



DVD Entertainment System

Owner's Manual



.mp3

wireless
integrated
VIDEOGAMES



NOTICES

NOTICE OF INTENDED USE

Rosen Entertainment Systems are designed to enable viewing of video ONLY for rear-seat occupants, and are not intended for viewing by the driver when the vehicle is in motion. Such use might distract the driver or interfere with the driver's safe operation of the vehicle, and thus result in serious injury or death. Such use might also violate state or local laws.

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GETTING STARTED

Use the system with the vehicle running or with the ignition key switch in the "accessory" position.

Make certain that the remote, the headphones, and the game controller have fresh batteries and are properly installed.

To access the disc slot, press on the lower portion of the unit. (See FIG 1 below)

To switch the system on, press the power button on the unit or remote control. Each headrest must be turned on independently.



FIG 1

To Watch a DVD:

- 1 Power the system on, unit will default to DVD player and resume play, if a disc is present.
- 2 Press on the lower part of the display bezel to expose the DVD slot.
- 3 Press EJECT to remove any loaded disc.
- 4 Insert a DVD with the **label facing away from you**.
- 5 Most DVD discs begin playback automatically. If a menu appears, press PLAY or ENTER as instructed on the screen.

To Play the Integrated Video Game:

- 1 Press **SOURCE** until "INTERNAL GAME" appears on the screen.
- 2 Turn the game controller on by setting the game switch to A or B.
- 3 Use the arrow keys on the game controller to select a game.
- 4 Press the **START** button on the game controller. (see page 17 for more information)
- 5 Remember to turn the controller "OFF" when not in use.



Front View



To View Same Image on both Screens:

- 1 Press **SOURCE** until "Second Unit" appears on the screen. Your monitor will now display the same image as the other unit.

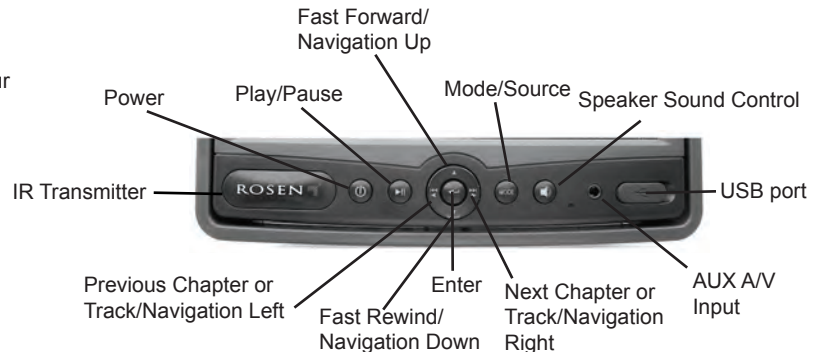
To Use An External Video Source

- 1 Connect the RCA audio and video outputs of the device to the Rosen RCA adapter cable. Plug into AUX input port on front of monitor.
- 2 Press **MODE (SOURCE)** on the remote until "AUX 1" appears on the screen.

Listening Over the Vehicle Speakers

- 1 Make sure **MUTE** is off. Press **SPEAKER** button on the front panel of the system or the remote control and "SPEAKER SOUND ON FM _ _ _ PRESS LEFT OR RIGHT TO ADJUST" will appear. (This must be done each time the system is used.)
- 2 Turn on the car radio. Tune to the FM frequency displayed on the screen. If radio interference is heard, try another frequency. (see pages 13 and 15 for more information)

The Front Panel Controls



INTRODUCTION

Congratulations on owning a Rosen Entertainment System! Here's a list of some things you can do with your system:

- Play DVD movies, music CDs, or discs with MP3 audio files.
- Play onboard video games.
- Play audio through the vehicle speakers or the wireless headphones
- Use external audio/video inputs from video game consoles, camcorders, or optional units like a TV tuner or a DVD changer.
- View JPG photo files or playback compatible MPG videos using the DVD or USB memory slot

Precautions

In order to operate the system, the vehicle ignition key switch must be in the ACC or engine ON position.



ACC or engine
ON position

- Use this system only if properly installed by a qualified installer.
- If the unit shows any sign of malfunction, turn it off and consult your dealer immediately. Do not open the unit - there are no serviceable parts inside.
- **Do not press directly on the display surface - you may damage it.**
- Clean the display surface with a slightly damp, soft cloth using household glass cleaner. **Do not** use solvents such as benzene, thinner, or commercial cleaners.

- When using portable radios and telephones near the system, picture or sound interference may occur.
- If your car was parked in a very cold or very hot place, you may see a blank screen, distorted picture or the unit may not be able to load a disc. The system will return to normal after the unit temperature returns to a normal operating range. This may take more than an hour depending on the temperature.
- If your car battery charge is low or the vehicle battery is old, you may see a blank screen, distorted picture or the unit may not be able to load a disc. The system will return to normal after the unit voltage returns to a normal operating range.

Note: The system's operating voltage range is 11-16VDC operating voltage. The system operating temperature is 32° to 140° F (0° to 60° C). Use of the system beyond the safe operating ranges listed, can cause temporary or permanent damage to the unit, and such damage may not be covered by the manufacturer's warranty.

DISC COMPATIBILITY

Compatible Discs

Note: Not all discs are supported by this system. You may find a disc that will not play on this system, but works fine on other players. Various manufacturers of discs change technology from time to time which may create compatibility issues. This is not a problem with the unit and is not covered by warranty.

Most DVD and CD-Audio discs are compatible with the AV7500 system.

The unit can also play **most** CD-Recordable discs containing CD-Audio, MP3 files, and JPEG images - but not all such discs. ***Since these discs are usually made on home computers, there is no certification process ensuring that all such discs play on all players.***

DVD Regions

When a DVD disc is created, it is encoded with a "Region number." The disc will only play on DVD players with the same Region number - for instance, a Region 3 disc won't play on a Region 1 player.

Region 1: U.S. and U.S. Territories, Canada

Region 2: Japan, Western Europe, Middle East, South Africa

Region 3: South Korea, Hong Kong, Taiwan, Southeast and East Asia

Region 4: New Zealand, Australia, Pacific Islands, Mexico, Central/South America

Region 5: Russia and the former Soviet Union, Africa, Indian subcontinent, North Korea

Region 6: China

Incompatible Discs

The following disc types are incompatible with the system:

- DVD-ROM/DVD-RAM/DVD+RAM discs.
- Most DVD-R/DVD-RW/DVD+R/DVD+RW discs.
- Some Photo CDs.
- CD-ROM data discs.
- CD-Audio discs made with certain copy protection methods.
- Any DVD with a different Region number than the unit.
- Any disc that does not meet DVD Forum standards.

Why the system doesn't respond the same way to all discs

When a DVD disc is created, the creator has to define how the disc will operate when loaded into a DVD player. For instance, some discs begin playing immediately, while other discs only display a menu and require a menu selection to be made before playback will start.

The DVD standard also allows the maker of a DVD disc to disable functions at certain times, such as Fast-Forward and Stop (which is why you can't skip past the copyright warning screen). If some DVD feature temporarily isn't working for you, usually the disc is preventing the player from performing that function.

Discs that don't properly load and play

Some CD and DVD discs, especially homemade discs which do not have all the data needed to properly initialize all DVD players, may not load and play properly. They may even create a state where the DVD player will not eject the disc at all. In these cases, use a paper clip to press the Reset button (this button's location is shown on page 6).

CHANGING AND ADJUSTING THE DISPLAY

Selecting a display mode: The system's "widescreen" display has a 16:9 aspect ratio - wider than a standard television. While many DVDs provide widescreen video images that fit the screen, standard broadcast TV and many video games do not.

- To view a widescreen DVD, press the **DISPLAY** button on the remote until "WIDE" is displayed on the screen.
- To watch a fullscreen DVD, the internal game system, or broadcast television, select "STANDARD."

Change the Display Adjustments Remote Control Only: The display has adjustable video settings. To change these settings, press and hold the **DISPLAY** button on the remote control to bring up the following menu:

► BRIGHTNESS	32
CONTRAST	32
COLOR	32
TINT	32

To select a setting to be changed: Press the **DOWN** arrow button to move the cursor down the menu list. Once you have selected the item to change, use the **LEFT** and **RIGHT** arrows on the remote or the front panel to adjust the settings. After you have finished making your desired changes, press the **DISPLAY** button on the remote to exit and save the changes you have made.

To change the value of a setting: Use the **LEFT** and **RIGHT** arrow buttons. The range is from 0 to 63.

To exit the menu: Press the **DISPLAY** button to save settings and exit. Set the brightness level in daytime conditions with plenty of ambient light. You can use the Day/Night mode button to switch between Day and Night modes.

Note: The internal DVD player can be configured for either a 16:9 "Wide" image output or a 4:3 "Standard" image output. Since the unit has a wide screen display, the DVD player should be configured for "Wide." For more information, see page 19.

Note: The internal DVD player also has a set of video adjustments, which are separate from the main adjustments.

USING THE REMOTE CONTROL

You can use the remote control to operate the system, including access to features not available on the front panel. The unit has an infrared sensor to receive signals located in the control panel. For definitions of each remote control button's specific function, see the following pages.

- | | |
|---------------------------|-------------------|
| 1 Power | 15 Info Menu |
| 2 Pause/Frame Step | 16 Zoom |
| 3 Stop | 17 Navigate Left |
| 4 Play | 18 Enter |
| 5 Previous Chapter/Track | 19 Navigate Right |
| 6 Fast Reverse | 20 Display |
| 7 Fast Forward | 21 Setup |
| 8 Next Chapter/Track | 22 Navigate Down |
| 9 Speaker Sound Control | 23 Disc Menu |
| 10 RES Sound (not active) | 24 Day/Night Mode |
| 11 Mute | 25 Repeat |
| 12 Eject (Not Active) | 26 Subtitle |
| 13 Source | |
| 14 Navigate Up | |

Note: If you try to perform a DVD action when it is not permitted (such as accessing the disc menu while the disc is loading), there will be no response from the unit. This is normal operation and is not a problem with your system.



BASIC REMOTE CONTROL BUTTONS

1 Power

Pressing this button powers on the unit. This button also powers on the optional external source unit.

4 Play

Press to begin or resume playback of a DVD.

*Note: When the disc is first inserted, you may have to press **PLAY** or **ENTER** to begin playback.*

3 Stop

Press once to temporarily stop playback of a DVD. To resume normal playback from the same point, press **PLAY**.

To play the disc from the beginning, press **STOP** twice, then **PLAY**.

*Note: Once **STOP** is pressed twice, the player can only begin playing from the beginning of the disc.*

2 Pause/Frame Step

Press once to pause playback. Press repeatedly to advance video frame by frame. To resume normal playback, press **PLAY**.

5 Previous Chapter/Track

Press to jump to the previous title or chapter if available on a DVD, or to the previous track on an audio CD. Not supported with some VCDs.

8 Next Chapter/Track

Press to jump to the next title or chapter if available on a DVD, or to the next track on an audio CD. Not supported with some VCDs.

6 Fast Reverse

Press to search in reverse. To resume normal playback, press **PLAY**. Press the **REVERSE** button multiple times to adjust search direction and speed. Choose from 2, 4, 8, and 16x. Press **PLAY** to resume regular play.

7 Fast Forward

Press during playback to fast forward. Press the **FAST FORWARD** button multiple times to adjust search direction and speed. Choose from 2, 4, 8, and 16x. Press **PLAY** to resume regular play.

24 Day/Night Mode

This button decreases display brightness for optimum viewing in low light conditions. For more information, see page 10.

USING MENU AND NAVIGATION BUTTONS

13 Source

This button allows you select the Internal DVD/CD player, the Internal Game, the Second Unit, or the Auxiliary Input. You can also select the optional TV Tuner, DVD changer, or other optional auxiliary sources, if installed.

Note: The Mode button on the control panel performs the same function.

14, 22 Up/Down Navigation Arrows

Press to move up or down in a menu or to change channels when watching TV.

17, 19 Left/Right Navigation Arrows

Press to move left or right in a menu. Also used to change frequencies on the FMT, after the Speaker Sound button is pressed.

18 Enter

Press to make a menu selection.

21 Setup

Pressing this button brings up the DVD player setup screen.

15 Info Menu

Pressing this button brings you into the DVD player menu.

USING AUDIO BUTTONS

9 Speaker Sound Control

When this button is pressed, "Speaker Sound On" appears on the screen, along with the FM frequency to which you should tune your radio, such as "FM 88.1." To change the frequency, press the **LEFT** or **RIGHT** arrow buttons on the remote control and wait two seconds for the station to set. Headphone audio is not affected by this button.

FM frequencies available: Find a frequency in your geographic location that has no static transmission and set it.

Note: If the frequency does not appear on screen when this button is pressed, an external FM Modulator is probably being used. See page 15 for more information.

11 Mute

Press once to mute all system audio. As long as the Mute function is active, "Mute" will appear on the screen. Press again to turn Mute off.

USING DVD DISC FEATURES

23 Disc Menu



Press to see the main menu for the DVD being played. To resume normal playback, press **PLAY**.

CHANGING THE SHAPE AND SIZE OF THE IMAGE

16 Zoom



View the same scene on a DVD at different magnifications.

- 1 Press the **ZOOM** button during playback to select among the following options: Zoom 1, Zoom 2, Zoom 3, and Off.
- 2 To resume normal playback, press **ZOOM** until "Zoom off" is displayed.

20 Display



This button allows you select from the various screen display modes.

- To view a widescreen DVD, press this button until "WIDE" is displayed on the screen. This uses the full width of the screen.
- To watch a fullscreen DVD or broadcast television, press until "STANDARD" is displayed. This mode uses most of the screen, but black bars will be visible on the sides, like this:



- To adjust the display settings (color, contrast, etc.), press and hold the **DISPLAY** button for two seconds.

For more information about image shapes, see "Managing Black Bars," on page 18.

25 Repeat



This button enables chapter and title repeat.

26 Subtitle



This button enables the DVD's Subtitle menu.

REPLACING THE REMOTE BATTERY



Use a single 3V battery, type CR2025. Insert as shown. Observe the correct orientation of the battery as marked on the battery tray.

Battery life is approximately six months, depending on how often the remote is used.

CD AUDIO, MP3 AND JPEG PLAYBACK

CD Playback

When you insert an audio CD (label facing away from you), the standard CD commands (PLAY, NEXT, etc.) will control the unit. Some CDs recorded in CD-R or CD-RW mode may not play.

MP3, JPEG and MPEG Playback

When a disc containing MP3, JPEG or MPEG files is inserted, a menu screen appears. Use the arrow buttons to select a file type and press enter to play it.

USB Playback

Inserting a USB drive into the available connector will cause DVD playback to stop and open a directory of the USB drive contents.

This may take several minutes depending on the amount of data. Use the arrow buttons to select a file type and press enter to play it.

LISTENING OVER THE CAR SPEAKERS

The system uses a wireless FM Transmitter (FMT) to send audio through the vehicle's speakers. To listen over your speakers:

- 1 Make sure system **MUTE** is off. Press **SPEAKER**. "SPEAKER SOUND ON FM _ _ . _" appears. Select a FM frequency as described below.
- 2 Turn on the car radio. Tune to the FM frequency displayed on the screen, such as "FM 88.1."
- 3 If no system audio is heard, try changing the FMT frequency and re-tuning the radio to the new frequency.

To change the FM Transmitter frequency:

Press **SPEAKER**. "Speaker Sound on FM _ _ . _" will be displayed. Now use the **LEFT** and **RIGHT** buttons to change the frequency. Select a frequency, re-tune your radio and check for clear sound.

The system saves the frequency you select, and returns to it each time the system is turned on. You may want to store the FMT frequency as a preset of your radio for ease of use.

Note: If there seems to be a strong station on the FM Transmitter frequency, and you are hearing a radio station mixed in with the system audio, change the FM Transmitter frequency. Avoid frequencies used by local radio stations.

If the words "HEADPHONES ONLY" appear, the internal FMT is turned off. It can be turned on by pressing the SPEAKER button and selecting a FM frequency. If the words "SPEAKER SOUND" appear, an external FM Modulator (FMM) is probably being used. In this case, the **SPEAKER** button turns the external FMM on and off. The Rosen external FMM frequencies are FM 87.7, 87.9, 88.1, 88.3, 88.5, 88.7, 88.9. If you have any questions about your FMM, please contact your Rosen dealer.

USING THE INCLUDED WIRELESS HEADPHONES

The system comes with infrared (IR) wireless fold-flat headphones. These headphones receive a signal from an IR transmitter built into the unit. Headphones allow rear-seat passengers to listen without using the vehicle speakers.

To turn the headphones on and off, push the Power ON/OFF button on the earpiece. The Power LED on the earpiece indicates when headphone power is on. Power turns off automatically after three minutes of no audio, in order to preserve battery life.

The headphones have a two-position slide switch labeled "A/B." When the switch is in the "A" position, the headphones play audio from the source designated as "A." When the switch is in the "B" position, the headphones play audio from the source designated as "B."

To adjust the headphone volume, rotate the thumb wheel on the headphones.



REPLACING HEADPHONE BATTERIES

The wireless IR headphones require two (2) "AAA" batteries. To replace the batteries, slide off the battery compartment door on the left earpiece and insert batteries, as shown. Make certain that the battery orientation matches the marks inside the battery compartment.



USING THE INTEGRATED GAME SYSTEM

There are integrated video games built into the system. The Rosen Game Controller is included.

To play a game:

Set the **A/Off/B** switch to **A** or **B** to turn the game controller on.

Press **SOURCE** on the remote or **MODE** on the front control panel until "INTERNAL GAME" appears, along with the game startup menu.



Battery Indicator: A red light will flash when the buttons are pressed indicating the batteries are ok.

Set the controller to channel A or B depending on which headrest unit you will be using.

Use the left and right arrows on the controller to select which game you want to play from the list.

Press **START** on the controller, to begin a game.

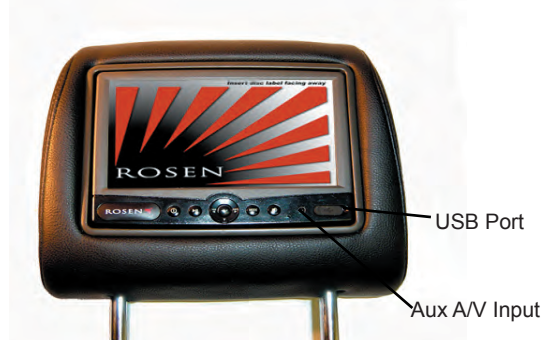
While playing, use **A and/or B** as fire, jump, or other action buttons, depending on the game.

To return to the game main menu, press **RESET** on the controller.

Note: The controller works using infrared "line-of-sight" technology. If the controller is held so that there is not a clear line of sight to the system, intermittent operation or reset will result.

USING EXTERNAL SOURCES

You may use optional external video games, camcorders, and other portable video units by connecting the unit to the auxiliary RCA input jacks on the unit. To connect a USB key, the unit must be in DVD mode. "USB" will appear on the screen.



To use an external game system, a 12VDC to 110VAC power inverter, available at most electronic retail stores, is often required.

*Note: If you want to watch non-widescreen, 4:3 images, press the **DISPLAY** button on the remote control until "STANDARD" is displayed on the screen. This will properly size the image, instead of stretching the image across the wide screen. In "STANDARD" mode, you will see black bars on the sides of the image.*

DVD TYPICAL SETUP AND CONFIGURATION

The following section explains how to customize various features of the Internal DVD Player, including languages, display, and parental control features.

Note: Some features may not be available on your system.

To change the settings for the internal DVD player:

- 1 Press **SETUP** on the remote.
- 2 Use the **UP** and **DOWN** navigation buttons to highlight a selection.
- 3 Press the **ENTER** button to confirm your selection.

Language Settings

Several language settings can be customized on the DVD Player. These languages can vary depending on the language supported by the DVD disc.

Note: Not all language settings are supported by all discs.

Default Settings:

- OSD = English
- Subtitle = Off
- DivX Subtitle = English
- Audio = English
- Disc Menu = English



Video Settings

This allows you to customize the Aspect Ratio and Video Output.

Default Settings:

- Aspect Ratio = 16:9
- TV System = NTSC

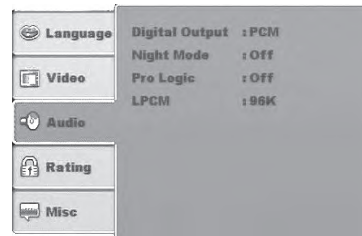


Audio Settings

This allows you to customize the audio settings.

Default Settings:

- Digital Output = PCM
- Night Mode = Off
- Pro Logic = Off
- LPCM = 96K



Rating Settings

This setting allows you to set parental control on the DVD player.

→ Default password = 3308



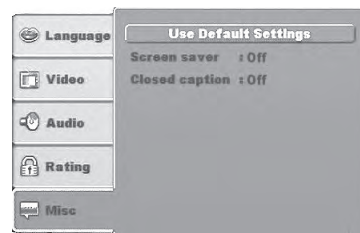
Note: Changing the state of some settings can cause apparent system failure. Do not change any settings other than those described in this section.

Misc Settings

This screen allows you to change the settings for the Screen Saver and Closed Caption. Selecting "Use Default Settings" will reset the system to the factory default settings.

Default Settings:

- Screen Saver = Off
- Closed Caption = Off



FREQUENTLY ASKED QUESTIONS

HOW DO I RESET MY SYSTEM?

To RESET the system, turn the vehicle off or press and hold the RESET button for 3 or more seconds. The RESET button is located near the eject button. (see page 6)

MY SYSTEM IS NOT RESPONDING TO COMMANDS

Periodically, the DVD system may receive conflicting commands from a DVD or remote control. When this happens, the system may not respond properly to the remote control, control buttons, or may be locked up and not respond at all.

Solution: The system needs to be RESET as described above.

Solution: Replace the battery in the remote control.

MY AUDIO HAS STATIC ON THE RADIO

To receive audio over the radio, the radio must be tuned to a broadcast station which is not in use by a local radio station.

Solution: Set the FM Transmitter to an alternate radio station. Then tune the radio to the newly selected station. (see pages 7,15)

MY DVD WILL NOT PLAY

Some DVDs will not play properly due to compatibility, dirt, rough edges, damage to the disc or the system may be beyond its operating temperature.

Solution: Confirm the DVD is a compatible format. (see page 9)

Solution: Check and clean the DVD as needed.

Solution: Use a pencil or soft wood to smooth the edge of the disk.

Solution: Replace the DVD if scratched, cracked or warped.

Solution: Allow the system temperature to return to normal operating temperatures. This may take up to an hour after the air temperature in the vehicle is at a comfortable level.

MY SYSTEM RESETS WHEN I START MY VEHICLE

Voltage levels while starting the vehicle can fall below the minimum operating levels for the system.

Solution: Ensure your battery is fully charged and in good condition.

Solution: Avoid operating your system without the engine running for periods longer than 10 minutes.

I CAN NOT GET AUDIO ON THE RADIO

To receive audio over the radio, the system must have SPEAKERS ENABLE selected, and the radio must be tuned to the proper station.

Solution: Press the SPEAKER button on the remote control to enable the radio transmission.

Solution: Tune the radio to the proper FM station as directed in the "Listening Over the Car Speakers" section of this manual. (see page 15)

Solution: Reset the system

MY DVD WILL NOT EJECT

Damaged DVDs, incompatible DVDs or improper system installation will prevent the DVD from ejecting and may lock up the system.

Solution: Reset the system then quickly press EJECT while the disc is spinning.

Solution: Check the DVD for damage, replace the DVD if scratched, cracked or warped.

Solution: Confirm the DVD is a compatible format. (see page 9)

I DO NOT HAVE HEADPHONE AUDIO

The headphone audio should be present at all times, unless MUTE is on, or a DVD setting has been changed in the DVD Settings Menu.

Solution: Press the MUTE button to enable the audio and turn the MUTE OFF.

Solution: Confirm that the headphones are turned on, and the ON LED indicator is illuminated. Change batteries if needed.

Solution: Check the DVD settings and restore them to FACTORY SETTINGS if needed.

MY PICTURE FREEZES

Damaged or incompatible DVDs will cause the system to freeze and lock up the system.

Solution: Check and clean the DVD as needed.

Solution: Replace the DVD if scratched, cracked or warped.

Solution: Confirm the DVD is a compatible format. (see page 9)

Solution: Allow the system to return to normal operating temperature.

Solution: Reset the system.

MY RADIO LOSES ITS NORMAL STATIONS

With an external FM Modulator and while the system is set to broadcast over the radio with SPEAKERS ENABLED, the vehicle's antenna is temporarily disabled.

Solution: Press the SPEAKER button on the remote to restore the vehicle antenna, "Headphones Only" will appear on the screen.

MY PICTURE IS DISTORTED

Excessive cold or hot temperatures will cause the picture on the display to become distorted or lose color or contrast.

Solution: Allow the system temperature to return to normal operating temperatures. This may take up to an hour after the air temperature in the vehicle is at a comfortable level.

MY PICTURE IS BLACK

The screen will appear black or dark blue if there is no video signal. This may happen if the DVD fails to initialize properly or if a source is selected which is not connected.

Solution: Eject the DVD and inspect it for damage, scratches or cracks. Clean the DVD and re-insert the disc.

Solution: Reset the system.

WHY CAN'T I HEAR THE AUDIO OUT OF THE HEADREST OVER THE CAR SPEAKERS?

Only one headrest at a time can be played through the car's audio system. To change this, press the speaker button on the monitor you want to hear. When you do this you will see "Headphones Only" on the other screen.

For other questions and capabilities please contact your authorized Rosen dealer. To locate a Rosen Entertainment Systems authorized dealer, please visit www.rosenentertainment.com.

SERVICE PARTS

Part Number	Description
AP1006	IR Remote Control
AP1007	IR Game Controller
AC3640	Dual Channel Fold Flat IR Headphones
AP1021	Owner's Manual

RES PN AP1021 Rev B
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INSTALLATION GUIDE

AV7500 Dual DVD Headrest Replacement System

NOTICE OF INTENDED INSTALLATION AND USE

ROSEN ENTERTAINMENT SYSTEMS VIDEO PRODUCTS ARE NOT INTENDED FOR VIEWING BY THE DRIVER, AND ARE TO BE INSTALLED ONLY TO BE VIEWED BY REAR-SEAT OCCUPANTS.

IMPROPER INSTALLATION COULD DISTRACT THE DRIVER OR INTERFERE WITH SAFE OPERATION OF THE VEHICLE, WHICH COULD RESULT IN SERIOUS INJURY OR DEATH, AND COULD ALSO VIOLATE STATE LAW. ROSEN ENTERTAINMENT SYSTEMS DISCLAIMS ANY LIABILITY FOR ANY BODILY INJURY OR PROPERTY DAMAGE THAT MAY RESULT FROM ANY IMPROPER OR UNINTENDED INSTALLATION AND/OR USE.

BEFORE YOU START THE INSTALLATION, READ THIS GUIDE!

Rosen "Headrest DVD" systems are the easiest-to-install DVD entertainment systems available today. However, we strongly recommend reading this guide before starting the installation!

For additional technical tips, please visit
www.Rosendealercentral.com

1 Make sure you have the tools you will need

These common items are needed to complete this installation:

- Digital multimeter (DMM)
- #2 Phillips screwdriver
- Appropriate tool for headrest removal
- Allen wrench set
- Panel removing tools
- Cable routing tool (included)
- Security latch tool (included)
- Retractable knife
- Wire cutters, strippers, and a crimping tool
- 1/4" drive sockets are often needed for dashboard and trim disassembly
- Check if Torx or Allen-drive bolts are used on any panels you will be removing
- You will need a DVD **in good condition** when testing the system

Standard installation parts you will need include wire, wire ties, wire crimp connectors or solder, and electrical insulating tape. Installation of aftermarket automotive electronics also often requires access to special parts. It is a good idea to have a source for these common installation parts.

2 Inspect the vehicle and plan your work

CHECK THE BATTERY

Test the battery voltage to make sure it's fully charged and inspect battery terminals for tightness and any corrosion. This only takes seconds and can save hours of troubleshooting later.

DECIDE ON A LOCATION FOR THE INTERFACE UNIT

Location of the interface unit varies by vehicle, but is typically secured underneath a driver or passenger seat out of sight and unobstructed by moving parts and passengers.



IF YOU HAVE PURCHASED A PRE-ASSEMBLED HEADREST SYSTEM, SKIP TO SECTION 6

3 Installing the electronics mounting bracket

You will need to install the electronics mounting bracket. The following steps will guide you through this process.

Step 1: Locate clean, non-abrasive working surface to prepare the headrest units.

Step 2: Locate the mounting bracket as shown.

Step 3: Install the 4 supplied mounting screws to fully attach the mounting bracket



Headrest cushion with electronics mounting bracket installed

4 Running the cables through the headrest posts

You will need to route the cables through the headrest posts. The following steps will guide you through this process.

Step 1: Place the AV7500 electronics system above the headrest bucket as shown in figure 1.

Step 2: Position the cables on each side of the headrest bucket and ensure they are smooth without kinks or knots.

Step 3: Route the cables through the headrest posts, being careful not to cross the cables.

Step 4: Position the AV7500 electronics unit in the headrest bucket while constantly pulling the cable through the headrest posts (see figure 2). This step is critical to prevent damage to the cables or AV7500 unit.

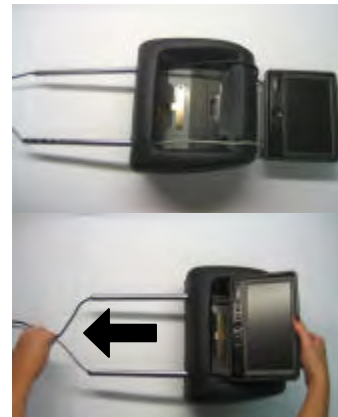


Fig. 1

Fig. 2



IMPORTANT!

Do NOT allow the cables to cross over one another or leave excess cable slack in the headrest bucket. This will prevent the unit from closing properly, could permanently damage the unit.

5 Mounting the AV7500 electronics into the headrest bucket

You will need to mount the AV7500 electronics unit into the headrest bucket. The following steps will guide you through this process.



CAUTION!

Do NOT press directly on the surface of the LCD. This will cause permanent damage which will not be covered by warranty.

Always **REMOVE ANY SLACK** in the cables during assembly. Failure to follow this step may cause damage to the cables.

Step 1: Place the lower edge of the AV7500 unit into the headrest bucket first. Be sure that the lower edge of the AV7500 unit does NOT go below the top surface of the headrest bucket (see figure 3). Use caution so the material on the bucket is not damaged.



Fig. 3

Step 2: Pull any additional slack created in the cables through the headrest posts.

Step 3: Align electronics on electronics mounting bracket. Push firmly, the side latch will “click” to lock monitor in place. Remove excess cable slack! Use caution NOT to press on the LCD surface as this can cause permanent damage to the LCD. (see figure 4)



Fig. 4

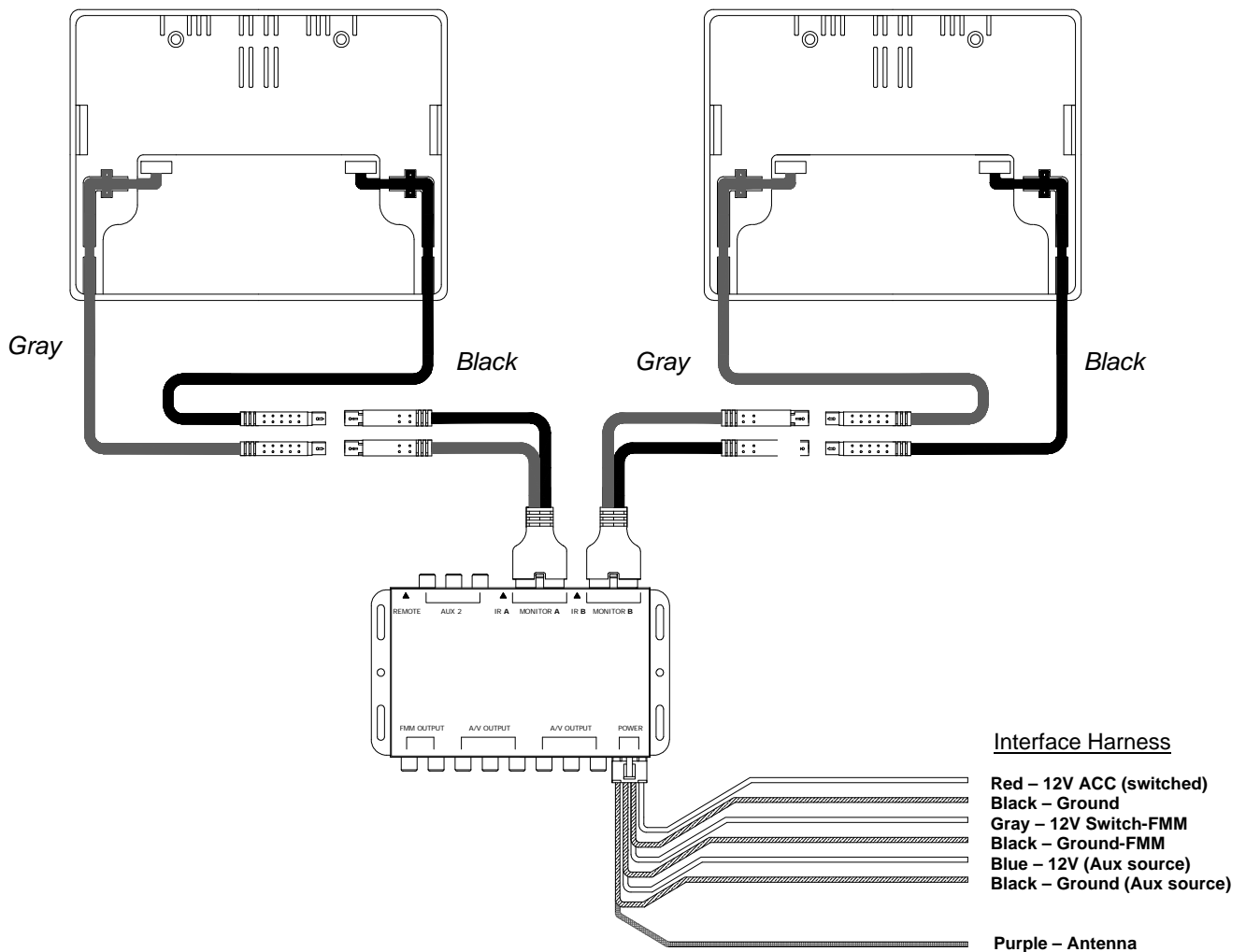


IMPORTANT!

Do not force electronics into the bracket, the components are designed to easily align when properly installed.

BE 100% CERTAIN TO REMOVE ALL SLACK in the cables during assembly of the units. Failure to follow this step may damage the unit, internal cables or prevent the unit from properly closing. If you feel resistance when closing the unit, please confirm that all cable slack has been removed.

Wiring diagram



6 Removing the factory headrests



IMPORTANT!

Do NOT start this step until you have inspected the seats and factory headrests for any obstructions.

You will need to remove the existing factory headrests. The following steps will guide you through this process.

Step 1: Determine if a locking device is present on the factory headrest. Locking devices are *usually* a button or small push pin located at the base of the headrest post(s).

Step 2: If a locking device is present, press and hold the lock release, and pull firmly upward on the headrest. If no locking device is visibly present refer to the vehicle's owners manual or the vehicle's manufacturer for further instructions.

7 Installing the AV7500 headrests

You will need to install the AV7500 headrests and route the cables through the seat backs. The following steps will guide you through this process.

Step 1: Check the headrest down tubes in the seat backs for any obstructions. Normally the down tubes are clear and allow the AV7500 cables to exit from the bottom of the down tubes.

Step 2: Position the AV7500 headrest so the monitor will be facing the rear of the vehicle once properly installed. Then drape the cables over the seat back, being sure that the cables are **NOT** crossed. Place the AV7500 safely on the seat cushion (see figure 6).

Step 3: Attach the cable routing tool to a cable. Slowly feed each cable routing tool through its corresponding down tube until the ends of the cable routing tool is visible at the bottom of each seat back. Pull the cable until it extends out the base of the seat back. Repeat for the second cable.

Step 4: Remove the cable slack until only ½ inch is showing. Insert the headrest into the down tubes. This step normally takes some moderate force, and may be eased by using a very light lubricant on the posts. Be certain to pull lightly on the cables as the headrest is inserted to remove excess slack (see figure 7).

Step 5: Once the headrest is fully seated in the down position, place a **small service loop (6"-12")** of cable in the seat back, to allow the headrest to easily adjust up or down.

Step 6: Connect the interface cable to the monitor cable, ensuring that the cables are matched **gray-to-gray** and **black-to-black**. Properly route the cables to ensure they are secured, out of sight and unobstructed by moving parts and passengers.



Fig. 6



Fig. 7



CAUTION!

Use caution when pulling on the cables as some seats may have sharp edges or objects in the seat back which could damage the cables. Sometimes it is necessary to remove or partially remove the seat back covering to properly install the cables.

8 Routing the harnesses and making the wiring connections



It is the installer's responsibility to ensure that the safety equipment in the vehicle is NOT adversely affected by installation of this system. Ensure that the routing of the harnesses does NOT obstruct airbags, SRS or other safety devices.

You will need to route the harnesses and make the power connections to the vehicle. The following steps will guide you through this process.

Step 1: This system requires a minimum of 12V (+) ACC Switched and Ground (-) to operate. The 12V (+) ACC Switched source must be capable of supplying a minimum of 7A. These can be found at multiple points in the vehicle. The Ground (-) should be located at a Factory Chassis ground point when possible.

Step 2: Select a location to mount the junction box for the AV7500 unit. Normally the junction box is best located under either the driver or passenger seat. Be sure to locate it so that it will not obstruct any moving parts in the seat or damaged by the feet of passengers.

Step 3: Route the power harness to the dash area where you have located the 12V (+) ACC connection point. Be sure to protect the cable from any potential sharp edges which could damage the harness in the future. To avoid vibration noise, use tape to secure the harness whenever possible.

Step 4: Route the FMT antenna wire (purple) toward the antenna/tuner. **(Be sure to separate it from the power wires and avoid any power seat modules or other vehicle harnesses as these may induce noise into the FM transmission.)**

Step 5: When connecting the power harness, Rosen recommends soldering all connections. When using T-Tap or crimp connectors, always ensure the connections are made with the proper gauge connectors. Failure to make a proper connection will result in a system failure in the future.

Step 6: With ACC off, plug all harnesses into the main interface unit. ***Note: Plug the main power harness in last.***

9 Initial test, reassembly, and pre-delivery re-test

You will need to fully test the system to ensure it is working and connected to the vehicle properly. The following steps will guide you through this process.

Step 1: INITIAL TEST (Do this BEFORE you reassemble any trim panels)

- a. Reconnect the vehicle battery if needed
- b. Install batteries into the remote control, headphones and game controllers
- c. Start the vehicle (ensure that it is safe to do so, there are no tools or people under the hood)
- d. Perform the following steps on each headrest to ensure proper operation:
 - Close and re-open the unit several times
 - With the display open, insert a DVD (in good condition) and select play
 - Check the audio on the IR headphones
 - Press the Speaker button and adjust the vehicle radio frequency as needed to check the audio
 - Select and play the internal games
 - Eject the disc
 - Turn off the vehicle and wait for the unit to turn off
- e. If the system does not function properly, reset the system by pressing and holding the reset button located near the eject button

Step 2: REINSTALL all trim panels removed during the installation using care not to damage any harnesses

Step 3: PRE-DELIVERY AND RE-TEST

- a. Start the vehicle (ensure that it is safe to do so, there are no tools or people under the hood)
- b. Perform the following steps
 - Insert a DVD (in good condition) and select play
 - Re-check IR headphones and FMT audio
 - Eject the disc
 - Remove the protective films and clean the unit as needed
- c. Place the Owners Information package in the glove compartment
- d. Place the IR headphones, remote control and game controller in a convenient location

10 Installer Setup

To access install setup menu: use the remote control, press EJECT-ENTER-1-1-2-0



- To change AUX 2 input labeling, highlight AUX 2 label and scroll left/right using arrows.
- To select EXT FMM, highlight EXT FMM and select on.
- POD ADDR is used to manually set pod address
Auto→ address is based on which port the pod is plugged into.
- Selecting A or B allows you to manually set the pod's address
When manually selecting POD ADDR, an OSD will appear on opposite pod displaying what pod it will be

Specifications

Supply Voltage	: 12V (+) ACC negative ground system, 11-16VDC operating range
Current Consumption	: 7A max operating
Video Signal	: Composite video 1.0Vp-p 75 , NTSC/PAL
Audio Signal	: Audio Output : 2Vrms, line output
IR Audio Signal	: Channel A= 2.3 MHZ / 2.8 MHZ and Channel B= 3.2 MHZ / 3.8 MHZ
Discs Played	: (1) 5" (12cm) DVD-VIDEO Disc (2) Compact Disc (CD-DA/CD-R/CD-RW/MP3)

Operating Temperature : 0C to +60C

Note: Specifications and designs are subject to modification without notice.

FAQ's

The monitor cables get stuck in the posts

Normally the cables will slide through the posts with very little effort. However, if you encounter difficulty, please check the following:

Solution: Ensure that there are no obstructions inside the post.

Solution: Ensure that there are no metal burs at the entrance or exit of the posts.

Solution: Ensure that there are no kinks or knots in the cables.

Solution: Use a cable pulling lubricant.

The monitor does not fit into the headrest bucket

The AV7500 unit has been designed to fit tightly into the headrest bucket. This was done to ensure a high quality fit with no gaps.

Solution: Use a mild soap and water solution to LIGHTLY moisten the mating surface of the headrest bucket. **CAUTION!** – Do not get water on or in the electronics as damage WILL result which will not be covered by warranty.

The FMT does not transmit audio

The system is designed to use either the internal FM Transmitter or an external FM Modulator. Select the mode in the installation set up menu.

Solution: Check the FMT configuration to be sure that FMM is set to OFF. FMT is the default.

Resetting the system

It is a good practice to reset the system immediately after Power is FIRST connected.

Solution: To reset the system, open the DVD unit and locate the small reset button next to the Eject button. Press and hold the Reset button for 3 or 4 seconds.

Finding the best Power Point

Avoid connection to wires which supply the following: fan/seat/mirror motors power, excessively large sized wires, glow plug power lines, radio power lines, defroster power lines, etc.

Solution: Open power points can be located in the fuse box, which are designed for accessory equipment.

The DVD restarts when the vehicle is started

When the vehicle is started, the DVD should resume from previous point. However, if the voltage falls below 10VDC during cranking, the system will restart at the beginning of the DVD.

Solution: Check if the battery is fully charged. New vehicles rarely have a fully charged battery.

Solution: Older batteries can not provide the necessary voltage during an engine cranking. Vehicle battery may need replacement.

Solution: Extreme climate conditions (cold or hot) will reduce the efficiency of the battery. Be sure the battery is fully charged and in good condition. Replace the battery if needed.

The System Stays On and Never Shuts Off

The System is designed to turn off when the key is turned off. If the ACC (Red) wire is connected to a constant 12VDC (+) power point the system will stay on until the battery dies.

Solution: Check the ACC connection point to be sure it is switched with the key, and relocate as needed.

No headphone audio

The Headphone audio should be preset at all times, unless the MUTE is set to on, or a DVD Setting has been changed in the DVD Settings Menu.

Solution: Press the MUTE Button to enable the audio and turn the MUTE OFF.

Solution: Confirm the headphones have fresh batteries, are turned on, and the ON LED Indicator is Illuminated.

Solution: Check the DVD Setting and restore them to FACTORY SETTINGS if needed (see the Owners Manual).

Selecting FMM pre-sets

For best operation, the FMM Pre-set selection should be on a station which is not in use or has weak broadcast in your area.

Solution: You can also check www.RosenDealerCentral.com. This site provides you with the best stations in your local area. Select a corresponding FMM Station when available.

Reducing audio or video noise

Audio or video noise may be induced into the system from sources ranging from harness location, power point to poor grounding.

Solution: Re-route the wire harnesses to avoid passing over other harnesses or near electrical motors.

Solution: Try relocating the ground point to factory ground point or factory ground wire.

Solution: In some cases, inline audio filters may be required. Contact Rosen for support on selection of a filter.

Missing Channel B Audio

System includes a monitor A and monitor B. Monitor A is channel "A" on headphones and monitor B is channel "B" on headphones. If audio is not present, check the following.

Solution: Check A/B switch on headphones.

Solution: Reset the system

Solution: Check all cable connections

Solution: Please refer to "Install Set-up Menu".

Solution: Force channel B via Installer Setup menu

Service and optional parts list

<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>	<u>Description</u>
AP1006	IR Remote Control	AC3323	External Wireless FMT
AP1007	IR Game Controller	AP1003	Interface Module
AC3640	2 Channel IR Headphones	AP1041	Monitor Black Harness
AP1008	Power Harness	AP1042	Monitor Gray Harness
AP1010	Interface Extension Harness	AP1011	Monitor Aux Harness
AP1012	Remote IR Harness	AP1019	Hardware Pack
AC3196	External Wired FMM	AP1026	Quick Reference Card
AP1021	Owners Manual		