



7" Widescreen TFT LCD Color Monitor

Owner's/Installation Manual

MODEL HVM702

NON-TRANSFERABLE LIMITED ONE YEAR CONSUMER WARRANTY

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Directed Electronics, Inc. (Directed) promises to the original purchaser that the new automotive video monitor and/or source unit(s) (the Product), excluding accessories, that is purchased and installed from a Directed authorized dealer more than ninety (90) days after the purchase of a new vehicle is warranted for a period of one (1) year from date of purchase of the Product.

Directed promises to the original purchaser that all video accessories will be free from defects in materials and workmanship under normal use and condition for a period of ninety (90) days after the date of purchase. A sales receipt and/or warranty registration card is required to provide proof of date of purchase of the Product or accessories.

Should the Product prove to be defective during the applicable warranty period, the Product will be repaired or replaced with a new or comparable reconditioned part(s), at Directed's election. To obtain warranty service, the Product must be returned to a Directed authorized dealer along with proof of purchase and proof of installation by an Authorized Directed Dealer.

Note: This warranty does not cover labor costs for the removal and/or reinstallation of the Product. IN ORDER FOR THIS WARRANTY TO BE VALID, YOUR PRODUCT MUST BE SHIPPED WITH PROOF OF PURCHASE AND INSTALLATION BY AN AUTHORIZED DIRECTED DEALER. ALL PRODUCTS RECEIVED BY DIRECTED FOR WARRANTY REPAIR WITHOUT PROOF OF DIRECTED DEALER INSTALLATION WILL BE DENIED.

This warranty is non-transferable and does not apply to any Product that has been modified or used in a manner contrary to its intended purpose, and does not cover damage to the Product caused by installation or removal of the Product. This warranty is **VOID** if the product has not been purchased from an authorized Directed dealer or has been damaged by accident or unreasonable use, negligence, acts of God, neglect, improper service or other causes not arising out of defect in materials or construction. This warranty does not cover the elimination of externally generated static or noise, or the correction of antenna problems or weak television reception, 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 operating 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, loss or vandalism, damage due to improper connection to equipment of another manufacturer, modification of existing equipment, use of a faulty tape cartridge or cleaning of the VCR head, or Product which has been opened or tampered with for any reason or which has been damaged due to alteration or service performed by anyone other than Directed Electronics, Inc.

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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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Important Notes

1. Before operating your LCD Monitor system, please read these instructions carefully.
2. Retain this manual for future reference.
3. Do not remove any WARNING stickers on the unit.
4. Do not use any chemical solvent, cleaning agent or corrosive detergent to clean away dirt on the surface of the screen. Doing so may cause irreversible damage to the surface of the LCD screen. To clean off dirt or fingerprints, it is recommended that a soft-damp lens-cleaning cloth be used.
5. Using spare parts from another manufacturer may cause permanent damage to the unit.
6. Avoid installing the monitor screen in a position that is exposed to direct sunlight and hot air vents.
7. Install the unit in a dry location, avoid condensation.
8. Ensure that all wiring is properly connected before operating the unit.
9. Should the LCD panel break, avoid contact with the broken glass or fluid leaking out from the enclosure. If you come into contact, flush and clean the affected areas with plenty of water. Seek medical attention immediately.
10. When operating the monitor, avoid touching or pressing on the LCD screen. Excessive force will damage the LCD screen.
11. When installing this unit in a vehicle, ensure that the installation and use of this unit is in compliance with local vehicle rules and regulations.
12. Before replacing a blown fuse, turn the unit off and disconnect all power. Ensure the replacement fuse is of the same rating (5A) of the fuse being replaced.
13. If during operation the unit overheats or malfunctions, turn off the power and contact your dealer. Do NOT disassemble the unit, there are no user serviceable parts in the unit.
14. Ensure that no foreign objects are in the unit when the LCD screen is closed.
15. The battery (CR2025) in the remote control has a useful lifetime of approximately 6-months. To ensure proper and reliable operation, replace the battery in a timely manner.
16. When the unit is used in conjunction with a radio/TV tuner, reception quality will vary depending on the geographic location and weather conditions.
17. The rated operating temperature range of the unit is 32°–92° F. Cool or warm the vehicle to within this temperature range prior to unit operation.
18. The picture viewing quality of this LCD is dependent on the installed location. Adjust the brightness control and/or the angle of the screen to achieve the optimum visual quality.

Introduction

Congratulations on your purchase of the world's finest video entertainment system. At Directed we are committed to bringing you the most technologically advanced products available. We are pleased that you chose a Directed Video product. Through years of critical testing and hand craftsmanship, we have created a wide range of video entertainment products for your viewing pleasure.

This system incorporates the use of on screen display menu controls that allows you to configure the system to suit your own personal preferences. For your listening flexibility, audio can be heard by optional infrared (wireless) headphones.

To view other great products from Directed Electronics, please visit the Directed Video page at www.directed.com.

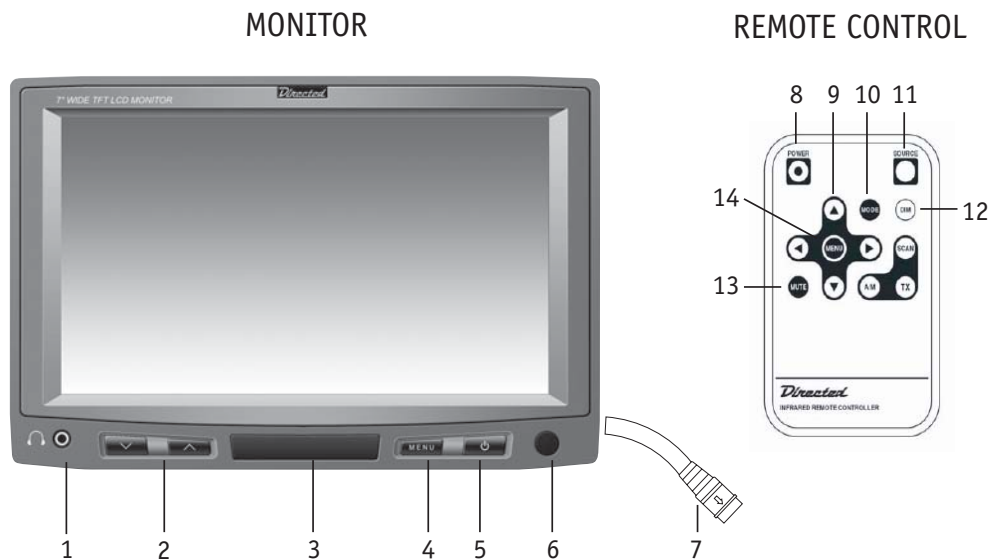
Features

- High definition, low reflection TFT LCD screen – 1440 (W) X 234 (H)
- 16:9 wide screen ratio (full, 4:3, or wide selectable)
- All functions can be operated from the remote control (power, volume, source select, etc.)
- OSD (On Screen Display) of all functions
- Brightness, color, and tint controls provided
- Invert image control (Up/Down, Left/Right)
- One-touch dimmer control
- Stereo audio output
- Low power consumption (750 mA at 12VDC)
- Input voltage tolerance (9VDC–16VDC)
- External A/V input
- 2-ch IR wireless stereo headphone
- Front headphone stereo output
- PAL/NTSC manual select

What is Included

- 7" TFT LCD Color Monitor
- Mounting hardware package
- Headrest housing
- EV sponge
- Headrest bezel
- DIN to RCA cable (for A/V input)
- Remote Control Unit/battery

System Description



MONITOR

1. Headphone jack
2. Volume up/down buttons
3. Wireless headphone IR transmitter
4. Menu—changes the viewing aspect ratio (Full, 4:3, or Wide)
5. Power On/Off button
6. Remote control IR sensor receiver
7. DIN jack for external audio/video input

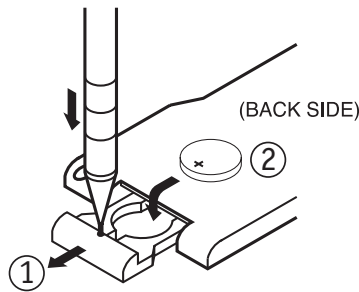
REMOTE CONTROL

8. POWER On/Off button
9. MENU/UP/DOWN/LEFT/RIGHT—use to adjust selected Menu setting
10. MODE—use to select 4:3 or 16:9 picture display.

11. SOURCE—select the video source (AV1/AV2).
12. DIM—dims the LCD screen
13. MUTE—mutes the audio
14. MENU—displays the menu screen. Each press advances through each of the menus

Battery Replacement

1. Follow the instructions given in the illustration below to open the battery holder.
2. Remove the old battery and replace it with a CR2025 or equivalent. The positive (+) side of the battery must be facing upward in the clip.
3. Push the battery holder into the body of the remote control until the battery holder is locked.
4. Properly dispose of the old battery.



1. Insert the tip of the pen into the slot of battery case & pull down towards a arrow mark.
2. Place the battery "+" facing up. (Product No. CR2025, 3V)
3. Push battery case into remote control.

Operation

POWER ON/OFF

1. Press the POWER button on the LCD screen, or press the POWER button on the remote control to turn the monitor on/off.
2. The Directed Electronics logo will display for 2-seconds.

MUTE

Press the MENU button on the LCD monitor and hold it for 2-seconds to mute the audio, press again and hold it for 2-seconds to restore the audio.

Also you can use the MUTE button on the remote. Press to mute the audio, press again to restore the audio


NOTE: The power on/off button on the monitor does not mute the audio when there is an A/V input selector (VS102), in which case the button selects the A/V input.

Press the SEL button on the remote control to the mute the audio, press again to restore audio.

NOTE: The MENU button on the monitor does not mute the audio when there is an A/V input selector, in which case the MENU button selects the A/V input.

MENU (ADJUSTMENTS)

1. Press the MENU button on the remote to display the following:

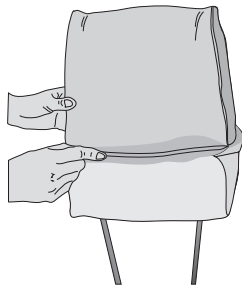
MENU	
Bright	31
Contrast	31
Color	31
Tint	31
Screen	16:9
Bass	0
Treble	0
IR	ch1
	

2. Use the ▲/▼ buttons on the remote to highlight the desired setting.
3. Use the ◀/▶ buttons to change the setting.
4. If no entry or action is taken within approximately 8-seconds the Menu will disappear and any changes are saved. Pressing the MENU button will also exit the adjustments screen.

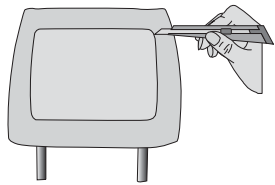
IR: A-CH B-CH

This setting allows the use of 2 headphones on different frequencies. If two video units are installed and each unit is playing a different video, using two headphones set at the same frequency may result in interference of the audio signal between the two headphones. Ensure that the headphones being used are capable of receiving different frequencies, and are capable of 2-channel reception.

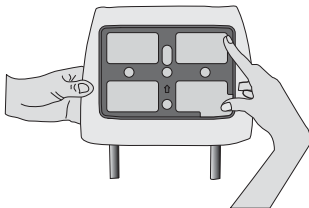
Headrest Housing/Bezel Installation



1. Remove the cover from the headrest.

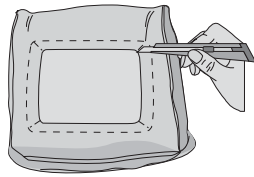


2. Using the headrest housing as a template, position the housing over the backside of the headrest and mark the foam with a felt tip pen. Cut the marked portion of foam and pull out the cut portion.



3. Insert the headrest housing into the headrest and secure the the headrest. Usually wire ties attached to the headrest posts is sufficient.

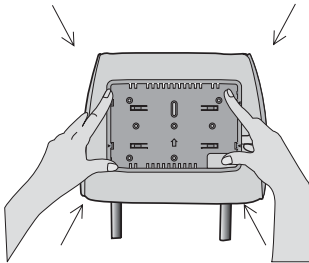
NOTE: Ensure that the UP arrow on the headrest housing is pointing up.



4. Replace the cover over the headrest. Mark 1-1/2" from the inside of the headrest housing and cut the material away.

5. Optional Step: Glue the material to the inside of the headrest housing. Take care not to use excessive glue so that the headrest bezel is not glued to the headrest housing.

NOTE: *Glue is not required if the material of the headrest covering is of sufficient thickness to be tensioned by the headrest bezel.*

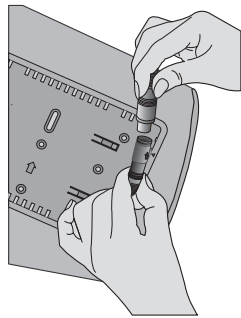
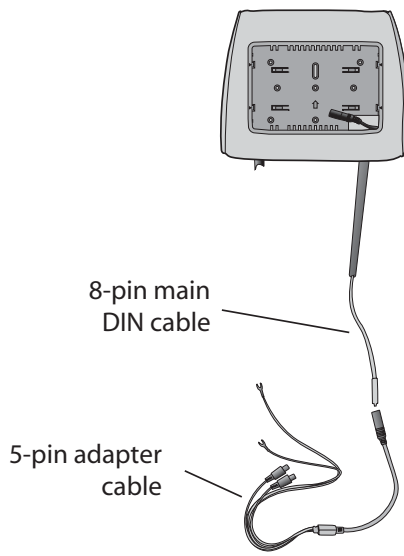


6. Insert the headrest bezel into the headrest housing and secure the assembly using the provided hardware.

NOTE: *Ensure that the UP arrow on the headrest bezel is pointing up.*

Headrest Installation

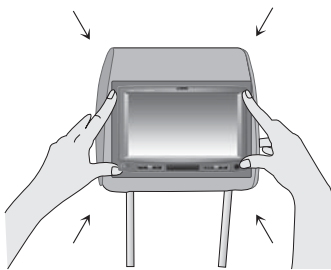
1. Unplug the DIN cable from the monitor.



2. Connect the LCD screen's 8-pin DIN plug into the 8-pin DIN plug of the headrest.

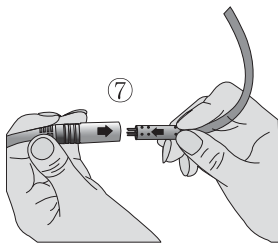
NOTE: When assembling the cable, match the arrows at each end of the connector.

NOTE: Feed and orient the connector assembly behind the shroud mount in the lower right hand corner. You may have to feed some of the DIN cable up into the headrest to accomplish this positioning.



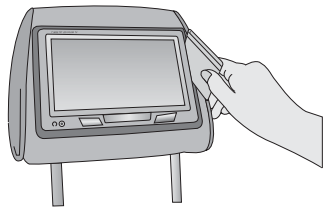
3. Position the monitor over the mounting shroud and apply even pressure to each corner of the monitor until the internal clips lock the monitor in place.

NOTE: Do not press on the LCD screen as this will damage the screen.



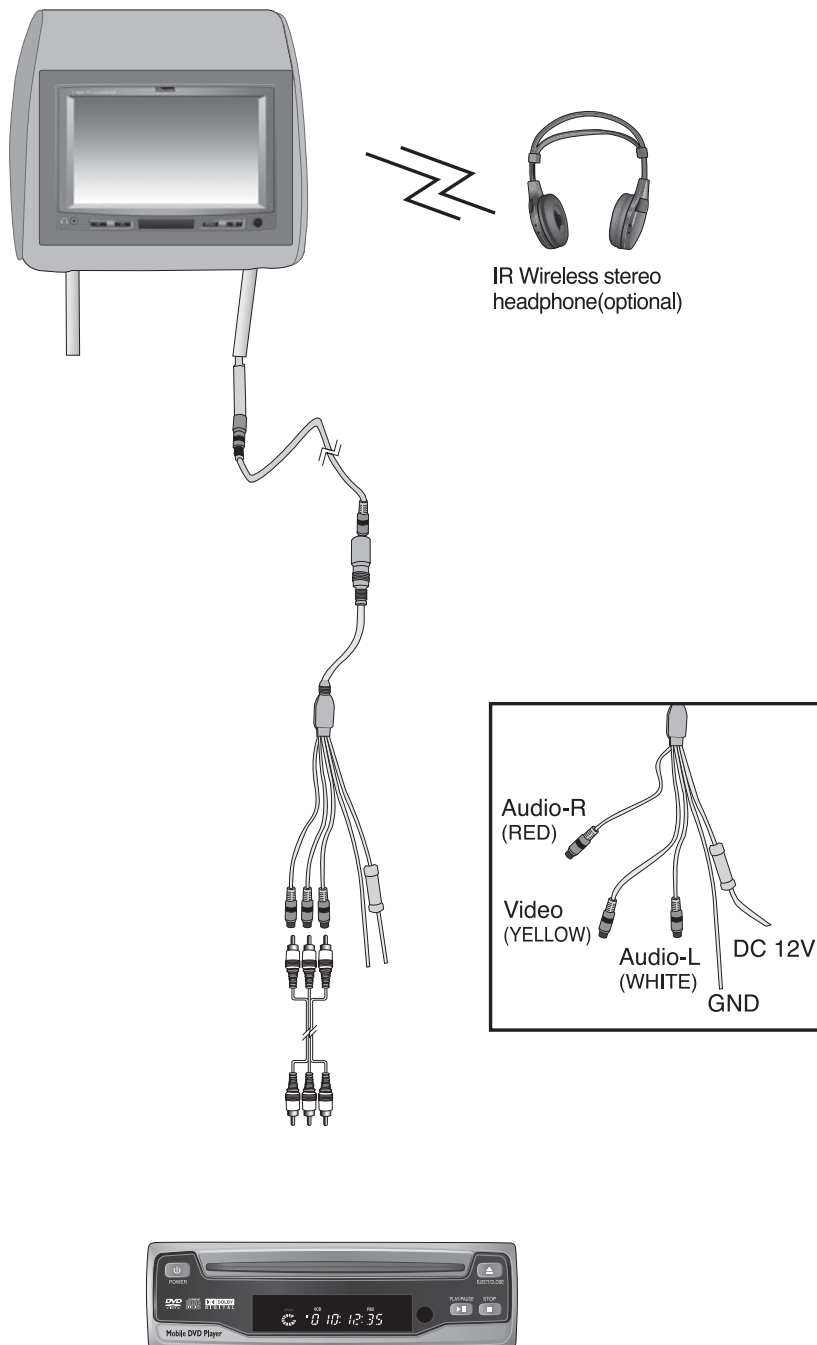
4. Tape the end of the DIN plug to prevent damage to the pins. Then feed this cable from the hollow post of the headrest down through the seat back and connect it to the cable from the DVD player.

NOTE: Ensure the cable does not entangle or interfere with the seat positioning/adjusting mechanism.



5. To remove the monitor from the mounting shroud for service or repair, insert and slide a plastic card at the edge of the monitor. This will remove the clip engagement of the monitor. Slightly lift this side of the monitor out, then repeat this procedure on the other side of the monitor.

Typical Wiring Diagram



Multiple A/V Input Selector

Refer to diagram on the next page for the discussion that follows:

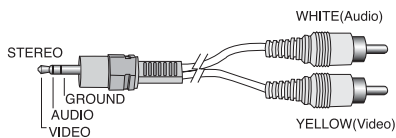
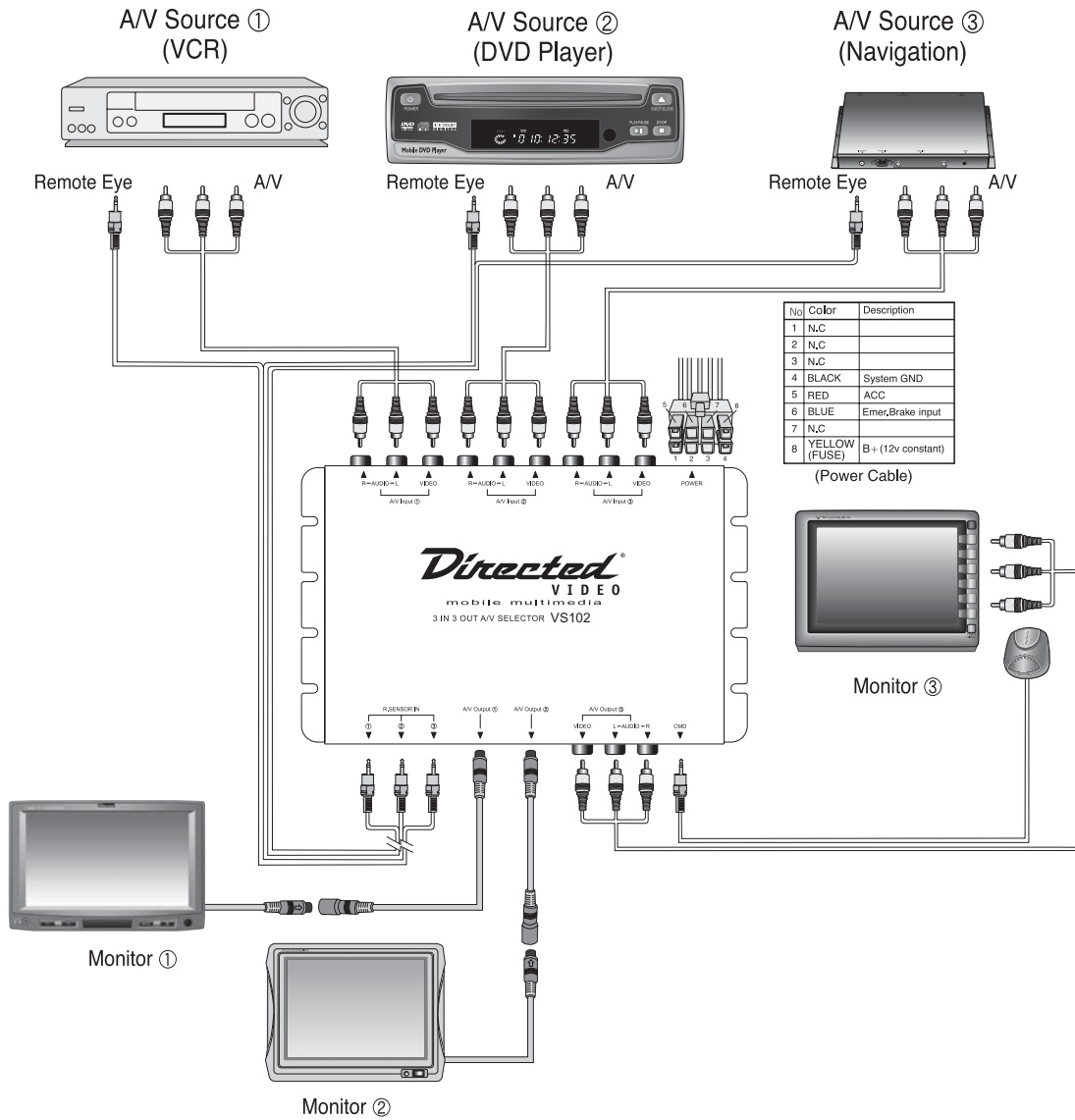
CONNECTING A MONITOR TO MULTIPLE SOURCES

When the monitor(s) power is turned on the input source will appear in the upper right hand corner (AV1, AV2, etc.). Press the SOURCE button on the remote to switch between the available sources for that monitor.

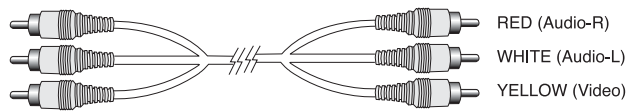
NOTE: *If PARKING is displayed on the screen, it means that this monitor(s) will not display video until the parking brake is set (vehicle parked).*

NOTE: *You cannot change sources on video output 3 using the source selector, Only the remote will switch #3 output between the 3 video inputs.*

For operating convenience, when the system is connected to several other devices which have their own remotes, you can use those remotes through the HVM702 to operate the other devices. This is done by connecting the Remote Eye IR interface cable from the other devices to the R(emote) Sensor Input at the VS102 video selector.



Mini Plug to RCA
(Optional)



3 RCA to 3 RCA
(Optional)

Troubleshooting

Use the following chart to assist in troubleshooting the system.

PROBLEM	SOLUTION
Power will not turn on	Check connections to the power supply and other devices.
No picture or sound	Check connections of external device.
Have picture, but no sound	Check if the volume is set to low. If in A/V mode, check audio connections.
Remote control does not work	Avoid using the product under strong & direct sunlight. Replace the battery in the remote control.
Intermittent audio	Power supply voltage is too low.
TV picture appear to shakes while driving	Bad reception. Check antenna and try reception in a better area.
No audio from headphone	Ensure the Power is switched on at the headphone. Replace the batteries in the headphone. Check to ensure the frequency of the headphone is the same as set up in the monitor. Check the volume level setting on the headphone.

Specifications

Power	12VDC (9–16VDC)
Power consumption	750mA Maximum @ 12VDC
Power consumption (stand-by)	50mA
Video type	PAL/NTSC
Video input level	1Vp-p, 75 ohm (composite)
IR frequency (left/right)	A-ch 2.3 MHz/2.8MHz
	B-ch 3.2 MHz/3.8MHz
IR range	1m \pm 30°
	1m \pm 15°
Headphone stereo output	0.5 watts - 16 ohms/channel
Actual screen size	155 (W) X 880 (H) mm
Dimensions	189.4 (W) X 126.5 (H) X 35 (D) mm
Weight	536 \pm 3 grams
Remote control battery	lithium battery CR2025, 3V

NOTE: Specifications are subject to change without notice.

The company behind this system is Directed Electronics.

Since its inception, Directed has had one purpose, to provide consumers with the finest vehicle security, car stereo products, rear seat entertainment, and accessories available. The recipient of more than 20 patents in the field of advanced electronic technology, Directed is ISO 9001 registered.

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Directed Electronics
Vista, CA 92081
www.directed.com

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