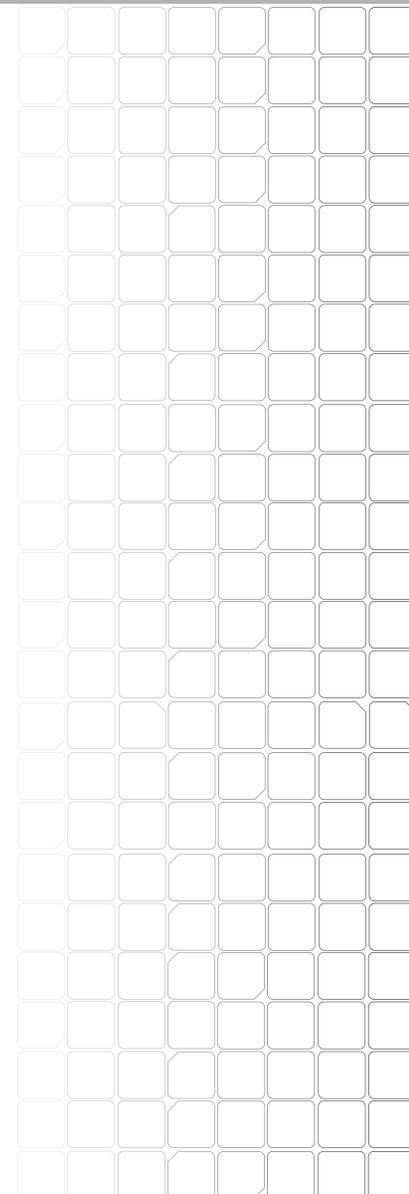# VM8022

Installation and Operation Manual

JENSEN®

160 Watts Peak
Watts en Crête
Vatios el Máximo
40W x 4

TABLE OF CONTENTS

INTRODUCTION

Congratulations on your purchase of the Jensen VM8022 Mobile Multimedia Receiver. It's a good idea to read all of the instructions before beginning the installation. We recommend having your Jensen VM8022 installed by a reputable installation shop.

INSTALLATION

This unit is designed for installation in cars, trucks and vans with an existing radio opening. In many cases, a special installation kit will be required to mount the radio to the dashboard. These kits are available at electronics supply stores and car stereo specialty shops. Always check the kit application before purchasing to make sure the kit works with your vehicle. If you have trouble locating a kit or need installation assistance, contact Technical Support at 1-800-323-4815 from 8:30am to 7:00pm EST Monday through Friday and from 9:00am to 5:00pm EST on Saturday.

Tools and Supplies

The following tools and supplies are needed to install the radio:

- Torx type, flathead and Philips screwdrivers
- Wire cutters and strippers
- Tools to remove existing radio (screwdriver, socket wrench set or other tools)
- Electrical tape
- Crimping tool
- Volt meter/test light
- Crimp connections
- 18 gauge wire for power connections
- 16-18 gauge speaker wire

Preparation

1. **Disconnect Battery**
   Before you begin, always disconnect the battery negative terminal.


NOTE: If the VM8022 is to be installed in a car equipped with an on-board drive or navigation computer, do not disconnect the battery cable. If the cable is disconnected, the computer memory may be lost. Under these conditions, use extra caution during installation to avoid causing a short circuit.

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2. **Remove Transport Screws**

TRANSPORT SCREWS
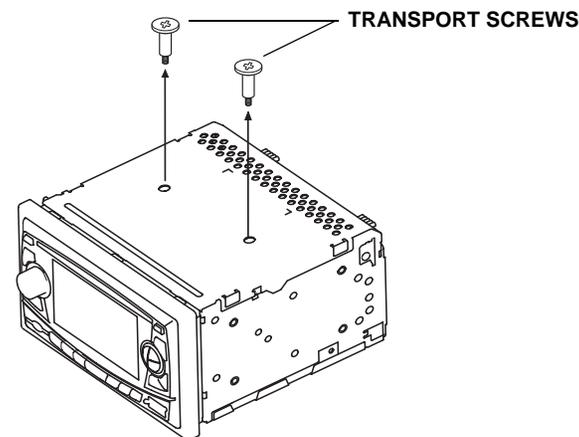
Universal Installation

1. Check the dashboard opening size by sliding the radio into it.

108mm
188mm
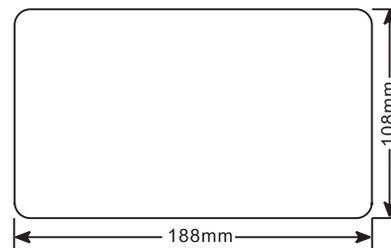
If the opening is too small, carefully cut or file as necessary until the radio easily slides into the opening. Do not force the radio into the opening. Check for sufficient space behind the dashboard for the radio chassis.

CAUTION: For proper operation of the DVD player, the chassis must be mounted within 20° of horizontal. Make sure the unit is mounted within this limitation.

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2. Place the radio in front of the dashboard opening so the wiring can be brought through. Follow the wiring diagram carefully and make certain all connections are secure and insulated with wire nuts or electrical tape. See "Wiring" on page 3. After completing the wiring connections,

turn the unit on to confirm operation (vehicle ignition must be on). If the unit does not operate, re-check all wiring until the problem is corrected.

3. Secure the rear of the unit to the car body using the mounting bolt and rubber cushion.

4. Test the radio using the "Operation" instructions that follow.
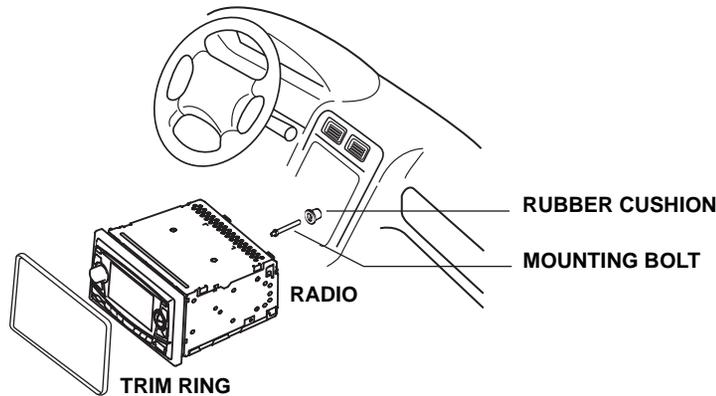

Kit Installation

If your vehicle requires the use of an installation kit to mount this radio, follow the instructions included with the installation kit to attach the radio to the mounting plate supplied with the kit.

1. Wire and test the radio as outlined in the Universal Installation instructions.

2. Install the radio/mounting plate assembly to the sub-dashboard according to the instructions in the installation kit.

3. Replace the dashboard trim panel.

ISO Installation

This unit has threaded holes in the chassis side panels which may be used with the original factory mounting brackets of some vehicles to mount the radio to the dashboard. Please consult with your local car stereo shop for assistance on this type of installation.

1. Remove the existing factory radio from the dashboard or center console

mounting. Save all hardware and brackets as they may be used to mount the new radio.
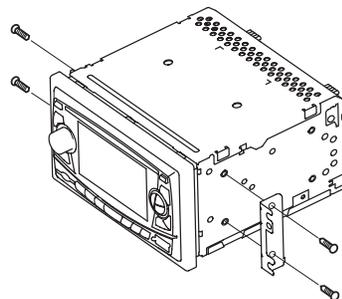
2. Carefully unsnap the plastic frame from the front of the new radio chassis. Remove and discard the frame.

3. Remove the factory mounting brackets and hardware from the existing radio and attach them to the new radio. Do not exceed M5 x 9mm maximum screw size. Longer screws may damage components inside the chassis.

4. Wire the new radio as outlined in the Universal Installation instructions.

5. Mount the new radio assembly to the dashboard or center console using the reverse procedure of step 1.

Fuses

When replacing a fuse, make sure the new fuse is the correct type and amperage. Using an incorrect fuse could damage the radio.
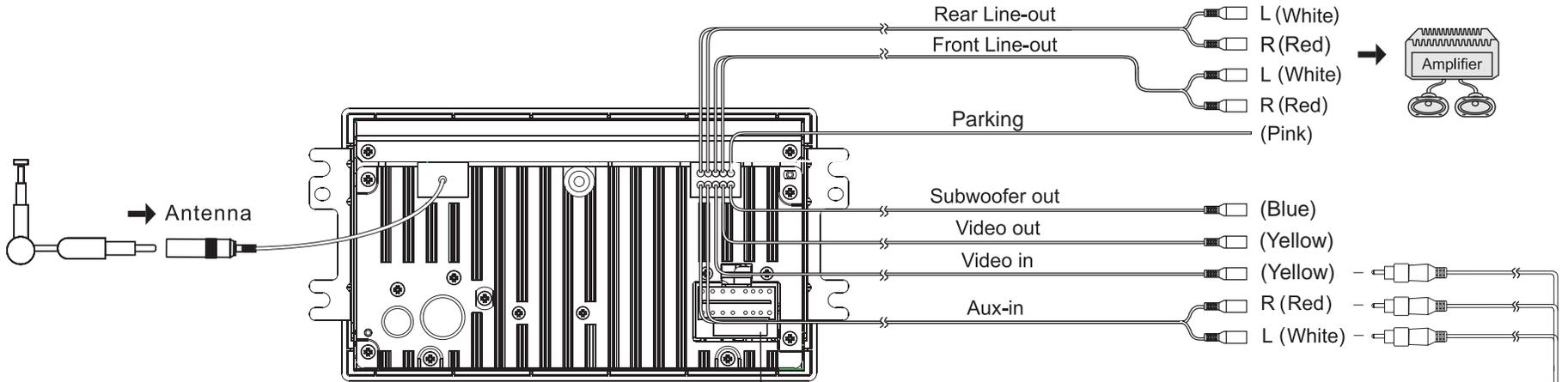
Reconnect Battery

When wiring is complete, reconnect the battery negative terminal.
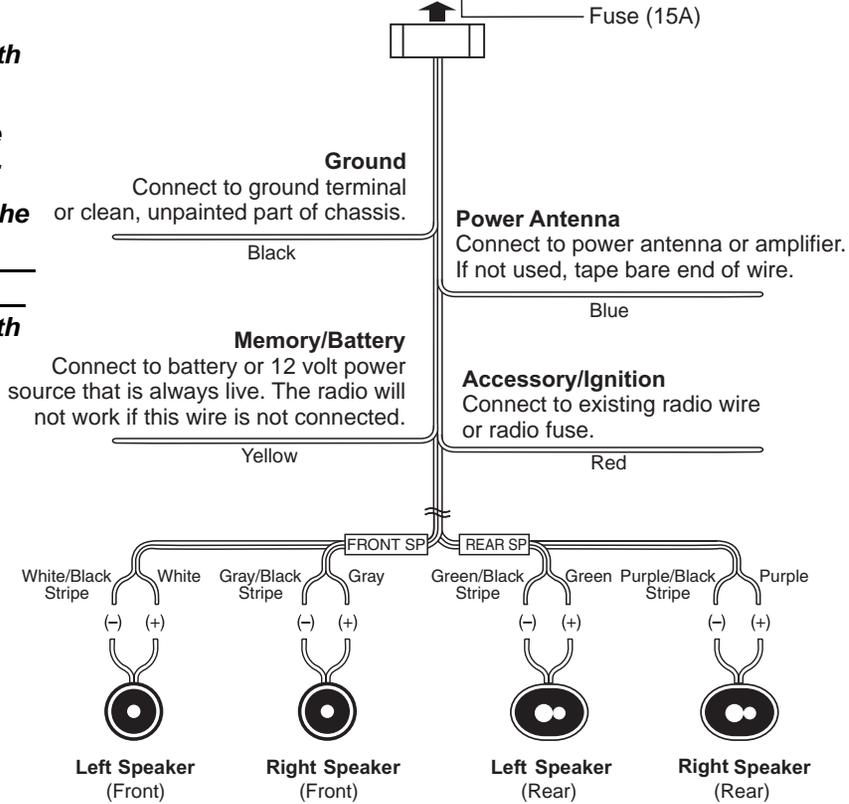
Technical Assistance

If you require assistance, contact Technical Support at 1-800-323-4815 from 8:30am to 7:00pm EST Monday through Friday and from 9:00am to 5:00pm EST on Saturday.

WIRING

Rear Line-out — L (White)

Front Line-out — R (Red)

L (White)

R (Red)

→ Amplifier

Parking — (Pink)

Antenna

Subwoofer out — (Blue)

Video out — (Yellow)

Video in — (Yellow)

Aux-in — R (Red)

L (White)

A/V Media
Adapter Cable
(White)

Fuse (15A)

NOTE: The amplifier in this radio is only designed for use with four speakers. Never combine (bridge) outputs for use with two speakers. Never ground negative speaker leads to chassis ground. Failure to wire exactly as shown may cause electrical damage to the radio.

Ground
Connect to ground terminal or clean, unpainted part of chassis.

Black

Power Antenna
Connect to power antenna or amplifier. If not used, tape bare end of wire.

Blue

NOTE: Only connect speakers with a nominal impedance of 4 ohms. Speakers with a load impedance less than 4 ohms could damage the unit.

Memory/Battery
Connect to battery or 12 volt power source that is always live. The radio will not work if this wire is not connected.

Yellow

Accessory/Ignition
Connect to existing radio wire or radio fuse.

Red

FRONT SP   REAR SP

| White/Black Stripe | White | Gray/Black Stripe | Gray | Green/Black Stripe | Green | Purple/Black Stripe | Purple |
| (–) | (+) | (–) | (+) | (–) | (+) | (–) | (+) |

Left Speaker
(Front)

Right Speaker
(Front)

Left Speaker
(Rear)

Right Speaker
(Rear)

⚠️

IMPORTANT!
The pink parking wire MUST be connected to the switched side of the parking break circuit (the part that becomes grounded when the brake is applied).

3

REMOTE CONTROL

The remote control will allow you to control the advanced functions of the VM8022.

1. ZOOM (DVD, VCD only)
2. TITLE (DVD only)
3. Power On/Off
4. SETUP: Access DVD Setup
5. Menu Navigation
6. ENTER
7. PROG: Enter Programmed Playback mode.
8. Direct Number Entry
9. SEL
   - Audio Mode: Select BAS, TRE, BAL, FAD.
   - *Press and hold* for System Menu
10. Volume Control
11. Mute
12. SEEK
    - Radio Tune
    - Track Skip/Seek
13. SUB.T: Subtitle (DVD only)
14. SRC: Change Input Source
15. REPEAT
16. A-B Repeat
17. Stop/Return
18. Play/Pause
19. GOTO Search
20. MENU PBC
    - DVD Menu
    - PBC (for VCD 2.0 and up)
21. OSD: On Screen Display
22. AUDIO
    - DVD Audio
    - VCD Audio L/R/ST
23. DISP: View On Panel Display
24. ANGLE (DVD only)
25. BAND/P/N
    - Video System: PAL, NTSC, AUTO
    - Radio Band
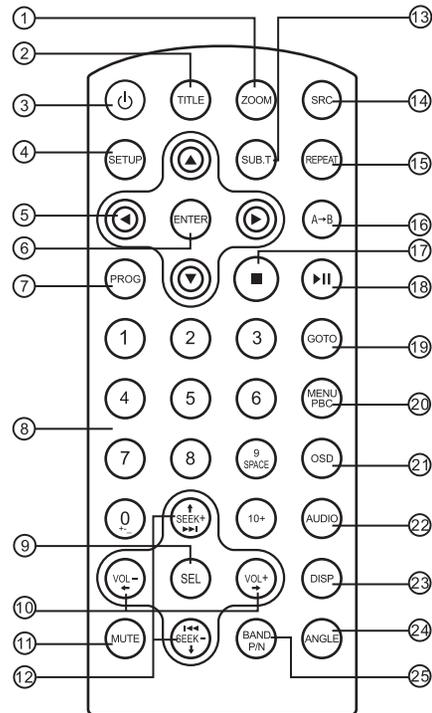
Operating Range

The remote control sensor (19) is located to the right of the power button. The remote control can operate within a distance of 3~5m.

Replacing the Battery

When the range of operation of the card remote control becomes short or stops functioning, replace the battery with a new lithium battery. Be sure to observe the proper polarity, as indicated below.

REMOTE SENSOR

30°   30°

(CR 2025)

1   2
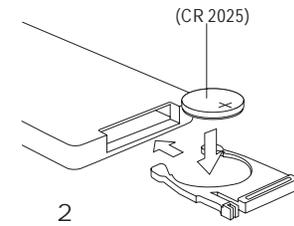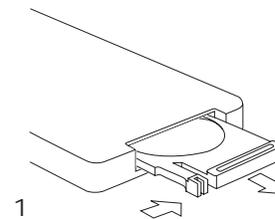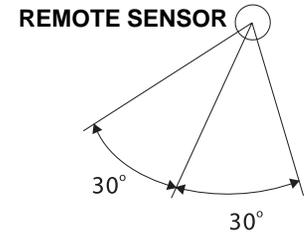
OPERATION

Power

Press the ⏻ (power) button (2) to turn the unit on. *Press and hold* the power button again to turn the unit off.

NOTE: LCD panels may take longer to respond when subjected to cold temperatures for an extended period of time. In addition, the visibility of the numbers on the LCD may decrease slightly. The LCD display will return to normal when the temperature becomes normal.

Source

Press the **SRC** button (6) to select a different mode of operation, as indicated on the display panel. Available modes include tuner (FM1, FM2, FM3, AM1, AM2), DVD, SD, USB, and auxiliary (AUX).

Audio Mute

Press the **MUTE** button (21) to silence the audio volume. " 🔇 " appears on the display. Press **MUTE** again to restore volume to the previous setting.

Volume Control

To increase the volume, turn the rotary encoder (5) clockwise. To decrease the volume, turn the rotary encoder counter-clockwise. When volume is adjusted, the volume level will be shown on the display panel as a number ranging from "0" (lowest) to "63" (highest).

Audio Menu

Press the **VOL** button (5) to access the audio menu. Press the **VOL** button repeatedly to move through the list of menu options.
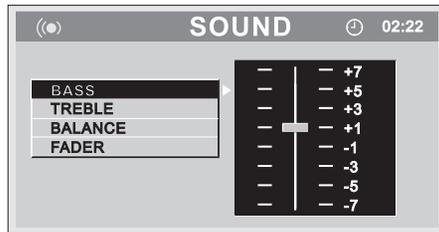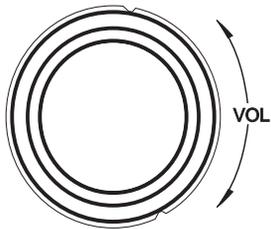
- BASS: Turn the rotary encoder (5) to adjust the bass level from "+7" to "-7".
- TREBLE: Turn the rotary encoder to adjust the treble level from "+7" to "-7".

- BALANCE: Turn the rotary encoder to adjust the balance from "R7" (full right) to "L7" (full left).
- FADER: Turn the rotary encoder to adjust the fader from "F7" (full front) to "R7" (full rear).

The unit automatically exits the audio control menu after five seconds of inactivity.
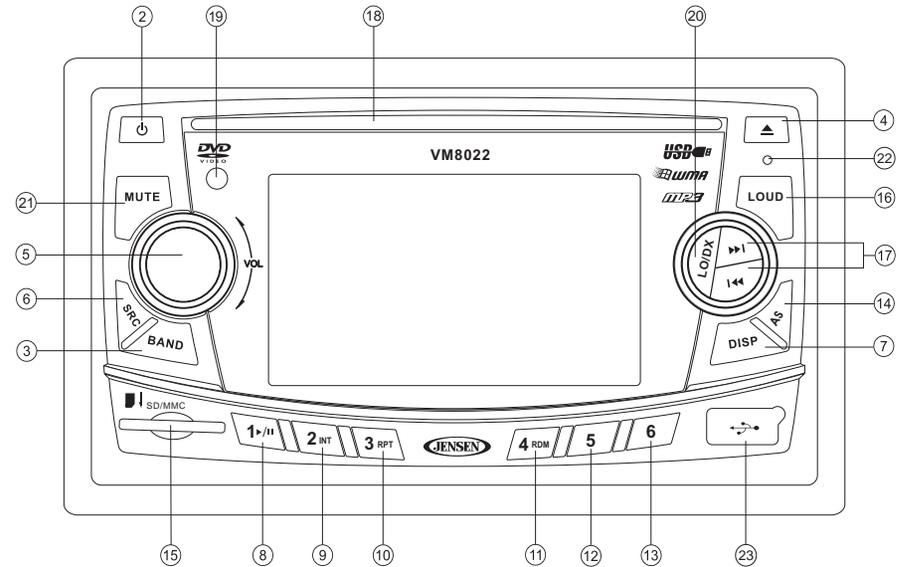
Menu Operation

Press and hold the **VOL** button (5) for more than two seconds to access the menu. Press the **VOL** button to move through the following menu options: EQ MODE, BEEP, 12/24 MODE (clock), VOL MODE, A-VOL, SUBWOOFER, SUB VOL. The following procedures assume you have already accessed the menu.

Equalizer Selector (EQ MODE)

The equalizer function applies preset sound effects to the unit's audio output signal. Turn the rotary encoder to select from the following equalizer options: "OFF", "ROCK", "POP", "CLASSIC" and "FLAT". With the equalizer function activated, if bass or treble is adjusted, the EQ Mode will revert to OFF.

When the equalizer function is activated, the most recently selected bass/treble levels cannot be adjusted. When the equalizer function is not active, the unit will return to the most recently selected bass and treble levels.

BEEP

The beep tone feature allows the selection of an audible beep tone to be heard each time the menu is accessed. "ON" is the default setting. Turn the rotary encoder to select "OFF".

12 / 24 MODE

This option allows selection of a 12 hour or 24 hour clock format. "24 HOUR" is the default setting. Turn the rotary encoder (**VOL** control) to change to the 12 hour clock format.

VOL-MODE

Turn the rotary encoder to select "VOL LAST" or "VOL ADJUST".

- VOL LAST: When the unit is turned on, the volume will resume at the level selected when last turned off.
- VOL ADJUST: If choosing VOL ADJUST, use the A-VOL setting to specify a turn-on volume.

Turn-On Volume (A-VOL)

After selecting "VOL ADJUST", press the **VOL** button (5) to access the A-VOL setting and then turn the rotary encoder to select the desired turn-on volume level. When this option is selected, the unit will revert to the adjusted volume each time the unit is turned on.

SUBWOOFER

After connecting a subwoofer to the back of the unit, turn the rotary encoder to select a crossover frequency: 80, 100 or 120Hz.

SUB VOL

The SUB VOL control is only applicable if the unit is connected to an optional sub-woofer speaker and is activated. To adjust the sub-woofer level from "00" to "33", press the **VOL** button (5) until "SUB VOL" appears in the display. Turn the rotary encoder clockwise to increase or counter-clockwise to decrease the subwoofer level.

Local/Distant Reception (LO/DX)

When the Local function is on, only radio stations with a strong signal are played. To activate Local reception mode, press the **LO/DX** button (20). "Local" will appear on the screen briefly. If pressed again, "DX" appears briefly.

Loudness Control (LOUD)

When listening to music at low volumes, this feature will boost the bass and treble ranges to compensate for the characteristics of human hearing. Press the **LOUD** button (16) to activate this feature as indicated by "LOUD" on the display panel. Press the **LOUD** button again to deactivate the function. "LOUD" will disappear from the display.

Clock Set

1. Press the **DISP** button (7) to display the clock.
2. *Press and hold* the **DISP** button until the clock blinks.
3. Turn the rotary encoder (5) to set the minutes.
4. Press the **VOL** button (5) to confirm and move to the hour field.
5. Turn the rotary encoder to set the hour.
6. Press the **DISP** button to set the clock and exit the clock set function.

Reset Button

The **RESET** button (22) is located below the eject button. The reset circuitry protects the microprocessor circuitry. Since resetting the unit will erase the time and preset memories, it should only be activated upon initial installation after all wiring is complete, or if there is a malfunction of any of the switches on the unit. In these circumstances, pressing the **RESET** button will clear the system and return the unit to normal operation.

TUNER OPERATION

remaining five presets on the current band and for presets on the other four bands.
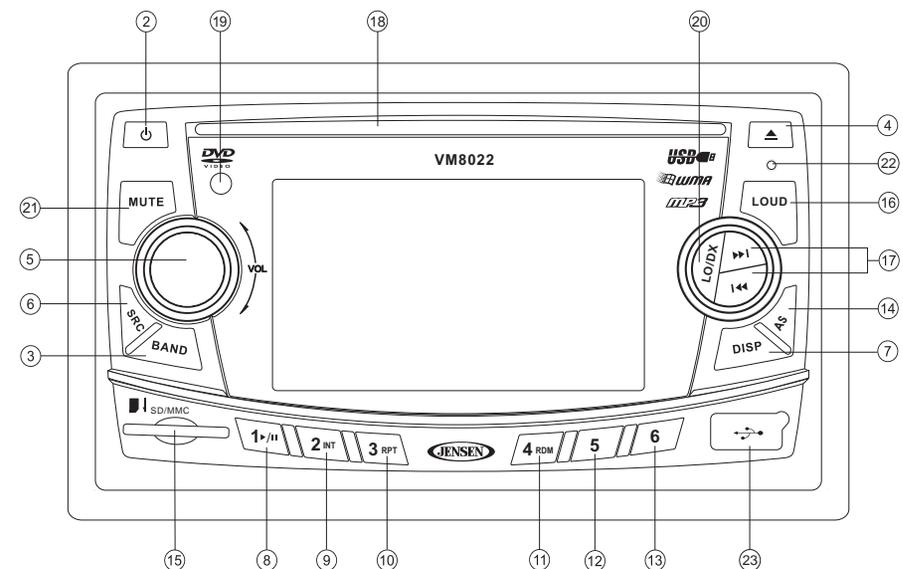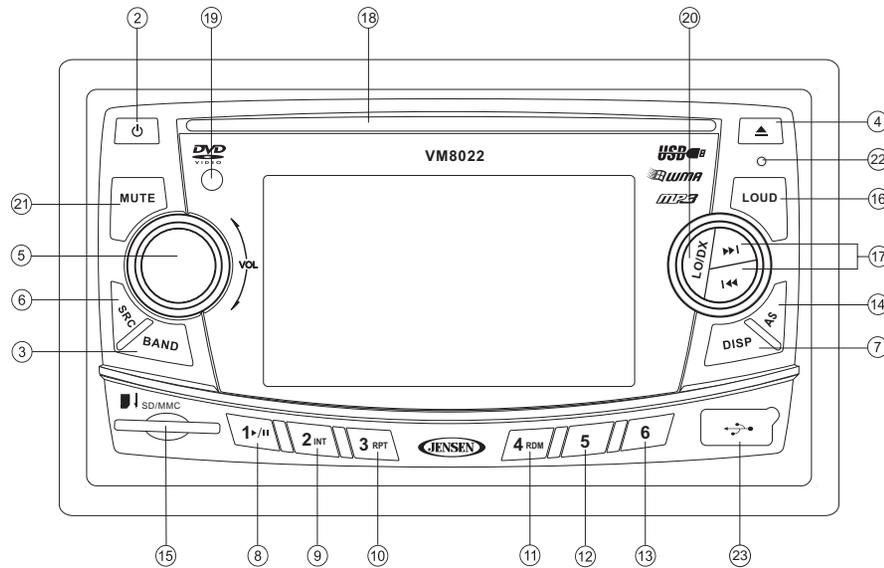
Select a Band

Press the **BAND** button (3) to change between three FM and two AM bands. Each band stores up to six preset stations.

Tuning

Manual Tuning

Press the **TUNE/TRACK >>|** or **|<<** buttons (17) to move the radio frequency number up or down one step.

Seek Tuning

Press and hold the **TUNE/TRACK >>|** or **|<<** buttons (17) for more than three seconds to seek the next/previous station automatically.

Preset Stations

Up to six stations on each band can be stored as presets, which can then be instantly recalled by pressing the associated preset button (8-13). To store a station, turn the radio on and select the desired band and station. *Press and hold* the desired preset button (numbered one through six on the face of the radio) for more than two seconds. When stored, the preset number will appear in the display. The station is now stored and can be recalled by pressing the corresponding preset button. Repeat for the

Preset Scan

Press the **AS** button (14) to scan and play each preset station for 5 seconds each. Press **AS** again to stop preset scan.

Automatic Preset Store

Press and hold the **AS** button (14) to select six strong stations and store them in the current band using the AUTO PRESET feature. The radio will automatically scan all bands and enter strong stations into the preset memory positions. After entering the stations into memory, the unit will automatically stop at each station for five seconds, allowing you to preview each selection. When using the AUTO PRESET feature, the new stations replace any stations already stored in preset memory.

NOTE: You can stop the AUTO PRESET function at any time by pressing the AS button again.

DISC/MP3/WMA PLAYBACK
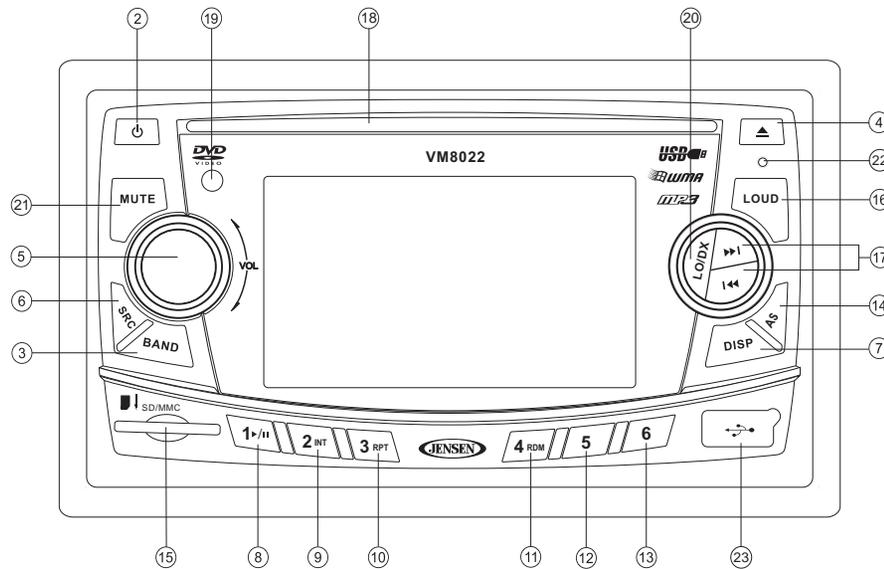
Insert and Eject Disc

Insert a disc, label side up, into the disc slot (18).

To stop disc play and eject the disc, press the eject button (4).

NOTE: The unit is designed for play of standard 5" (12 cm.) discs only. Do not attempt to use 3" (8 cm.) CD singles in this unit, either with or without an adaptor, as damage to the player and/or the disc may occur. Such damage will not be covered by the warranty on this product.

Controlling Disc or File Playback

Pause

Press the pause **>/||** button (8) to suspend playback. Press the pause **>/||** button again to resume playback.

Track Select

Press the **TUNE/TRACK >>|** or **|<<** buttons (17) for less than one second to advance to the next track/file. The selected track number will appear on the display.

Fast Forward/Reverse

Press and hold the **TUNE/TRACK >>|** or **|<<** buttons (17) to fast forward or fast reverse. *Press and hold* once for 2X. *Press and hold* additional times for 4X, 8X, 20X or PLAY. Press the play/pause **>/||** button (8) to end fast forward or reverse and resume normal playback.

Intro Scan (INT)

During disc play, press the **INT** button (9) to select "INTRO" and play the first 15 seconds of each track/file. When the desired track is reached, press **INT** again to end the scan and play the selected track.

Repeat (RPT)

Press the **RPT** button (10) multiple times during playback to select from the following repeat play options:

- VCD/CD: RPT ONE (track), RPT ALL (disc), RPT OFF
- DVD: RPT CHAPTER, RPT TITLE, RPT OFF
- MP3/WMA: RPT ONE (file), RPT DIR (directory/folder), RPT ALL (disc), RPT OFF

Random (RDM)

Press the **RDM** button (11) during playback to select "RANDOM" and play all tracks/files in random, shuffled order. Press **RDM** again to stop random play.

Section Repeat (A-B)

To repeat a specified section of a track, perform the following steps:

1. Press the **A->B** button *on the remote control* to select the starting point. The display will show "REPEAT A-".
2. Press **A->B** when you reach the desired ending point. The display shows "REPEAT A-B" and the selected section will play repeatedly.

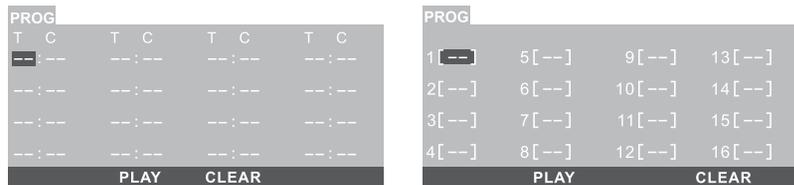To cancel section repeat, press the **A->B** button again. "A-B CANCEL" appears on the display.

GOTO Direct Track Access

Use the GOTO function to access a track directly.

1. Press the **GOTO** button on the remote control. The track number will become highlighted.
2. Use the number keys on the remote control to enter the track number directly.
3. Press the **ENTER** button to confirm and begin playback.

Programmed Playback

1. Press the **PROG** button *on the remote control* to access the pro-grammed playback screen:

PROG			
T C	T C	T C	T C
--:--	--:--	--:--	--:--
--:--	--:--	--:--	--:--
--:--	--:--	--:--	--:--
--:--	--:--	--:--	--:--
PLAY	CLEAR		

PROG			
1[--]	5[--]	9[--]	13[--]
2[--]	6[--]	10[--]	14[--]
3[--]	7[--]	11[--]	15[--]
4[--]	8[--]	12[--]	16[--]
PLAY		CLEAR	

2. Use the ▲, ▼, ◄ or ► cursor buttons to access the fields on the "PROG" screen.
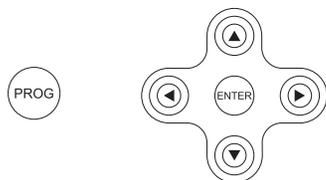
3. Use the number buttons on the remote control to enter a track number in each field.
4. Press the **>/||** button (8) or highlight "PLAY" on screen and then press **ENTER** to begin playback in the numbered order indicated.

To delete the list, highlight "CLEAR" and then press **ENTER**. Press **PROG** to exit the programmed playback screen.

VCD PlayBack Control (VCD Only)

If you insert a VCD with playback control, playback automatically starts at the beginning of the first track.

- Press the **PBC** button on the remote control to access the VCD menu.
- Use the **TUNE/TRACK >>|** or **|<<** buttons (17) to select the desired track.
- Press the ■ (stop) button to return to the menu.
- Press **PBC** again to exit the menu.

DVD Playback Features

The following remote control features are available during DVD playback:

- AUDIO: Press to choose an alternate audio language, if available.
- SUB-T: Press to select an alternate subtitle language, if available.

- TITLE: Press to display the title or chapter list. Use the ▲, ▼, ◄ or ► cursor buttons or the numeric buttons to enter a title or chapter number, and then press **ENTER** to play.
- ANGLE: Press to select an alternate viewing angle, if available.
- ZOOM: Press to zoom the picture at X2, X3, X4, X1/2, X1/3 or X1/4, or select OFF to return to normal view.

NOTE: Feature availability is dependent upon DVD embedded information.

Disc Player Error Codes

If a problem should develop while operating the Disc player, an error code may appear on the display panel. This can indicate a number of problems with the unit, including a mechanical error or an error in the microprocessor control. If an error code appears, try ejecting and reloading the disc into the player. While the disc is out of the unit, make sure it is clean and undamaged, and then load it correctly. If this does not solve the problem, pressing the **RESET** button (22) may help, but will erase the time and preset memory. If the suggested measures do not solve the problem, contact an approved warranty station near you for further assistance.
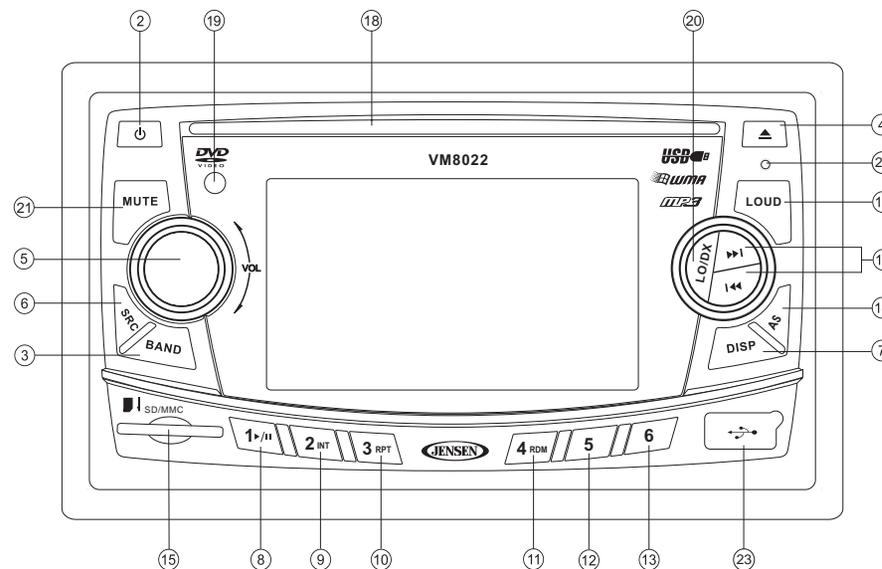
SYSTEM SETUP MENU

During disc play, press the **SETUP** button on the remote control to access the SYSTEM SETUP menu.

SYSTEM LANGUAGE VIDEO

SYSTEM SETUP	
VIDEO FORMAT	
SCREEN SAVER	
ASPECT RATIO	
PASSWORD	
RATING	
DEFAULT	
EXIT SETUP	
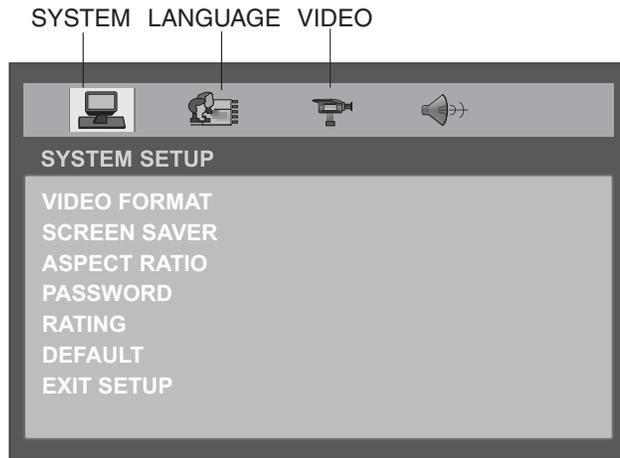
Use the ▲, ▼, ◄ or ► cursor buttons to choose between SYSTEM, LANGUAGE, or VIDEO setup options.

Table 1: System Setup Menu

SYSTEM SETUP		
VIDEO FORMAT	NTSC	The color signals are output in the standard NTSC format.
	PAL	The color signals are output in the standard PAL format.
	AUTO	The color signal output is switched automatically based on the current video input signal - NTSC or PAL.
SCREEN SAVER	ON	Turn screen saver on/off.
	OFF	

Table 1: System Setup Menu

ASPECT RATIO	4: 3 PS	With 16:9 display, the left and right sides are cut off.
	4:3 LB	With 16:9 display, the top and bottom are cut off.
	16:9	Image is presented in wide view with a 16:9 aspect ratio.
PASSWORD	_ _ _ _	Enter a 4-digit password to activate the "Rating" feature. The original password is "0000".
RATING	1 KID SAFE	Select the appropriate rating level for the intended audience.
	2 G	
	3 PG	
	4 PG13	You may override higher ratings by using your password.
	5 PG-R	
	6 R	
	7 NC-17	
	8 ADULT	
DEFAULT	RESTORE	Select "Reset" to restore the factory default settings for the *Rating system only*.
LANGUAGE SETUP		
OSD LANGUAGE	ENGLISH	Select the appropriate on-screen language for the DVD
	GERMAN	
	SPANISH	
	FRENCH	

Table 1: System Setup Menu

AUDIO LANGUAGE	ENGLISH	Choose from audio languages contained on the DVD If you are watching a disc recorded in multiple languages *NOTE: Languages are DVD dependent and not all languages may be supported.*
	FRENCH	
	SPANISH	
	PORTUGUESE	
	GERMAN	
SUBTITLE LANG	ENGLISH	Choose the language you would like subtitles to appear in (if available) *NOTE: Subtitles are DVD dependent and not all languages may be supported..*
	FRENCH	
	SPANISH	
	PORTUGUESE	
	GERMAN	
	OFF	Turn subtitles off
MENU LANG	ENGLISH	Select the default language in which you would like the DVD menu (if applicable) to be displayed.
	FRENCH	
	SPANISH	
	PORTUGUESE	
	GERMAN	
VIDEO SETUP		
BRIGHTNESS	12 - 0	Use the ▲/▼ cursor buttons to set the video output options
CONTRAST	12 - 0	
HUE	+6 to -6	
SATURATION	12 - 0	
SHARPNESS	8 - 0	
EXIT SETUP		

USB/SD OPERATION

Notes on MP3/WMA Play

MP3 and WMA (Windows Media Audio) music files are digital audio files that are compressed to allow more files on a single CD. This unit can play MP3/WMA directly from files contained on a CD-R/RW or an SD card, USB Device using the buttons on the receiver (or remote control) as described below.

Many types of software are available for converting audio files into MP3/WMA formats. Jensen recommends *Nero* or *Roxio Easy CD Creator*.

This unit can play MP3 (MPEG1, 2, 2.5 Audio Layer 3). However, the MP3 recording media and accepted formats are limited. When writing MP3/WMA, pay attention to the following restrictions.

Acceptable Media

The MP3/WMA recording media acceptable to this unit are CD-ROM, CD-R, and CD-RW. The unit will also play MP3, WMA, photo or videos files written to SD Cards, USB Devices.

Depending on the media type and recording method, some CD-R/RWs may be incompatible with this unit. When using CD-RW, use full format rather than quick format to prevent malfunction.

This unit supports playback of MP3/WMA and CDDA (CDA), Mixed-Mode CDs and CD-Extra (including multi-session discs). Discs on which the session has not been closed will not play.

NOTE: This unit supports FAT 16 and FAT 32 file systems. The unit supports USB 1.1 only, but will play USB 2.0 devices at USB 1.1 speed.

Acceptable Medium Formats

The following formats are available for the media used in this unit. The maximum number of characters used for file name, including the delimiter (".") and three-character extension, are indicated in parentheses.

- ISO 9660 Level 1 (11 characters)
- ISO 9660 Level 2 (31 characters)
- Joliet (31 characters)
- Romeo (31 characters)

Up to 200 characters can be displayed in the long file name format. For a list of available characters, see the instruction manual of the writing software and the section "Entering File and Folder Names" that follows. The media reproducible on this unit has the following limitations:

- Maximum number of nested folders: 8
- Maximum number of files per disc: 999
- Maximum number of folders per disc: 255

MP3/WMA files written in formats other than those listed above will not play successfully and their file or folder names will not display properly.

MP3/WMA Encoder and CD Writer Settings

Use the following settings when compressing audio data with the MP3 encoder.

- Transfer bit rate: 8 - 320 kbps
- Sampling frequency: 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, 48 kHz

When using a CD writer to record MP3/WMA up to the maximum disc capacity, disable additional writing. To record an empty disc up to the maximum capacity at once, select the "disc at once" option.

Entering ID3 Tag

This unit supports ID3 tag version 2.0. For character codes, refer to the table to the right.

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	@	P	`	p			■	°	À	Đ	à	đ
1			!	1	A	Q	a	q			¡	±	Á	Ñ	á	ñ
2			"	2	B	R	b	r			¢	²	Â	Ò	â	ò
3			#	3	C	S	c	s			£	³	Ã	Ó	ã	ó
4			$	4	D	T	d	t			¤	´	Ä	Ô	ä	ô
5			%	5	E	U	e	u			¥	µ	Å	Õ	å	õ
6			&	6	F	V	f	v			¦	¶	Æ	Ö	æ	ö
7			'	7	G	W	g	w			§	·	Ç	×	ç	÷
8			(	8	H	X	h	x			♪	†	È	Ø	è	ø
9			)	9	I	Y	i	y			©	¹	É	Ù	é	ù
A			*	:	J	Z	j	z			ª	º	Ê	Ú	ê	ú
B			+	;	K	[	k	{			«	»	Ë	Û	ë	û
C			,	<	L	\	l	|			¬	¼	Ì	Ü	ì	ü
D			-	=	M	]	m	}			®	½	Í	Ý	í	ý
E			.	>	N	^	n	~			¯	¾	Î	Þ	î	þ
F			/	?	O	_	o	■			°	¿	Ï	ß	ï	ÿ

Entering File and Folder Names

Names using the code list characters are the only file names and folder names that can be entered and displayed. Using any other character will cause the file and folder names to be displayed incorrectly. The unit recognizes and plays only files with the MP3/WMA extension.

NOTE: A file name entered with characters not on the code list may not play correctly.

Electronic Shock Protection

- 10 seconds for CD-DA (CDA)
- >45 seconds for MP3 recorded at 44.1kHz, 128kbps
- >90 seconds for WMA recorded at 44.1kHz, 128kbps

Bit Rates

The unit supports bit rates from 32 - 320 kbps.

MP3 Playing Order

When selected for play, files and folders (Folder Search, File Search or Folder Select) are accessed in the order in which they were written to the media. As a result, the order in which they are expected to be played may not match the order in which they are actually played. You may be able to set the order in which MP3/WMA files are to be played by assigning file names beginning with play sequence numbers such as "01" to "99". For example, a medium with the following folder/file hierarchy is subject to Folder Search, File Search or Folder Select as shown below.
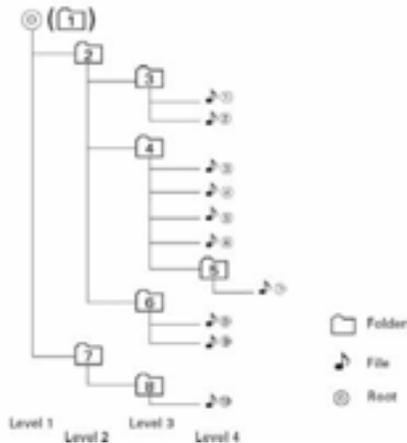
The VM8022 player will only recognize three folder levels and does not display folders containing only other folders. In the example above, the unit will display folders 3, 4, 6, and 8, but not 2 and 7 since they do not contain any tracks directly. Folder 5 is not recognized at all since it is at the fourth level.

Loading an SD Card

Insert the SD card into the SD slot (15) on the front of the radio. The unit will read the files on the card automatically.
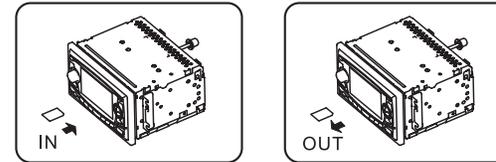
To remove the card, first press the **SRC** button (6) to switch to another mode and stop SD playback. Press the SD card to pop it out, then remove the card.

Loading a USB Device

1. Locate the USB jack (23) located near the bottom right corner on the front of the radio.
2. Pull the left side to lift the rubber cover and reveal the USB jack.
3. Insert the USB device into the USB jack. The unit will read the files on the USB device automatically.
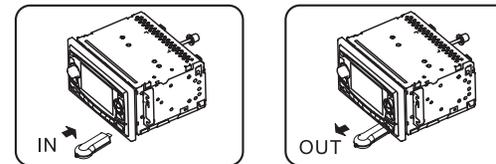
To remove the USB device, press the **SRC** button (6) to switch to another mode and then remove the USB device from the USB jack.

File Playback

When a disc or device (SD, USB) containing individual music, video and/or photo files is inserted, the following screen appears:

Folder Name   File Name

[Maria]01-MOONL 16.MP3

Folder List

| 01.Paul |
| 02.Kevin |
| 03.Mario |
| 04.Richard |
| 05.1 |

File List

01.01-MOONLIG
02.02-ENTERIN
03.03-FIGHT
04.04-NEW WOR
05.05-GODS OF
06.06-ROYAL
07.07-TWILIGH
08.08-PHANTOM
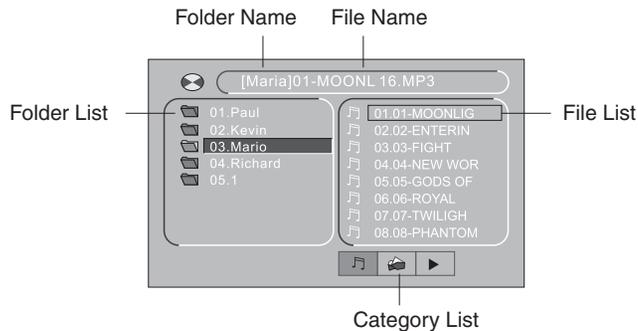
Category List

The category, folder or file list is displayed on screen with the name of the file/folder being played displayed on top. The item currently selected will appear highlighted.

You can change which type of items appear for selection on the screen using the following buttons:

AUDIO

PICTURE

VIDEO

1. Use the ◄/► cursor buttons to highlight the media type, and then press **ENTER** to confirm.
2. Use the ◄/► cursor buttons to enter a folder list and the ▲/▼ cursor buttons to select a folder.
3. Use the ◄/► cursor buttons to enter a file list and the ▲/▼ cursor buttons to select a file.
4. Press **ENTER** to play the file or ■ (stop) to return.

For PICTURE, press the >|| button (8) to play a slide show of any pictures on the media. Press **PROG** to select how the next photo is displayed.

CARE AND MAINTENANCE

DVD Player

The following guidelines will help you extend the life of your DVD player:

1. When cleaning the vehicle interior, do not get water or cleaning fluids on the unit.
2. The DVD player will not operate properly in extreme hot/cold or under damp conditions. In case of such conditions, wait until the vehicle interior reaches a normal temperature or any condensation on the disc player lens has evaporated before using the player.
3. Always remove the disc when the player is not in use.
4. The unit is designed with a vibration dampening disc mechanism to minimize interruption of disc play due to normal vibration in a moving vehicle. However, occasional sound skips may occur when driving on very rough roads. This will not scratch or damage the disc, and normal play will resume when the rough conditions cease.

CD-R and CD-RW Capability

Depending on media type and method of "recording/burning", some CD-R/RWs may be incompatible with this unit. After "recording/burning", the session **must be closed**. Please refer to your software's recommended procedures for closing a disc/session. Review your recording software to familiarize yourself with the correct "recording/burning" procedures. We recommend using the latest versions of ROXIO™ or NERO™ burning software.

In addition, this unit will only recognize the CDDA (Compact Disc Digital Audio), .MP3 and .WMA formats "recorded / burned" onto a CD-R/RW. **This unit does not support .WAV, .OGG or other formats.**

Disc Care and Handling

Dirt, dust, scratches and warpage can cause skips in the playback and deterioration of sound quality. Please follow these guidelines to take care of your compact discs.

1. Do not touch the disc surface.
2. Never use chemicals such as record sprays or household cleaners to clean discs, as they can irreparably damage the disc's surface.
3. Discs should be kept in their storage cases when not in use.
4. Do not expose discs to direct sunlight, high temperatures or high humidity for long periods.
5. Carefully wipe fingerprints, dust and dirt from the disc's playing surface with a soft cloth. Wipe in a straight motion from the inside to the outside of the disc.
6. **Do not stick paper, tape or disc labels on disc surfaces, as internal damage may occur.**

TROUBLESHOOTING

Problem	Cause	Corrective Action
Does not operate (display does not light)	No power to yellow wire; no power to red wire	Check connection with test light; check vehicle fuse with test light
	Fuse blown	Replace fuse
No power to unit	Fuse blown	Check/replace fuse
No/low audio output	Improper audio output connection	Check wiring and correct
	Volume set too low	Increase volume level
	Speakers damaged	Replace speakers
	Heavily biased volume balance	Adjust the channel balance to the center position
	Speaker wiring is in contact with metal part of car	Insulate all speaker wiring connections
Blows fuses	Power wire shorting to ground	Make sure wire is not pinched
	Speaker wires shorting to ground	Make sure wire is not pinched
	Incorrect fuse; fuse too small	Install fuse of correct rating
No image	Incorrect connection to parking brake wire	Check Parking SW wiring and correct
	Parking SW is connected but parking brake is not engaged	Stop vehicle in safe place and apply parking brake
Flashing image or interference appears on screen	DVD is not compatible with current TV system settings	Change setup to accommodate disc
	Improper video signal connections	Check wiring and correct
Prolonged image or improper height/width ratio display	Improper aspect ratio setup	Use correct ASPECT RATIO setting
Disc does not play back	Disc is warped or scratched	Use disc in good condition
	Disc is dirty or wet	Clean disc with soft cloth
	Laser pickup is dirty	Clean laser pickup with cleaning disc
	Incompatible disc is used	Use compatible disc
	Disc rating exceeds RATING limit	Change RATING settings to lower restriction
	Disc region code is not compatible with unit	Use disc with proper region code
	Disc is inserted upside down	Insert disc with label side up
Image blurred, distorted, or dark	Disc is illegally copied	Use original disc

SPECIFICATIONS

CEA Power Ratings

Power Output . . . . .13 watts RMS X 4 channels into 4-ohms @ < 1% THD+N
Signal to Noise Ratio. . . . . 70dBA below reference (reference: 1 watt, 4-ohms)
Frequency Response . . . . .20Hz to 20kHz (-3dB), Auxiliary input used as source reference
Reference Supply Voltage. 14.4VDC

DVD/CD Player

Compatible Disc Media . . . . DVD + R / RW and CD-R / RW
Compatible Media Formats . . . . CD-DA, MP3, WMA, VCD, SVCD, AVI,
. . . . MPEG1 / 2, XviD, DivX and Kodak picture CD (JPEG)
Signal to Noise Ratio. . . . .>95dBA
Dynamic Range. . . . .>95dB
Frequency Response . . . . 20Hz to 20 kHz, -3dB
Channel Separation . . . . > 60dB @ 1 kHz

Video

Format. . . . . NTSC, PAL (auto-detection)
Output 1Vp-p (75-ohm)
Input 1Vp-p (75-ohm)

FM Tuner

Tuning Range . . . . 87.5MHz - 107.9MHz
Mono Sensitivity (-30dB) 10dBf
Quieting Sensitivity (-50dB) 15dBf
Alternate Channel Selectivity 70dB
Signal to Noise Ratio @ 1 kHz 58dB
Image Rejection 75dB
Stereo Separation @ 1 kHz. . . . .>27dB
Frequency Response . . . . .30Hz - 13 kHz, -3dB

AM Tuner

Tuning Range . . . . 530 kHz - 1720 kHz
Sensitivity (-20dB) 15uV
Signal to Noise Ratio @ 1 kHz 50dB
Frequency Response . . . . 50Hz - 2kHz, -3dB

Monitor

Screen Size . . . . .4.0" (Measured diagonally)
Active Area . . . . 88mm x 50mm
Screen Type . . . . Digital TFT Panel
Resolution . . . . 480 (W) X 272 (H) sub pixels
Dot Pitch . . . . 0.061 (H) x 0.183 (V)
Contrast Ratio 100:1
Brightness 200 cd/m2

General

Auxiliary Input Impedance. 10k
Power Supply . . . . 11 to 16VDC, negative ground
Power Antenna (Blue) . . . . .500mA max, current limited protection
Operating Temperature . . . .-20C ~ 65C
Fuse . . . . .15-amp, mini ATO type
DIN Chassis Dimensions. . . . . 2.0 DIN (Double DIN)

*Specifications subject to change without notice.

Limited Warranty
CD or Multimedia Radios/Headunits

Audiovox Electronics Corporation ("the Company") is committed to quality and customer service, and are pleased to offer you this Warranty. Please read it thoroughly and contact the Company at 1-800-323-4815 with any questions.

Who is covered?
The Company extends this warranty to the original retail purchaser of products purchased through an authorized Audiovox retailer in the U.S.A., Puerto Rico or Canada. This warranty is not transferable or assignable. Proof of purchase is required in the form of an original sales receipt.

What is covered?
The Company warrants that should this product or any part thereof, under normal use, be proven defective in material or workmanship within 12 months from the date of original purchase, such defect(s) will be repaired or replaced with a new or reconditioned product (at the Company's option) without charge for parts and repair labor.

What is not covered?
This Warranty *does not* cover the following:
- Damage incurred during shipping or transporting the product to the Company or a service center
- Elimination of car static or motor noise
- Defects in cosmetic, decorative or non-operative structural parts
- Correction of antenna problems
- Costs incurred for installation, removal or reinstallation of the product
- Consequential damage to compact discs, USB devices, digital media cards, accessories or vehicle electrical systems
- Damage caused by improper installation, mishandling, misuse, neglect, accident, blown fuse, battery leakage, theft or improper storage
- Products whose factory serial number/bar code label(s) or markings have been removed or defaced
- Damage resulting from moisture, humidity, excessive temperature, extreme environmental conditions or external natural causes

Please review the "Care and Maintenance" section of your Installation and Operation Manual for additional information regarding the proper use of your product.

Limitations
THE EXTENT OF THE COMPANY'S LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT PROVIDED ABOVE AND, IN NO EVENT, SHALL THE COMPANY'S LIABILITY EXCEED THE PURCHASE PRICE PAID BY PURCHASER FOR THE PRODUCT.

This Warranty is in lieu of all other express warranties or liabilities. ANY IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, SHALL BE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. ANY ACTION FOR BREACH OF ANY WARRANTY HEREUNDER INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY MUST BE BROUGHT WITHIN A PERIOD OF 24 MONTHS FROM DATE OF ORIGINAL PURCHASE. IN NO CASE SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WHATSOEVER. No person or representative is authorized to assume for the Company any liability other than expressed herein in connection with the sale of this product.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damage so the above limitations or exclusions may not apply to you. This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Obtaining Warranty Service
- To obtain repair or replacement within the terms of this Warranty, call 1-800-323-4815 for the location of a warranty station serving your area.
- You must prepay the initial shipping charges to the Company. The Company will pay the return shipping charges for all warranteed products returned to an address within the U.S.A., Puerto Rico or Canada.
- Please package the product securely to avoid shipping damage. We recommend using a carrier that provides tracking service to prevent lost packages. Lost or damaged packages are not covered by this warranty.
- Provide a detailed description of the problem(s) for which you require service.

if it's too
LOUD
you're too
OLD!

JENSEN