become necessary:

Date of Purchase: \_\_\_\_\_

Place of Purchase: \_\_\_\_\_

Unit Serial Number: \_\_\_\_\_

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## Features

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- **LCD Monitor:** Provides crisp, clear images on an easy to view color screen.
- **OEM-Styled Monitor Housing:** Matches your vehicle's interior in both style and design.
- **CCD Color Camera:** High resolution and low light viewing provides versatility.
- **Small and Lightweight:** Easy to mount camera fits in just about any location.
- **Weather-Resistant and Waterproof Camera:** Withstands years of service in all weather conditions.

## Specifications

Specification	WM-345 (NTSC)	WM-345C (Pal)
Image Device	1/3" Interline CCD	1/3" Interline CCD
Number of Pixels	(H) 510 x 492	(H) 500 x 582
Scanning System	525 Lines, 60 Field/Sec	625 Lines, 50 Field/Sec
Sync System	Internal Synchronization	Internal Synchronization
Horizontal Resolution	330 TV Line	330 TV Line
Video Output	1 Vp-p 75 Ω	1 Vp-p 75 Ω
B.L.C.	Back Light Compensation (auto)	Back Light Compensation (auto)
White Balance	Auto White Balance (auto)	Auto White Balance (auto)
Minimum Illumination	1 Lux (F: 2.0)	1 Lux (F: 2.0)
Electronic Shutter	1/60 ~ 1/100,000 Sec	1/50 ~ 1/100,000 Sec
Built-In Lens	F: 2.97 (option)	F: 2.97 (option)
Power Consumption	12 V ± 10% DC, 100 mA	12 V ± 10% DC, 100 mA
Operation Temp.	-10°C ~ +50°C, RH 95% Max.	-10°C ~ +50°C, RH 95% Max.
Storage Temp.	-20°C ~ +60°C, RH 95% Max.	-20°C ~ +60°C, RH 95% Max.
Weight	Approx. 134 g	Approx. 134 g
Housing	Aluminum	Aluminum
Accessories	Angle Controller Ring – 3 sets Fixing Ring – 3 pcs. Fixing Tube – 1 pc.	Angle Controller Ring – 3 sets Fixing Ring – 3 pcs. Fixing Tube – 1 pc.

## Controls

### Monitor Controls:

**Sensor:** Remote sensor for the remote control.

**Volume (-):** Adjusts down with each function in the menu.

**Mode:** Switches through the functions in the menu to select the desired screen adjustments.

**Volume (+):** Adjusts up with each function in the menu.

**Power:** Turns the monitor on and off.

### Remote Control:

**Screen Power:** Press the 'POWER' button to illuminate the LCD screen.

**Control:** Pressing the 'CONTROL' button will allow source selection by pressing the 'AV' button.

**Monitor:** Pressing the 'MONITOR' button allows the following adjustments to be selected.

### Adjusting the screen options:

**Screen Adjustments:** Press the 'PIC' button to select the desired screen adjustment, then press the 'VOL (-)' or 'VOL (+)' to change the setting. Each press of the 'PIC' button will cycle to the next adjustment in the following order: Contrast, Brightness, Color, Tint, Blue Screen, Power Direct, Color System, Mirror Mode, Mode Selector.

**Contrast:** Adjusts the differentiation between light and dark.

**Brightness:** Adjust the overall Brightness of the LCD display.



## Controls (cont.)

**Color:** Adjusts the intensity of the display colors.

**Tint:** Adjusts the overall red/green color balance.

**Blue Screen:** Select 'OFF' to see the video program while adjusting the display. Select 'ON' to see a blue screen while making display adjustments.

## Setup Operation

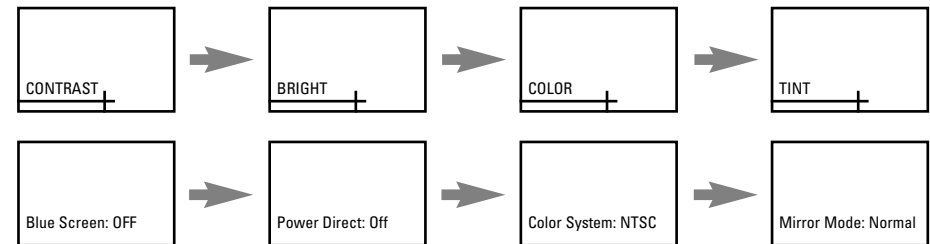
**This system is designed to allow the backup system to only operate when the vehicle is in reverse.**

1. Set up directions:
  - a. Engage the Emergency Brake
  - b. Turn the ignition on only. Do not start the vehicle.
  - c. Put the vehicle in reverse.
  - d. Push power on the monitor to turn it on.
  - e. Push the 'MODE' button on the screen to access the functions.
  - f. Continue pushing the 'MODE' button until you get to 'POWER DIRECT: OFF'.
  - g. Push 'VOLUME (+)' to select 'ON'.
  - h. This will allow the monitor to turn 'ON' every time the Vehicle is put in reverse.
  - i. The setup is now finished.

**See wire diagram for installation directions.**

## Setup Operation (cont.)

Press PIC button on the remote control (or Mode button on the Monitor). It will appear on the screen in order as the following pictures.



Adjust each function, CONTRAST, BRIGHTNESS, COLOR, TINT, ON/OFF, NTSC/PAL, NORMAL, MODE SELECTOR with VOL (+ -) button.

## System Operation

1. Turn the system on using the 'Power ON' switch on the monitor.
2. Switch the monitor to A/V (1).

No picture will be displayed while driving.

Once the vehicle is put in reverse, the screen will switch over to A/V (2) to display the camera view. Once the screen is put into drive, the screen will revert to A/V (1).

3. Switch the monitor to A/V (2).

The monitor will display the camera view. (Driving forward, or backing up)

## Troubleshooting

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- No Display: (Screen is black)
  - Verify that +12V power is correctly supplied to the A/V Control Module.
  - Verify that the Monitor Cable is connected to the A/V Control Module.
  - Verify that the + 12V circuit is on (i.e. ignition position).
  - Verify that the Setup Operations steps were taken. (Page 4)
  
- No video: (screen displays blue screen)
  - Make sure that all cables are connected properly.
  - Make sure that the Camera Cable is connected to the A/V Control Module.
  - Make sure the the Monitor power switch is toggled On.


## Care and Maintenance

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Your backup monitor system is a product of superior design and craftsmanship and should be treated with care. The suggestions below will help to fulfill warranty obligations and to provide many years of enjoyment.

Cleaning the Monitor Screen and Housing:

- The components may be cleaned by gentle wiping with a soft, lint-free, cotton cloth that has been slightly dampened with water.

 **CAUTION: Do not use liquids, abrasives, aerosol cleaners, or paper cleaning products because they will result in permanent damage to the finish of your components! The LCD screen is made of a specially coated glass and can be scratched or damaged by abrasive or ammonia-based window cleaners.**

- Use and Storage:

- These units contain precision electronics that must be protected from dust, dirt, and moisture.
- Never spill liquids on any of the components. Liquids, humidity, and precipitation contain minerals that will corrode electronic circuits.

- Take care to avoid the following:

- Rough handling can break internal circuit boards. Do not drop, knock, or shake the components.
- Do not attempt to paint or refinish the components. Paint can clog moving parts and prevent proper operation.
- The components can be damaged by non-expert handling. Attempting to open any of the components may void the Limited Warranty.

## Limited Warranty

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### ONE YEAR LIMITED WARRANTY

#### NONTRANSFERABLE

#### Terms of Warranty

TMI Products, Inc (the Company) warrants to the original retail purchaser, that the auto video product(s) purchased from a Company authorized installer are free from defects in materials or workmanship under normal use and conditions for a period of one (1) year from date of purchase, except, the remote control and headphones which are warranted for a period of sixty (60) days from date of purchase. A sales receipt is required to provide proof of date of purchase.

Should the product(s) be determined defective during the applicable warranty period, the defect(s) will be repaired or replaced with a new or reconditioned part(s), at the Company's option. To obtain warranty service, the product(s) must be returned to a Company authorized installer along with proof of warranty coverage.

#### Exclusions:

This limited warranty excludes:

- Elimination of externally generated static or noise, or the correction of antenna problems or weak television reception.
- Costs incurred for installation, removal or reinstallation of the product(s).
- Damage to tapes, video games, software, camcorders, discs, speakers, accessories or vehicle electrical systems.
- Cosmetic damage or damage due to negligence, misuse, abuse, failure to follow operation instructions, accidental spills or customer applied cleaners.
- Damage due to environmental causes such as floods, airborne fallout, chemicals, salt, hail, windstorms, lightning or extreme temperatures.
- Damage due to accidents, road hazards, fire, theft or vandalism.
- Damage due to improper installation or connection, improper connection to equipment of another manufacturer, modifications of existing equipment, use of a faulty tape cartridge or cleaning of the VCR head.
- Product(s) which have been opened or tampered with for any reason or which have been damaged due to alteration or service performed by anyone other than the Company or a Company authorized installer.

EXCEPT AS EXPRESSLY SET FORTH IN THIS WARRANTY, THE COMPANY MAKES NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE COMPANY EXPRESSLY DISCLAIMS ALL WARRANTIES NOT STATED IN THIS LIMITED WARRANTY. ANY IMPLIED WARRANTIES THAT MAY BE IMPOSED BY LAW ARE LIMITED TO THE TERMS OF THIS EXPRESSED LIMITED WARRANTY.

Some states do not allow limitation on how long an implied warranty lasts. In such states, the limitations or exclusions of this Limited Warranty may not apply.

Some states do not allow the exclusion or limitation of incidental or consequential damages. In such states, the exclusion or limitation of this Limited Warranty may not apply to you. This Limited Warranty gives you specific legal rights and you may have other rights, which vary from state to state.

EXCEPT AS EXPRESSLY SET FORTH IN THIS WARRANTY, THE COMPANY MAKES NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE COMPANY EXPRESSLY DISCLAIMS ALL WARRANTIES NOT STATED IN THIS LIMITED WARRANTY. ANY IMPLIED WARRANTIES THAT MAY BE IMPOSED BY LAW ARE LIMITED TO THE TERMS OF THIS EXPRESSED LIMITED WARRANTY.

## How to Obtain Warranty Service

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To obtain warranty service, the product(s) must be returned to an authorized installer accompanied by proof of warranty coverage.

## How State Law Relates to the Warranty

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Some states do not allow limitation on how long an implied warranty lasts. In such states, the limitations or exclusions of this Limited Warranty may not apply. Some states do not allow the exclusion or limitation of incidental or consequential damages. In such states, the exclusion or limitation of this Limited Warranty may not apply to you. This Limited Warranty gives you specific legal rights and you may have other rights which vary from state to state.

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