VME9020TS

MULTIMEDIA RECEIVER

MANUAL/WARRANTY CARD

AUDIOVOX®

CONTENT

PREPARATION

Congratulations on your purchase of the Audiovox VME9020TS Mobile Multimedia AM/FM/DVD/TV Tuner/SD Card/iPod (ready) Receiver.

It's a good idea to read all of the instructions before beginning the installation. We recommend having your Audiovox VME9020TS installed by a reputable installation shop.

Features

• ISO Double-DIN chassis
• Light weight proprietary DVD core mechanism
• Wide screen (16:9) 6.5" TFT touch screen monitor
• 280 watts total system power
• Center channel speaker output - 1 X 22 watts RMS, 40 watts peak
• Multi-Zone media distribution
• AM/FM RDS Tuner
• TV Tuner with diversity antenna's
• Supports NTSC and PAL, auto negotiation
• Full, Wide, Normal and Off (Standby) screen modes
• Motorized TFT panel has 16 precise angle adjustments via remote control or infinitely variable manual adjustment from the front panel
• Auto-activated rear view camera input - Reverse gear over rides the TFT screen to display video from a rear mounted camera
• Over current motor protection for obstructed TFT panel
• Compatible optical / SD Card formats: DVD-R/RW, DVD+R/RW, CD-R/RW, CD-DA, MP3, WMA, HDCD, SVCD, VCD, MPEG (MPEG 1), MPEG 4, JPEG, MP3/WMA files burned onto a DVD+R/RW or DVD-R/RW and Kodak Picture CD
• SD Card slot
• Multi-language, multi-subtitle and multi-angle playback options
• Last position memory for optical disc
• Parental Lock - Uses a password and disc rating set-up to prevent unauthorized user access from display content
• Audio Mute
• 5-Way joystick navigation
• Two remote controls - a full function front remote control and a limited function Kid-Zone remote control for back seat operation

• Over and under voltage protection to insure the unit operates within designed parameters

• Damped DVD mechanism with 16 Mbit flash memory ESP (Electronic Shock Protection) provide smooth disc playback under the severest road conditions

Tools and Supplies
You will need these tools and supplies to install your VME9020TS:
• Torx type, flat-head 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

WARNINGS!
- Only connect the unit to a 12-volt power supply with proper grounding.
- Never install this unit where operation and viewing could interfere with safe driving conditions.
- To reduce the risk of a traffic accident (except when using for a rear view video camera) never use the video display function while driving the vehicle. This is a violation of federal law.
- Never disassemble or adjust the unit without the assistance of a professional. For details, please consult your local car stereo specialty shop.
- To prevent injury from shock or fire, never expose this unit to moisture or water.
- Never use irregular discs.
- To prevent damage to the mechanism inside this unit, avoid impact to the TFT monitor.
- To prevent damage to the touch screen display, do not use metal, plastic or any other object to attempt to operate the touch screen functions. The touch screen function was designed for hand/finger operation only.
- The monitor employs an automatic motorized mechanism. To prevent damage to the core mechanism, please do not push, pull or swivel the monitor manually.

Battery disposal:
At the end of the product´s useful life, please dispose of it at appropriate collection points provided in your country.

Disconnecting the Battery

To prevent a short circuit, be sure to turn off the ignition and remove the negative (-) battery cable prior to installation.

NOTE: If the VME9020TS 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.

ADJUSTMENT OF THE TOUCH SCREEN MONITOR (SCREEN CAL)

To offer the best performance it is necessary to do the following adjustment direct after the installation into the customers car:

Within the System Setup you will find the Screen Calibration.
Once you select this choice then you will get a green cross at the left upper area at the screen. Please push the middle of the cross for 1 second and then the green cross appears in the lower right corner. Please push once more for 1 second the middle of the cross. Once you did this then the unit switch back to the System Setup and the adjustment is finished.

INSTALLATION

This unit is designed to fit into a 2.0 DIN dashboard opening, found in many imported cars. The unit has threaded holes in the chassis side panels which may be used with the original factory mounting brackets of some Toyota, Nissan, Mitsubishi, Isuzu, Hyundai, Honda... vehicles to mount the radio to the dashboard. Please consult with your local car stereo specialty 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 will be used to mount the new radio.
2. Remove the factory mounting brackets and hardware from the existing radio and attach them to the new radio.
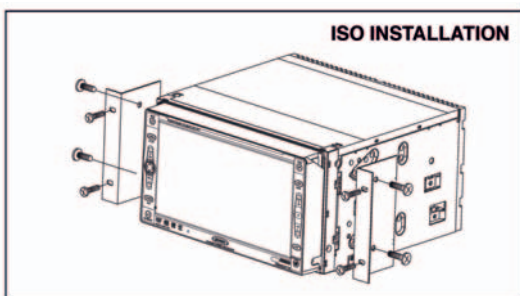
CAUTION: Do not exceed M5 X 6 MM screw size. Longer screws may touch and damage components inside the chassis.

SUBJECT TO TECHNICAL CHANGE

3. Place the radio in front of the dashboard opening so the wiring can be brought through the mounting sleeve. Follow the wiring diagram carefully and make certain all connections are secure and insulated with wire nuts or electrical tape. After completing the wiring connections, plug the ISO connectors into the mating sockets on the rear of the chassis. Turn the unit on to confirm operation (vehicle ignition switch must be "on"). If the unit does not operate, re-check all wiring until the problem is corrected.

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

CAUTION: For proper operation of the CD player, the chassis must be mounted within 30° of horizontal. Make sure the unit is mounted within this limitation.

NOTE: It is the end-users responsibility to install and operate this unit in a manner in accordance with local, state and federal laws. The PARKING BRAKE wire MUST BE CONNECTED as directed in the manual.

CAUTION: Do not block the cooling fan exit. If blocked, the unit may overheat and become damaged.

Using the iAUX3 External AV Connector

The iAUX3 allows you to connect a variety of external devices, including a VCR, DVD player, portable MP3 player, etc., to your VME9020TS without removing the radio.

To install the iAUX3, connect it to the AUX-IN cables on the back of the VME9020TS (see "Wiring" on page 9), and then install the iAUX3 in a location convenient for plugging in auxiliary devices.

Using the Cosmetic Trim Ring

A trim ring is packaged with the VME9020TS for installation flexibility. The VME9020TS will fit into most import dashes with little or no modification to the dash board/cavity. Some European and US domestic vehicle dashes will accept a Double-DIN chassis, but there is usually a small gap between the radio and dash piece after installation is complete. In this case, use the trim ring to conceal any gaps that may be present.

OPTIONAL TRIM RING
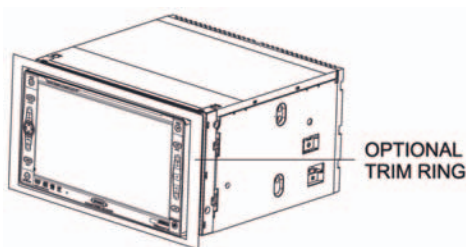
Replacing the Fuse

When replacing the fuse, use a new 10A replacement fuse. Using a fuse with an improper rating could damage the unit and cause a fire.

WIRING
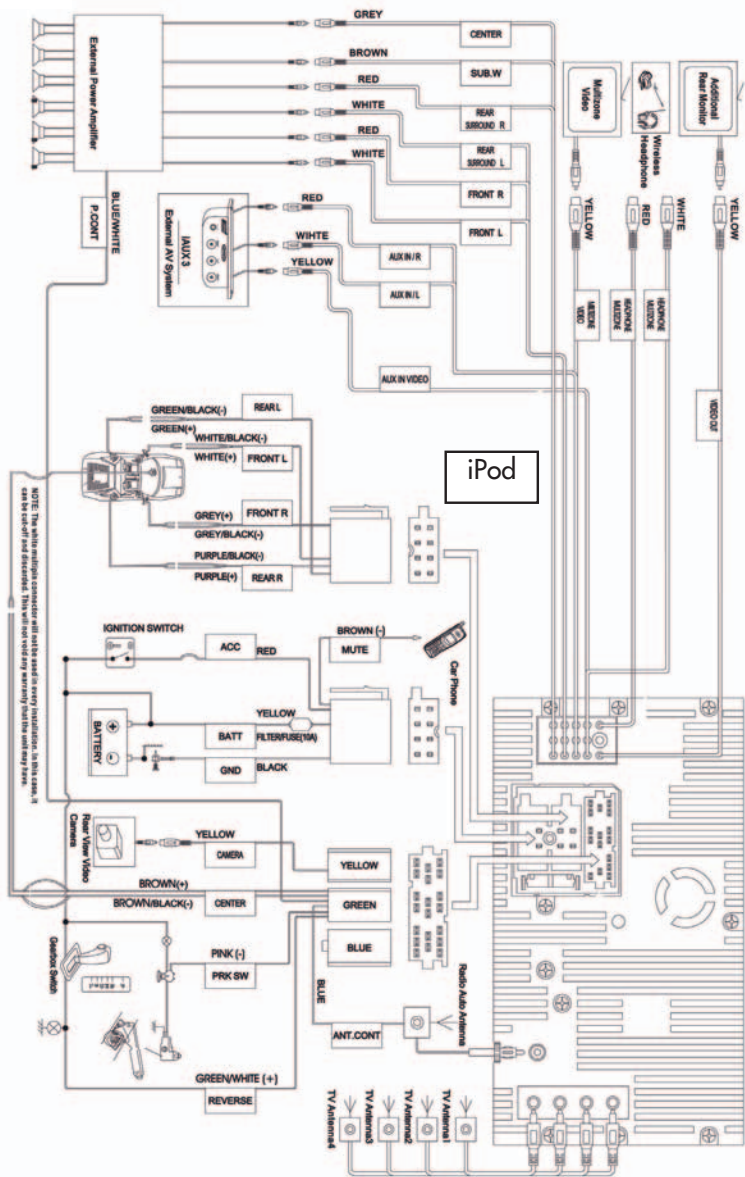
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CONTROLS AND INDICATORS

1. POWER/MUTE
Press the **POWER/MUTE** button (1) once to turn the unit on. Press again to mute the volume. Press and hold to turn the unit off.

2. AUDIO/LOC
Press the **AUDIO/LOC** button (2) to access the audio menu and change and/or confirm audio settings. Press and hold to activate or deactivate the LOCAL (LOC) setting.

3. VOL +
Press to increase the volume.

4. VOL -
Press to decrease the volume.

5. Joystick/ENTER
Press in on the joystick to perform the "enter" function during various applications. Push the key up, down, left or right to perform the following tasks:

6. Joystick/▲
• DVD Mode: Press once for fast forward/fast reverse.
• TUNER Mode: Press to go up one frequency step. Press and hold the button for 2 seconds to activate/deactivate the RDS REG function.
• MENU Mode: Press once to move the cursor up.
• TV Mode: Press once to select a stored TV channel.

7. Joystick/▼
• DVD Mode: Press once for slow forward/slow reverse.
• TUNER Mode: Press to go down one frequency step. Press and hold the button for 2 seconds to activate/deactivate the RDS TA function.
• MENU Mode: Press once to move the cursor down.
• TV Mode: Press once to select a stored TV channel.

8. Joystick/◄
DVD Mode: Press once to play back previous chapter/track.
• TUNER Mode: Press once to auto search for the previous available radio station. Press and hold to increase the tuner frequency step-by-step.
• MENU Mode: Press once to move the cursor to the left.
• TV Mode: Press to go down one frequency step.

9. Joystick/ ▸

• DVD Mode: Press once to enter the next chapter or track.

• TUNER Mode: Press once to auto-search the next available radio station. Press and hold to decrease the tuner frequency step-by-step.

• MENU Mode: Press once to move the cursor to the right.

• TV Mode: Press to go up one frequency step.

10. TUNER

Press to access the radio tuner source and then to change between AM and FM bands.

11. MENU/SRC

Press to access the playing source menu.

12. OPEN

Press the **OPEN b**utton (12) to activate the automatic mechanical system and move the TFT down, exposing the disc and SD card slots. Press again to close the TFT.

13. DISP/PIC

Press the **DISP/PIC** button (13) to adjust the display aspect of the picture to one of three settings: Wide, Full or Normal. Press and hold to access picture settings.

14. CH+

• Press and hold the **CH+** button (14) to adjust the monitor position upright.

• Press to play the next preset AM/FM station.

• Press to play the next stored TV channel.

15. CH-

• Press and hold the **CH-** button (15) to adjust the monitor position outward.

• Press to play the previous preset AM/FM station.

• Press to play the previous stored TV channel.

16. TV

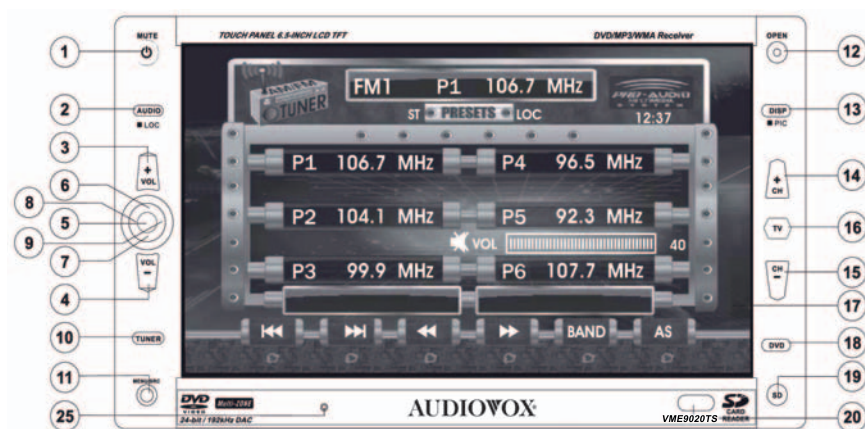• Press to access the TV tuner source.

17. TFT Display

18. DVD

• Press to access the DVD player source.

19. SD

• Press to access the SD card source.

20. IR Remote Control Receiver
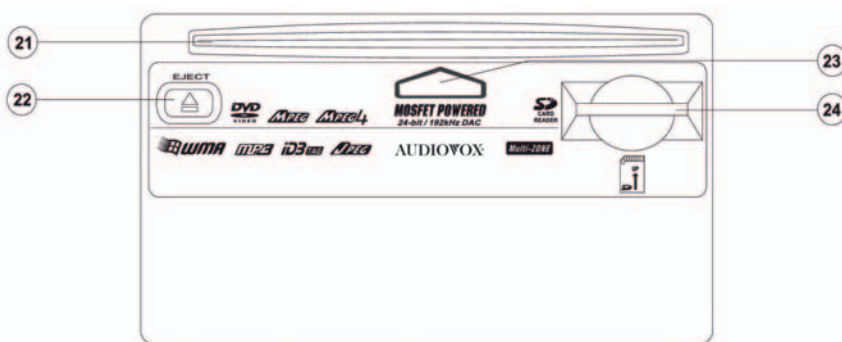
21. Disc Slot
22. Eject Button
• Press once to eject the disc.
• Press and hold to reset the mechanism.
23. Disc Indicator
24. SD Card Slot
25. Reset Button

SUBJECT TO TECHNICAL CHANGE

FRONT ZONE REMOTE CONTROL FUNCTIONS

Button Name/Ref

MENU 1:
DVD: Enters the main menu of the disc
VCD: Turns on PBC when playing VCD

TITLE 2:
DVD: Enters the title menu of the disc
VCD: Plays first ten seconds of each chapter/title

MUTE 3
Toogles on/off audio output

POWER 4:
DVD/VCD/Tuner/CD/MP3: Turns the power on. Press and hold to turn the power off.

AUDIO 5:
Changes the audio language for disc playback

REPT A-B 6:
DVD/VCD: Setup to repeat playback from time frame A to time frame B

REPT 7:
DVD/VCD: Repeats playback of current chapter
CD/MP3: Repeats playback of current track

SCR 8:
DVD/VCD/Tuner/CD/MP3/iPod: Selects front zone playback source

SUBTITLE 9:
DVD: Language selection for subtitle

DISP 10:
DVD/VCD/Tuner/CD/MP3: Displays playing information

ANGLE ▲ 11:
DVD/VCD/TUNER/CD/MP3: Continuously adjusts front panel tilt angle

ANGLE ▼ 12:
DVD/VCD/TUNER/CD/MP3: Continuously adjusts front panel tilt angle

ANGLE 13:
DVD: Plays back disc in different angle for a scene
VCD: Plays back Picture CD with different angle of picture displayed

⏩ 14:
DVD/VCD/TUNER/CD/MP3: Fast forwards the disc content

VOL- 15:
DVD/VCD/TUNER/CD/MP3: Decreases volume

VOL+ 16:
DVD/VCD/TUNER/CD/MP3: Increases volume

⏮ 17:
DVD: Selects the previous chapter for playback
VCD: Selects the previous chapter for playback
TUNER: Searches an available radio station by decreasing tuning frequency
CD/MP3: Selects the previous track for playback

▶/II 18:
DVD: Pauses playback/starts playback
VCD: Pauses playback/starts playback
TUNER: Scans FM/AM radio station; plays/stores radio station; deletes radio station
CD/MP3: Pauses playback/starts playback

⏭ 19:
DVD: Selects the next chapter for playback
VCD: Selects the next chapter for playback
TUNER: Searches an available radio station by increasing tuning frequency
CD/MP3: Selects the next track for playback

■ /BAND 20:
DVD: Stops playback
VCD: Stops playback
TUNER: Selects FM/AM band
CD/MP3: Stops playback

GOTO 21:
DVD/VCD: Goes to specific time frame and playback

❙▶ 22:
DVD/VCD: Slow playback/slow rewind playback

ZOOM 23:
DVD/VCD: Zooms in/out on an image

PIC 24:
DVD/VCD: Displays set-up parameters

OPEN/CLOSE 25:
DVD/VCD/TUNER/CD/MP3: Opens/Closes the TFT monitor

⌄ 26:
DVD/VCD/TUNER/CD/MP3: Decreases monitor tilt angle

⌃ 27:
DVD/VCD/TUNER/CD/MP3: Increases monitor tilt angle

WIDE 28:
DVD/VCD/TUNER/CD/MP3: Selects display mode: WIDE, NORMAL, or FULL

0-9 (Numeric Keypad) 29:
DVD: Directly accesses chapter
TUNER: 1-6 selects preset for current band
CD/MP3: Directly accesses track

DVD SETUP 30:
DVD/VCD/TUNER/CD/MP3: Access DVD Setup menu

SYS SETUP 31:
DVD/VCD/TUNER/CD/MP3: Access System Setup menu

SEL 32:
Audio adjustment (EQ, Bass, Treble, Fader, Bal, Sur, Loud)
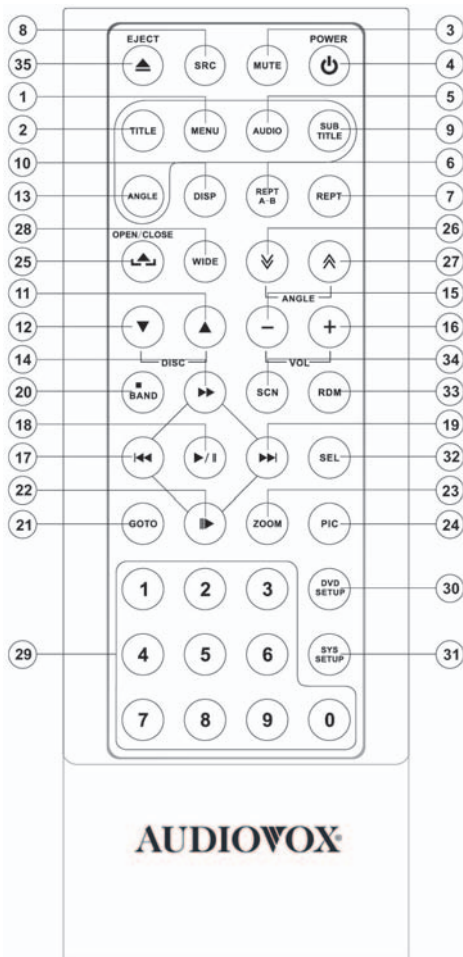
RDM 33:
DVD: Plays all chapters in random order
CD/MP3: Plays all tracks in random order

SCN 34:
CD/MP 3: Plays the first ten seconds of each track

EJECT 35:
DVD/VCD/TUNER/CD/MP3: Ejects disc

Note: Your remote control may differ slightly from the one pictured here. The above diagram is for illustrative purposes only.

MULTI-ZONE REMOTE CONTROL FUNCTIONS

Button Name/Ref

MENU 1:
DVD: Enters the main menu of the disc
VCD: Turns on PBC when playing VCD

TITLE 2:
DVD: Enters the title menu of the disc
VCD: Plays first ten seconds of each chapter/title

MUTE 3:
DVD/VCD: Toggles on/off audio output

AUDIO 5:
DVD: Switches the audio language for disc playback

REPT 7:
DVD/VCD: Setup to repeat playback of each chapter/title/disc

R.SRC 8:
DVD/VCD: Selects playing mode for rear zone

SUBTITLE 9:
DVD: Language selection for subtitle

▸▸ 14:
DVD/VCD: Fast forwards the disc content

I◂◂ 17:
DVD/VCD: Selects the previous track/chapter for playback

▸/II 18:
DVD/VCD: Pauses playback/Starts playback

⏭ 19:
DVD/VCD: Selects the next track/chapter for playback
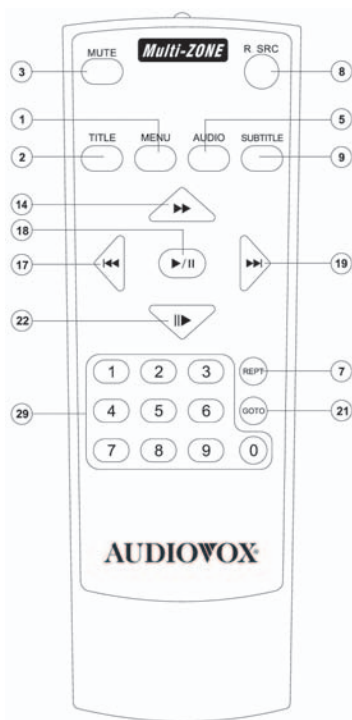
GOTO 21:
DVD/VCD: Goes to specific time frame and playback

❚❚▶ 22:
DVD/VCD: Slow playback/slow rewind playback

0-9 (Numeric Keypad) 29:
DVD: Directly accesses chapter

Note: Your remote control may differ slightly from the one pictured here. The above diagram is for illustrative purposes only.

SUBJECT TO TECHNICAL CHANGE

USING THE TFT MONITOR

Open/Close TFT Monitor
Press the **OPEN** button (12) on the front panel or press the (▲) button (25) of the front zone remote control to open/close the monitor.

TFT Monitor Auto Open
• If "TFT Auto Open" is "on" when the unit is turned on, the monitor automatically moves to the last viewing position.
• If "TFT Auto Open" is "off" when the unit is turned on, press the **OPEN** button (12) or (▲) button (25) on the front zone remote control to move the monitor into the desired viewing position.

Monitor Tilt Angle Adjustment
A known characteristic of LCD panels is the quality of the display in relationship to the viewing angle. The monitor angle can be adjusted for optimum viewing using one of the following methods:
• Press the (⋀) or (⋁) buttons (3, 4) on the remote control or the **CH+** or **CH-** button (14, 15) on the front of the unit to adjust the tilt angle of the screen one step at a time
• Press and hold the to adjust the tilt angle of the screen one step at a time.

Rear Camera Mode
When the vehicle is placed in "Reverse", and an optional rear camera is connected to the VME9020TS, the TFT monitor will automatically switch to the camera input source.

Aspect Ratio
The following sources only have the WIDE and OFF aspect ratio option: AM/FM RDS Tuner, CD-DA, SD Card, DVD+R/RW, DVD-R/RW and CD-R/RW with music files. Press the **WIDE** button (28) on the remote control to adjust the aspect ratio as follows:
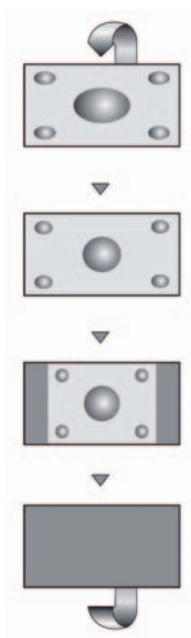
FULL
The entire screen is extended horizontally to the aspect ratio of 16 to 9. The extension ratio is the same at any point.

WIDE
The screen is extended horizontally to the aspect ratio of 16 to 9. The extension ratio increases toward the right and left ends of the screen.

NORMAL
The conventional display image has a 4 to 3 ratio of horizontal to vertical, leaving a blank area on the right and left sides of the display.

OFF

Image Setting
Video Output Format
Table 3 shows the video output format for each playing source.

Table 3: Video Output Formats

Playing Source	Video Output Format
TUNER	RGB Mode
DVD	RGB Mode
AUX IN	CVBS Mode
CAMERA	CVBS Mode
TV	CVBS Mode

*CVBS - Composite Video Baseband Signal

Adjustable Parameters

While in DVD or TUNER mode, the only parameter that can be adjusted is brightness (BRIGHT). To access "PICTURE", "COLOR", "CONTRAST", and "TINT" you must be in AUX or CAMERA mode.

NOTE: *The default adjustment is "O" in PAL mode. Tint is unavailable for adjustment.*

Parameter Adjustment Procedure
1. Enter Picture Quality Setting mode:
Press the **PIC** button (24) on the remote or press and hold the **DISP/PIC** button (13) on the unit.
2. Select Item to Set:
Press the (▸▸) (Ⅰ▸) buttons (14, 22) on the remote or press and hold the (▲) or (▾) buttons (18, 19) on the monitor panel.
3. Set Parameters:
Press (Ⅰ◂◂) (▸▸Ⅰ) buttons (17, 19) on the remote or press (◂) (▸) buttons (8, 9) on the unit.
4. Exit Picture Quality Setting Mode:
Press the **PIC** button (24) on the remote or press and hold the **DISP/PIC** button (13) on the monitor panel.

Parking Brake Inhibit

• When the "PRK SW" cable is connected to the brake switch, the display on the TFT monitor will display video only when the vehicle is applied.
• Parking brake function is overridden when the video source is set to CAMERA.
• When the parking brake inhibit is active, the front monitor displays "Parking Is On", preventing the driver from watching content while driving. Rear video screens are not affected.

Monitor Movement Mechanism

If an obstruction occurs in the monitor path, the motion will stop automatically to prevent damage to the mechanism or monitor.
Normal operation is resumed by pressing the **OPEN** button (12) or disconnecting and reconnecting the power.

OPERATING INSTRUCTIONS

Power On / Off
Press the **MUTE** button (1) to turn the unit on. The buttons on the front of the unit light up.

Press and hold the **MUTE** button (1) on the front panel or the **POWER** button (4) on the remote to power off the unit.

Audible Beep Confirmation
An audible beep tone confirms each function selection. The beep tone cannot be disabled.

Mute
Press the **MUTE** button (1) on the front panel or the **MUTE** button (3) on the remote to mute the volume from the unit. Press the **MUTE** button again to restore the volume. The mute icon flashes on the right side of the screen. Adjusting the volume or using any of the audio set-up features cancels the mute function.

Playing Source Selection
Press the **SRC** button (11) on the remote to change between available playing sources in the following order: TUNER, DVD, AUX IN, iPod or CAMERA (rear view video camera). The playing mode is displayed on the screen.
Press the **MENU/SRC** button (11) on the unit to access the playing source menu. Use the direction buttons on the joystick (6, 7, 8, 9) or remote control (14, 17, 18, 19, 22) to select a playing source, then press the ▶/II button (18) or the joystick enter button (5) to enter the selected source.

AUX IN Mode
An external peripheral device can be connected to this unit via RCA output and "AUX-IN".

CAMERA Mode
"CAMERA" mode is only available if the camera is connected and during reverse driving. To install a rear view video camera, connect the video input cable to the camera output cable.

Volume Adjustment

To increase or decrease the volume level, turn the **ROTARY ENCODER** (6) on the front panel or press the **VOL+/VOL-** buttons (15, 16) on remote control. When the volume level reaches "0" or "40", a beep sounds, indicating that the adjustment limit has been reached. The volume ranges from "0" to 40". The LCD or TFT screen displays the volume level for 3 seconds.

Programmable Turn-On Volume

This feature allows the user to select a turn-on volume setting regardless of the volume setting prior to turning the unit off.

To program a specific volume level, push and hold the **AUDIO** button (2) while the yellow volume bar is displayed on the screen. The unit will beep two times to confirm your turn-on volume setting.

AUDIO CONTROL MENU

The Audio Control feature allows you to easily adjust your audio system to meet the acoustical characteristics of your vehicle, which vary depending on the type of vehicle and its measurements. To get the best possible sound quality from your new system, be sure to adjust the settings for the speakers as well. Proper setting of the Fader and Balance boosts the effects of the cabin equalizer.

Accesing the Audio Control Menu

Push the **AUDIO/LOC** button (2) on the front panel once to display the "AUDIO" menu.

Selecting an Audio Feature for Adjustment

Press the (◄)/(►) buttons (8, 9) on the joystick or the (◄◄)/(►►) buttons (17, 19) on the remote control to select the audio feature to be adjusted.

Adjusting an Audio Feature

Press the (►►)/(I►) buttons (14, 22) on the remote control or the (▲)/(▼) buttons (6, 7) on the joystick to adjust the selected feature to the desired setting.

Table 4: Audio Adjustments

Audio Function	Adjustable Range
EQ	User
	Flat
	Jazz
	Pop
	Classical
	Rock
	Vocal
Bass	-14 to +14
Treble	-14 to +14
Fade	-9 to +9
Bal	-9 to +9
SW	- 7 to +7
Loud	Off, 1-4

Note: The Bass and Treble levels are only adjustable when EQ is set to "User" mode.

The Loud function compensates for deficiencies in sound ranges at low levels. Loudness levels range from 1-4 or "off". When the Loud function is on, LOUD is displayed on the screen.

Exiting the Audio Control Menu
Press and hold the **AUDIO/LOC** button (2) or stop making adjustments for a few seconds to exit the audio control menu.

Six-Channel Audio Control

Note: *Before adjusting the volume of any speaker, please refer to "Surround Setup" on page 55.*

Table 5:6-Channel Audio Adjustments

Item	Adjustable Range
Master Volume	00 to 40
Front Left Channel Volume	-10 to +10
Front Right Channel Volume	-10 to +10
Rear Left Channel Volume	-10 to +10
Rear Right Channel Volume	-10 to +10
Center Channel Volume	-10 to +10
Subwoofer Volume	-10 to +10

Rear Zone
If a monitor is installed in the rear zone and connected to the rear zone AV output, passengers in the back seat can control the DVD output using the rear zone remote control. See "Multi-Zone Remote Control" on page 18 for instructions.

System Reset
To correct a system halt or other illegal operation, use the tip of a pen to press the **RESET** button (25) located on the front bottom-left corner of the unit. After a system reset, the unit restores all factory default settings.

(RESET) Button

Note: *If the unit is reset while a DVD is playing, the DVD resumes play once the reset is complete.*

Line Mute
If the "MUTE" wire is connected, audio output mutes when a telephone call is received by the car phone. See "Wiring" on page 9.

SYSTEM SETUP MENU

In "System Setup" mode, "ASP CONFIG", "RDS SETUP" and "GENERAL SETUP" are available for adjustment. Setup can be performed by pressing the dedicated button on the remote control or by pressing the **MENU/SRC** button (11) on the front panel.
For system settings, press the **SYS SETUP** button (31) on the remote control or touch "SETUP" on the screen to enter the "SETUP" menu. "SYS SETUP" is highlighted in green.
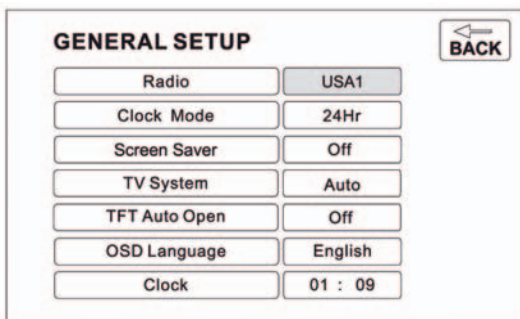
General Setup Menu
Accessing the General Setup Menu
To access the "GENERAL SETUP" Menu, press the direction buttons on the joystick (6, 7, 8, 9) or remote control (14, 17, 18, 19, 22) to highlight "GENERAL SETUP" in green.
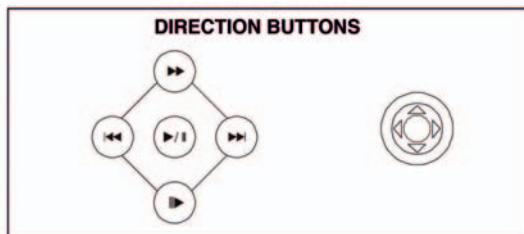
Press the ▸ / II button (18) on the remote control to enter the "GENERAL SETUP" menu. A menu appears with the option for the first item, "Radio", highlighted in light blue.

GENERAL SETUP   BACK

Radio	USA1
Clock Mode	24Hr
Screen Saver	Off
TV System	Auto
TFT Auto Open	Off
OSD Language	English
Clock	01 : 09

Selecting a Feature for Adjustment

Press the ▸▸ or II ▸ buttons (14, 22) on the remote control or the ▲ or ▾ buttons (6, 7) on the joystick to select the feature to be adjusted.

Adjusting a Feature

1. Enter the option field for the feature you want to adjust by pressing the ▸ / II button (18) on the remote or by pressing the **ENTER** (joystick) button (5) on the unit. A sub-menu appears in a second row with the selected option highlighted in light blue.
2. Select a new value by pressing the ▸▸ or II ▸ buttons (14, 22) on the remote control or the ▲ or ▾ buttons (6, 7) on the joystick.
3. Confirm your selection by pressing the II ▸, I◂◂, or ▸▸I buttons (14, 17, 19) on the remote control, or the ◂ or ▸ button (8, 9) on the joystick. The new value is highlighted in light blue and setup is complete.

Table 6: General Setup Menu Features

Setting	Options	Function
Radio	USA1	Select the appropriate setting based on the country in which you reside.
	S. Amer 1	
	Arabia	
	China	
	S. Amer 2	
	Europe	
	Korea	
Clock Mode	12H	Clock displays 12 hour time using AM and PM.
	24H	Clock displays 24 hour time up to 23:59.
Screen Saver	On	Turn screen saver on/off.
	Off	
TV System	Auto	The color signal output is switched automatically based on the current disc.
	NTSC	The color signals are output in the standard NTSC format.
	PAL	The color signals are output in the standard PAL format.
TFT Auto Open	On	The TFT panel automatically opens when the unit is turned on.
	Off	You must press the OPEN button (12) to open the TFT panel.
OSD Language	English German Italian	The menus are displayed in English, German and Italian
Clock	(HH:MM)	See "Adjusting the clock" to learn how to set the clock.
BACK		Return to previous menu.

Adjusting the Clock

1. Access the "Clock" setting under the General Setup menu.
2. Press the ▸▸ or ‖▸ buttons (14, 22) on the remote control or the ▲ or ▾ buttons (6, 7) on the joystick to move the cursor to the "Hour" or "Min" position.
3. Press the ⊯ or ⊯ buttons (17, 19) on the remote control or the ◂ or ▸ buttons (8, 9) on the joystick to adjust the hour or minutes.
4. Press the ‖▸ button (14) on the remote control to confirm setup.

Returning to the System Setup Menu

To return to the System Setup menu, move to BACK, then press the ▸/‖ button (18) on the remote control.

ASP (Audio Sound Processing) Config Menu

The ASP Config Menu allows you to make fine audio adjustments.

Accessing the ASP Config Menu

To access the "ASP CONFIG" Menu from the "SYSTEM SETUP" menu, press the direction buttons on the joystick (16, 17, 18, 19) or remote control (14, 17, 18, 19, 22) to highlight "ASP CONFIG" in green. Press the ▸/‖ button (18) on the remote control to enter the "ASP CONFIG" menu. A menu appears with the option for the first item, "Bass Center Freq", highlighted in light blue.

ASP CONFIG   ⇐ BACK

Bass Center Freq	200HZ
Treble Center Freq	17KHZ
SUB.W Filter	120KHZ
SUB.W Phase	0D
Bass Q-Factor	1.25

Adjusting a Feature

1. Enter the option field for the feature you want to adjust by pressing the ▶/II button (18) on the remote or by pressing the **ENTER** (joystick) button (5) on the unit.

A submenu appears in a second row with the selected option highlighted in light blue.

2. Select a new value by pressing the ▶▶ or II▶ buttons (14, 22) on the remote control or the ▲ or ▼ buttons (6, 7) on the joystick.

3. Confirm your selection by pressing the II▶, ◀◀ or ▶▶ buttons (14, 17, 19) on the remote control, or the ◀ or ▶ button (8, 9) on the joystick. The new value is highlighted in light blue and setup is complete.

Table 7: ASP Config Menu Features

Setting	Options	Function
Bass Center Freq	60Hz	According to the audio source, select the Bass Center Frequency to achieve the best Bass effect.
	80 Hz	
	100Hz	
	130Hz	
	150Hz	
	200Hz	
Treble Center Freq	10KHz	According to the audio source, select the Bass Center Frequency to achieve the best Treble effect.
	12.5KHz	
	15KHz	
	17KHz	
Sub.W Filter	80Hz	Selecting a crossover frequency sets a cut-off frequency of the subwoofer´s LPF (low-pass filter) and the "SMALL" speakers`HPF (high-pass filter). The Crossover frequency setting has no effect if the subwoofer is set to "OFF" and any other speaker is set to "LARGE".
	120Hz	
	160Hz	
Sub.W Phase	OD	Subwoofer output IN phase
	180D	Subwoofer output OUT OF phase
		Note: Depending on your installation, reversing the sub-woofer phase may increase Bass output.
Bass Q-Factor	1.0	When the Bass Center Frequency is selected, adjusting the Bass Q-Factor alters the sharpness of the Bass output.
	1.25	
	1.5	
	2.0	
BACK		Return to previous menu.

Exiting the System Setup Menu

To exit setup mode and resume normal playback, press the **SYS SETUP** button (31) on the remote control or the **DISP** button (13) on the front panel.

MULTI-ZONE OPERATION

Independent sources can be played simultaneously on the VME9020TS. For example, a video game console can be seen on the front screen while DVD video is available to rear passengers.

NOTE: If DVD is selected as the front source and SD Card is selected for the rear source, then both sources will switch to SD Card. If SD Card is selected as the front source and DVD is selected for the rear source, then both sources will switch to the DVD source. Since the multimedia processor is shared between optical and SD Card media, one of the other can be selected but not both simultaneously.

Selecting a Source for the Front Zone

To access the FRONT ZONE SOURCE MENU, touch the TFT screen in the top left corner of the screen.

This menu allows you to select a source for the front zone.

Selecting a Source for the Rear Zone

To access the rear zone SOURCE MENU, touch the top right corner of the screen, near the Multi-ZONE icon.
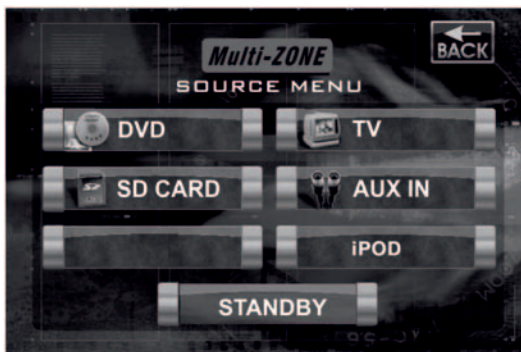
Select the source to be directed to the rear Multi-ZONE RCA outputs.

NOTE: Optical media and an SD Card cannot be selected from the Multi-ZONE Source Menu simultaneously.

NOTE: The AM/FM tuner graphics will change to a "blue screen" background when any optical or SD Card media is selected from the Multi-ZONE menu. In addition, only the top left (Front Zone Source Menu) and right (Multi-ZONE Source Menu) quadrants of the touch screen are active during this mode of operation.

TUNER OPERATION

Tuner TFT Display
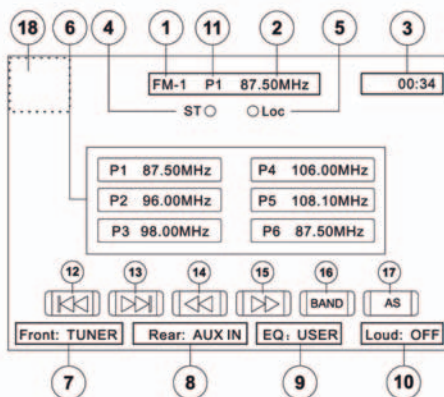
1. Current Radio Band Indicator
2. Radio Frequency Indicator
3. Clock
4. Stereo Broadcasting Indicator
5. Strong Local Signal Broadcasting Indicator: Touch and hold to activate/deactivate Local function
6. Preset Radio Stations: Touch to recall preset stations or touch and hold to store a station
7. Front Zone Playing Mode
8. Rear Zone Playing Mode
9. User Defined Equalizer Level
10. Loud Setting Indicator
11. Current Preset Station Indicator
12. ⏮: Touch to seek backward
13. ⏭: Touch to seek forward
14. ⏮: Touch to tune backward one step
15. ⏩: Touch to tune forward one step
16. **BAND:** Touch to change between AM/FM bands
17. **AS:** Touch to automatically store stations
18. Touch this area to return to the MAIN MENU

SUBJECT TO TECHNICAL CHANGE

Switch to Radio Tuner source
Press the **TUNER** button (10) on the front panel or the SRC button on the remote control (8) to switch to the TUNER source.

Select FM/AM Band
Touch the **BAND** button (16) on the screen, or press the **TUNER** button (10) on the unit or the **BAND** button on the remote control (20) to change between the following bands: FM1, FM2, FM3, AM1 and AM2.

Auto Tuning
Press and hold the ▸▸| button (19) on remote control or screen, or the ▸ button on the joystick (9) to seek the next available radio station by increasing the tuning frequency. Press the button again to stop searching.

Press and hold the |◂◂ button (17) on the remote control or screen, or the ◂ button on the joystick (8) to seek the next available radio station by decreasing the tuning frequency. Press the button again to stop searching.

Manual Tuning
Press the ▸▸ or ||▸ buttons (14, 22) on the remote control or screen, or the ▲ or ▾ buttons (6, 7) on the joystick to increase or decrease the tuning frequency one step.

Press and hold the buttons to continuously tune until you release them.

Using Preset Stations
Six numbered preset buttons store and recall stations for each band. All six stored stations (P1-P6) for the current band appear on the screen.

Storing a Station
1. Select a band (if needed), then select a station.
2. Touch and hold an on-screen preset button (6) for three seconds. The preset number appears at the top of the display.

Recalling a Station
1. Select a band (if needed).
2. Touch an on-screen preset button (6) to select the corresponding stored station.

P1 87.50MHz	P4 106.00MHz
P2 96.00MHz	P5 108.10MHz
P3 98.00MHz	P6 87.50MHz

Auto Store (AS)
Automatic Storing of Preset Stations
To select six strong stations and store them in the current band:
1. Select a band (if needed).
2. Touch **AS** (17) for 2 seconds to activate the Auto Store function.

The new stations replace stations already stored in that band.

Local Radio Station Seeking (LOC)
When the Local function is on, only radio stations with a strong radio signal are play-ed. To activate the Local function in AM/FM tuner mode, press and hold the **AUDIO/LOC** again to turn Local off.
When the Local function is active, "LOC" appears on the screen and a green indicator is illuminated.

RDS INFORMATION

Within the RDS Setup Menu (OSD) you will find the following setup possibilities.

OVERVIEW OF THE RDS FUNCTION
A) Notes:
- RDS is only available for FM receiption
- The PS function allows station names to be displayed in clear letters.

- Network Tracking receiption uses the PI and AF codes. The PI code identifies the country, area and broadcast system. AF lists up which reception frequencies at the area are broadcasting the same program and automatically changes to the best reception quality offering frequency without the need to interrupt the program by a seek function.
- Traffic programmes and announcements can be automatically received using the TA features.
- The station name is displayed automatically when a RDS station is received.

B) AF (Alternative Frequencies / REG (Regional):
RDS AF Function

There are the following possible modes available:

- AF off: The network tracking is deactivated. Only station name will be displayed.
- AF on: Network tracking is activated. AF function changes between stations belonging to the broadcast network being received.
(Can be adjusted within the RDS Setup menu)

Note: When this unit is set to this mode (REG OFF), a station broadcasting a different regional program in the same network may be received at certain times. This can happen only in case of listening to regionalized programs; no malfunction!

- AF on / REG ON: Network tracking is activated. Regional mode is engaged (AF function changes between stations broadcasting the same program at all times).
Regional mode shall be selected only in case of driving in certain local areas.
(Can be adjusted within the RDS Setup menu)
- RDS may not operate correctly in areas where no alternative station can be received.
- In reception borderland of a program chain normally no alternative stations can be found. In this case also a high advanced RDS function cannot help anymore, another program- of the driving area- must be selected.
- Especially in regional mode such reception borderland can be often reached. Because of possible reduced reception quality, the regional function shall be used only for driving short distances.

- If the RDS station does not suport AF data list or if the tuner cannot read AF data from reception, no network tracking is possible. Switching to alternative frequencies does not work.

After turning the RDS feature on, AF can be set to become "ON" or "OFF" using the OSD menue.

- AF "OFF": When the AF switching mode is set to OFF and RDS is set to "ON", a maximum number of 6 RDS and non-RDS channels will be stored together.

- AF "ON": When the AF switching mode is set to ON the RDS station information will only be displayed.

- Illuminated AF Segment: When the AF switching mode is "ON", the radio continually checks the AF signal strength. The interval of checking time of each AF depends on the signal strength of current station which can be anywhere from a few seconds for strong station to a few minutes for weak station. Every time a new AF is stronger than a current station, the AF will switch over to the stronger station quickly.

- REG mode "ON": When the Region mode is set to ON the AF switching is implemented to the station that has all PI codes that are same as the current station. "REG ON" should be shown on screen. (Can be adjusted within the RDS Setup menu)

- REG mode "OFF": When the regional mode is "OFF" the radio may switch from a national program station to a local variant of that program, or from a local station in an area to a local station in another area. This may cause customers to listen to a wrong program. To avoid this feature set the Region mode to "ON", and then the radio will only switch to an AF that broadcasts Region mode to the same program. To switch the REG function "ON"/"OFF" please push the right joystick for 2 seconds up (see page 10 button 6).

TA (Traffic Announcement) / TP (Traffic Program)

TP mode will automatically switch between "ON" and "OFF" depending upon the broadcast. In order to access the TA mode. To switch the TA function "ON"/"OFF" please push the right joystick for 2 seconds down (see page 10 button 7). When the TA mode is "ON" and a traffic announcement is received the following may occur:

1. The unit will switch from the different sources temporarily to radio mode.
2. The volume level will be raised to the threshold point.
3. When a TP station is received, the OSD will display "TA ON".

TA Volume (traffic announcement volume increasement)

In the RDS Setup you can adjust between 0-7.

PTY

Within the PTY field will be displayed additional broadcaster information.

DVD PLAYER OPERATION

NOTE: When properly installed, DVD video cannot be displayed on the main TFT screen unless the parking brake is applied. If you attempt to play a DVD while the vehicle is moving, the TFT screen displays "PARKING" with a blue background. Rear video screens, if applicable, will operate normally.

Opening/Closing the TFT Video Screen
Opening the TFT Screen
To open the TFT video screen, press the **OPEN** (2) button. The unit beeps and then open.

Note: The unit includes security closing of the monitor after 30 seconds after ejecting a CD/DVD and no new CD/DVD is inserted!

Closing the TFT Screen
Press the **OPEN** (12) button again to close the TFT screen. If the screen is in the "IN" position, it moves out before closing.

Insert/Eject Disc
Upon inserting a DVD disc, DVD mode is entered disc play begins. If the screen is closed, the DVD indicator appears lit on the LCD screen.

NOTE: If Parental Lock (Rating) is activated and the disc inserted is not authorized, the 4-digit code must be entered and/or the disc must be authorized (see "RATING (Parental Lock) Menu" on page 57).

You cannot insert a disc if there is already a disc in the unit or if the power is off.

NOTE: CD-R/RW, DVD-R/RW, DVD+R/RWs will not play unless the recording session is closed.

Ejecting a Disc
Press the ▲ button (22) on the unit or remote control (25) to eject the disc. The unit automatically reverts to Tuner mode. You may eject a disc with the power off and the unit remains off after the disc is ejected.

Reset the Loading Mechanism
If the disc loads abnormally or an abnormal core mechanism operation occurs, press and hold the ▲ button (22) on the unit or remote control (25) to reset the loading mechanism. Normal operation resumes.

Accessing DVD Mode

To switch to DVD mode when a disc is already inserted, press the **DVD** button (18) on the front panel or press the **SRC** button (8) on the remote control until DVD appears at the bottom of the screen.

Using the Touch-Screen Controls

The touch key areas for DVD playback are outlined below.
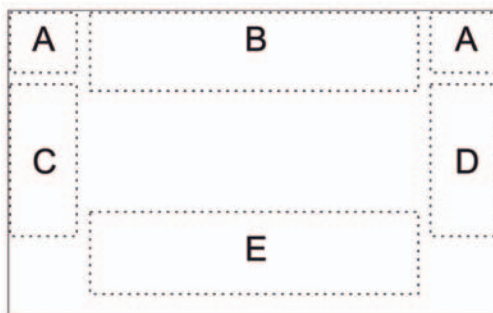
A – Return to MAIN MENU
B – DISP key: Displays playing information
C – Select previous chapter
D – Select next chapter
E – Display the following on-screen controls: Menu, ▶/II, ■, ◄◄, ►►I, I◄◄, ►►.

Controlling Playback

Stopping Playback

Touch the stop button (■) on the screen or press the ■/**BAND** button (20) on the remote control to stop DVD play.

Pausing Playback

Touch the play/pause button (▶/II) on the screen or press the ▶/II button on the remote control (18) to suspend or resume disc play.

Slow Motion Playback

Press the II▶ button (22) on the remote control or the ▼ button (7) on the joystick to play the current title in slow motion at 1/2, 1/4, 1/6 or 1/7, the normal speed. Press ▶/II (18) to resume normal play. Continue pressing the II▶ or ▼ button to slow reverse.

Repeat Playback

Press the **REPT** button (7) on the remote control to alter repeat mode according to the following:
• DVD: Repeat Title, Repeat Chapter, Repeat Off
• VCD (PBC Off): Repeat Single, Repeat Off
• MP3: Repeat Single, Repeat Folder, Repeat Off

NOTE: For VCD play, the repeat function is not available if PBC is on.

Sectional Repeat Function (A-B)

Use the A-B function to define a specific area of a disc to repeat.
• Press the **REPT A-B** button (6) on the remote control to set the start point (A) of the repeated section.
• Press the **REPT A-B** button again once you reach the desired end point (B) of the repeated section. The selected portion of the DVD will now repeat continuously.
• Press the **REPT A-B** button again to cancel the A-B section setting and stop repeat play.

Random Playback

With a DVD, VCD, or CD playing, press the **RDM** button (33) on the remote control to activate random playback and play all chapters/tracks in random order. "On" appears on the screen.

Press the ▶▶ button (19) on the remote control or the ▶ button on the joystick (9) to play the next random track. Press the **RDM** button again to turn random play off.

NOTE: When a VCD is playing with PBC turned "On", activating random playback automatically turns PBC off.

Accessing the DVD Menu

Press the **MENU** button (1) on the remote control to recall the main DVD menu. Use the directional (arrow) buttons (◀ , ▶ , ▲ & ▼) on the joystick (16, 17, 18, 19) to select a title from the menu.

Press the **TITLE** button (2) on the remote control to select a different title for playback.

Press the ▸/II button (18) on the remote control or the **ENTER** (joystick) button (20) to confirm your selection and begin playback.

Moving Through Chapters
Press the ▸▸I button (19) on the remote control or the ▸ button on the joystick (17) to advance to the next chapter on the DVD.

Press the I◂◂ button (17) on the remote control or the ◂ button on the joystick (16) to move to the previous chapter.

Fast Forward/Fast Reverse
Press the ▸▸ button (14) on the remote control or the ▴ button (6) on the joystick to fast forward. Keep pressing and releasing the button to increase the rate from "2X" to "4X", "8X", and "20X". Continue pressing the ▸▸ or ▴ button to fast reverse.

Scanning
Press the **SCN** button (34) on the remote control to play the first ten seconds of each chapter. Press SCN again to stop the scan function and play the current chapter.

Selecting 2-Channel and 6-Channel Audio Playback

2-Channel Audio (Down Mix) Support for CD, iPod, SD Card and DVD
Linear pulse code modulation (LPCM) and pulse code modulation (PCM) support is available for CD, SD Card and DVD discs when 2-channel audio is selected.

6- Channel Audio Support for CD, SD Card and DVD
Surround I is available for decoding analog or digital 2-channel down mixed sources. Surround II is available for decoding digital bit-stream sources.

NOTE: 2-Channel audio support is available for AM / FM tuner, TV tuner and Auxiliary input only.

Table 8: Speaker Output options

Speaker Setup	Front Spkr	Rear Spkr	Center Spkr	Sub-woofer
2CH mode	X	X		
Play 2CH audio in 6CH mode with Surround "Off"	X			
Play 2-channel (down mix) audio in 6-channel mode with Surround I "ON"	X	X	X	X
Play 6-channel audio in 6-channel mode with surround II "ON"	X	X	X	X

Goto Search

During DVD or VCD playback, perform the following steps to use the GOTO feature to access a specific location on a disc:

1. Press the GOTO button (21) on remote control to enter "GO TO" mode.

2. Press the ▶▶ or ‖▶ buttons (14, 22) on the remote control or the ◀ or ▶ buttons (8, 9) on the joystick to select a category (highlighted in blue).

• For DVD mode, you can choose Time or Title/Chapter search.

```
Search
Time        --:--:--
Title/Chapter  ---/---
```
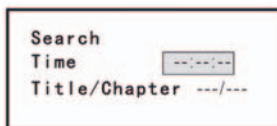
DVD Search

Time – Go to specific time in current title

Title/Chapter – Go to specific time in a chapter

• For VCD mode, press the **GOTO** button to choose between Track Search, Disc Search and Exit.

```
Track Search
Time          --:--:--
Track         ---/---
```

VCD Track Search
Time – Go to specific time in the current track
Track – Go to specific track

```
Disc Search
Time          --:--:--
Track         ---/---
```
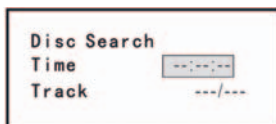
VCD Disc Search
Time – Go to specific time on disc
Track – Go to specific track

3. Enter a time into the field using the numeric keypad (29) on the remote control.
4. Press the ▶/II button (18) on the remote control or the **ENTER** (joystick) button (5) to go to the specified location on the disc.
5. Press the **GOTO** button again to exit.

Direct Chapter / Track Selection
During DVD, VCD and CD playback, you can use the numeric keypad on the remote control (29) to access a track directly.
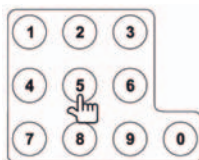
Viewing an Alternate Picture Angle (DVD Only)

Some DVDs contain scenes that have been shot simultaneously from different angles. For discs recorded with multiple angles, press the **ANGLE** button (13) on the remote control to toggle available angles of the on-screen image.

Zooming

Press the **ZOOM** button (23) on the remote control to enlarge and pan through the video image using the following options: "Q1", "Q2", "Q3", and "OFF".

Multi-Language Discs (DVD Only)
Changing Audio Language

If you are watching a disc recorded in multiple languages, press the **AUDIO** button (5) on the remote control to choose a language.

Changing Subtitle Language

If you are watching a disc recorded in multiple languages with subtitles, press the **SUB-TITLE** button (9) on the remote control to choose the language in which you would like the subtitles to appear.

NOTE: During VCD playback, press the AUDIO button (5) on the remote control to choose between Left Channel, Right Channel, and Stereo.

PBC (Play back Control) (VCD Only)

For VCDs with play back functionality, play back control (PBC) provides additional controls for VCD playback. Press the **MENU** button (1) on the remote control to toggle the PBC function "On"/"Off". Once PBC is on, playback starts from track one of the play list.

NOTE: When PBC is activated, fast forward, slow playback, and previous/next track are available. Repeat and direct track selection are not available.

When PBC is activated, selecting random, scan, or search playback automatically deactivates PBC.

Playback Information
During DVD and VCD playback, press the **DISP** button (10) on the remote control to display playback information on the screen, including the media playing and current playback time.

DVD Playback Information
The following information is displayed at the bottom of the screen during DVD playback:

```
DVD  T : 5/8  C : 2/16   00:41:28  □2/6  Eng
```

• T : 5/8 – "5 / 8" indicates the fifth of 8 titles on the DVD is currently playing.
• C : 2/16 – "2 / 16" indicates that the second of 16 titles on the DVD is currently playing.
• 00:41:28 – "00:41:28" indicates the playback time of the current title.
• □ 2 / 6 Eng – The language display information indicates the second language out of 6 (English) is currently being used.
The following information appears at the bottom of the screen during DVD playback:

```
Front: DVD    Rear: AUXIN     SURR II     DSP
```

• Front: DVD is the current playback source for the front zone.
• Rear: AUX IN is the current playback source for the rear zone.
"Surround II" is the selected playback audio encoding process.
"DSP" indicates Digital Signal Processing.

VCD Playback Information

The following information is displayed on the screen during VCD playback:

```
VCD2.0          T: 6/18          00:02:18
```

• VCD2.0 – Format of current disc.
• T: 6/18 – "6/18" indicates the sixth of 18 tracks on the VCD is currently playing.
• 00:02:18 – "00:02:18" indicates the playback time of the current track.

The following information appears on the screen during VCD playback in 6-Channel mode:

```
Front: DVD     Rear: AUXIN     MPEG     MOVIE
```

• Front: DVD – "DVD" is the current playing source for the front zone.
• Rear: AUX IN – "AUX IN" is the current playing source for the rear zone.
"MPEG" is the decoding method in use.
"Movie" indicates that movie effects are being applied to the audio sound track from the VCD.

The following information appears on the screen during VCD playback in 2-Channel mode:

```
FRONT: DVD   REAR: AUX IN   EQ: FLAT   LOUD: Level 1
```
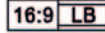
• Front: DVD – "DVD" is the current playing source for the front zone.
• Rear: AUX IN – "AUX IN" is the current playing source for the rear zone.
• EQ: FLAT – The equalizer setting is FLAT.
• Loud: Level 1 – The Loud option is set to Level 1 loudness.

General Disc Information

Table 9: Disc Properties

Symbol	12cm Disc Properties	Max Play Time
DVD VIDEO / DVD VIDEO	Single side single layer (DVD-5) Single side double layer (DVD-9) Double side single layer (DVD-10) Double side double layer (DVD-18)	(MPEG 2 Method) 133 minutes 242 minutes 266 minutes 484 minutes
COMPACT disc DIGITAL VIDEO	Single side single layer (VCD)	(MPEG 1 Method) 74 minutes
COMPACT disc DIGITAL AUDIO TEXT	Single side single layer	74 minutes

Tabel 10: Disc Symbols

Symbol	Meaning
(8))	Number of voice languages recorded. The number inside the icon indicates the number languages on the disc (maximum of 8).
(32)	Number of subtitle languages available on the disc (maximum of 32).
(9)	Number of angles provided (maximum of 9).
16:9 LB	Aspect ratios available. "LB" stands for Letter Box and "PS" stands for Pan/Scan. In the example on the left, the 16:9 video can be converted to Letter Box video.

Tabel 10: Disc Symbols

Symbol	Meaning
	Indicates the region code where the disc can be played. • Region 1: USA, Canada, East Pacific Ocean Islands • Region 2: Japan, Western Europe, Northern Europe, Egypt, South Africa, Middle East • Region 3: Taiwan, Hong Kong, South Korea, Thailand, Indonesia, South-East Asia • Region 4: Australia, New Zealand, Middle and South America, South Pacific Ocean Islands/Oceania • Region 5: Russia, Mongolia, India, Middle Asia, Eastern Europe, North Korea, North Africa, North-West Asia • Region 6: Mainland China • ALL: All regions
	Regional Coding: Both the DVD-Player and discs are coded by region. These region codes must match in order for the disc to play. If the codes do not match, the disc won't play. This unit's code is 2. DVD's with other region codes cannot be played in this unit.

DVD SETUP MENU

In "DVD Setup" mode, "LANGUAGE", "VIDEO", "AUDIO" "SURR SETUP", "SURROUND FX", and "RATING" (parental lock) are available for setup. This operation can be performed using the remote control or joystick controls.

Accessing the DVD Setup Screen
Setup can be performed by pressing the dedicated button on the remote control or by pressing the **MENU/SRC** button (11) on the front panel.
For system settings, press the **DVD SETUP** button (30) on the remote control or touch "SETUP" on the screen to enter the "SETUP" menu. "SYS SETUP" is highlighted in green. To access the "DVD SETUP" Menu, press the ▾ button (7) on the remote control to choose the "DVD SETUP" option, then press the ▸/II button (18), or just touch "DVD SETUP" on the screen. "LANGUAGE" is highlighted in green.

Note: Once the DVD setup is complete, the settings are memorized. To return to the factory default settings, press the RESET button (25) on the front panel.

Accessing a Menu

To access a menu (LANGUAGE, VIDEO, AUDIO, SURR SETUP, SURROUND FX, or RATING), press the direction buttons on the joystick (6, 7, 8, 9) or remote control (14, 17, 18, 19, 22) to highlight the desired menu in green. You can also touch the on-screen menu selection to access that menu.
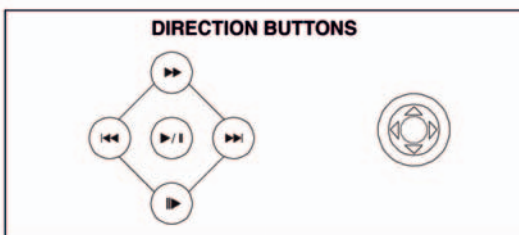
Selecting a Feature for Adjustment

Once inside a menu, press the ⏩ or ⏸▶ buttons (14, 22) on the remote control or the ▲ or ▼ buttons (6, 7) on the joystick to select the feature to be adjusted.

Adjusting a Feature

1. Enter the option field for the feature you want to adjust by pressing the ▶/⏸ button (18) on the remote or by pressing the **ENTER** (joystick) button (5) on the unit. A sub-menu appears in a second row with the selected option highlighted in light blue.

2. Select a new value by pressing the ⏩ or ⏸▶ buttons (14, 22) on the remote control or the ▲ or ▼ buttons (6, 7) on the joystick.

3. Confirm your selection by pressing the ⏸▶, ⏮, or ⏭ buttons (14, 17, 19) on the remote control, or the ◀ or ▶ button (8, 9) on the joystick. The new value is highlighted in light blue and setup is complete.

LANGUAGE Menu

If a DVD supports more than 1 Subtitle or Audio language, all the languages are available for selection during playback. If the selected language is not supported by the DVD, then the default language is used. During playback, press the **SUBTITLE** (9) or **AUDIO** (5) button on the remote control to change the language directly. This will not affect the DVD menu settings.

LANGUAGE Menu Features

<u>Subtitle</u>
English, Auto, Off: Select the default language in which you would like subtitles (if applicable) to be displayed.

<u>Audio</u>
English: Select the default language in which you would like audio (when optional) to be played.

<u>DVD Menu</u>
English: Select the default language in which you would like the DVD menu (if applicable) to be displayed.

BACK: Return to previous menu.

VIDEO Menu Features

<u>**TV Shape (Aspect Ratio)**</u>
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.

<u>**Angle Mark**</u>
On: Angle indicator (if applicable) is shown.
Off: Angle indicator is not shown.

<u>**View Mode**</u>
Fill
Original
H Fit
W Fit
Fit to Scrn
Pan Scan

BACK: Return to previous menu.

NOTE: For standard discs not formatted for "widescreen", use of the 16:9 aspect ratio will result in image distortion.

AUDIO Menu
The VME9020TS has a built-in Pink Noise generator to help set the relative speaker levels for multi-channel audio playback.

AUDIO Menu Features

<u>**Pink Noise**</u>
Off: Stop output of pink noise
Left: Left channel pink noise
Center: Center channel pink noise
Right: Right channel pink noise
Left Surr: Left surround channel pink noise

Right Surr: Right surround channel pink noise
Subwoofer: Subwoofer pink noise

DRC
Off/On: Employ the Dynamic Range Control for better playback for low volumes.

CNTR CTRL
5ms/4ms/3ms/2ms/1ms/0ms: Adjust the time difference between the center and front speakers to create a time delay between 1 and 5 milliseconds, producing a more accurate audio effect.

REAR CTRL
15ms/12ms/9ms/6ms/3ms/0ms: Adjust the time difference between the rear and front speakers to create a time delay between 3 and 15 milliseconds, producing a more accurate audio effect.

Down Sampling
Off: Normal Output
On: Audio signal output at 48kHz

BACK: Return to previous menu.

NOTE: When Down Sampling is ON, the audio output signal will be converted to 48kHz. When Down Sampling is OFF, the original sampling frequency is preserved.

SURR SETUP Menu
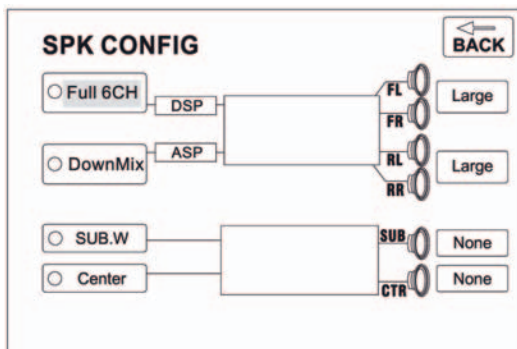
To change speaker settings for 2-channel mode, use the ▶▶ or ‖▶ buttons (14, 22) on the remote control or the ▲ or ▼ buttons (6, 7) on the joystick to select "DownMix". To change speaker settings for 6-channel mode, select "Full 6CH". After selecting 2 or 6-channel mode, use the ▶▶ button (19) on remote control or the ▶ button on the joystick (17) to move to the speaker settings on the right.

Speaker Selection
Selecting LARGE for the multi-channel speaker option will give a full range output. Selecting SMALL for the multichannel speaker option will activate a high pass filter whose crossover is dependent upon the sub-woofer low pass filter frequency. For example, if the subwoofer low pass filter is set to 80Hz, then the high pass SMALL speaker crossover will be 90Hz.

Low pass	High pass
80Hz	90Hz
120Hz	135Hz
160Hz	180Hz

SURR SETUP Menu Features

FL (Front Left) / FR (Front Right)
Large: Use when front speakers have good bass output.
Small: Use when speakers do not have good bass output.

LR (Left Rear) / RR (Right Rear)
Large: Use when rear speakers have good bass output.
Small: Use when rear speakers do not have good bass output.
None: Use when rear speakers are not present.

SUB (Subwoofer)
Present: Use when subwoofer is present.
None: Use when subwoofer is not present

CTR (Center)
Large: Use when center speaker has good bass output.
Small: Use when center speaker does not have good bass output.
None: Use when center speaker is not present.

BACK: Return to previous menu.

SURROUND FX Menu Features

Decode Mode
Off: Play original audio format.
Surround I: Use Surround I decoding method.
Surround I Matrix: Play mono output with surround effect.
Surround I Movie: Enhance movie surround effects.
Surround I Music: Play surround music effects.

Panorama (Only available when Surround I Music Mode is activated.)
On: Extend the video from the front to the rear to achieve a better surround effect.
Off: Panorama is turned off.

Dimension Ctrl
0-6: Shift audio output between front and rear speakers.

Center Width Ctrl
0-6: Shift audio output between front and center channel speakers.

BACK: Return to previous menu.

NOTE: Surround I is recommended when the playback source is LPCM (Linear Pulse Code Modulation) or 2-channel down mixed digital bit-stream.

NOTE: When Surround I Music mode is selected, Dimension Control and Center Width are available for fine tuning to achieve a more realistic surround sound processing.

RATING (Parental Lock) Menu
The DVD system has a built-in parental lock feature to prevent unauthorized persons from viewing restricted disc content. By default, the rating system is unlocked. Once setup, the parental lock is released only by entering the correct password. Once the password is entered, rating is available for setup.

RATING Menu Features

Password: Enter a 4-digit password to activate the "Rating" feature. The default password is 0000.

Rating
1. Kid Safe   Select the appropriate rating level for the intended audience.
2. G
3. PG   You may override higher ratings by using your password.
4. PG-13
5. PG-R
6. R
7. NC-17
8. Adult

Load Factory
Reset: Select "Reset" to restore the factory default settings for the *Rating system* only.

BACK: Return to previous menu.

To reset the password, access the "RATING" menu and enter the current password. Once the correct password is entered, you can access the "Password" field and enter a new one.

NOTE: Record the password and keep it in a safe place for future reference. The rating for each disc is marked on the disc, disc packing, or documentation. If the rating is not available on the disc, the parental lock feature is unavailable. Some discs restrict only portions of the disc and the appropriate content will play. For details, please refer to the disc description.

CD/MP3/WMA OPERATION

Instructions for Insert/Eject, Play/Pause, Stopping Playback, Track Selection, Fast Forward/Fast Reverse, Scan, and Random Play are the same for DVD, CD and MP3 operation.
Please see the DVD Player Operation section for information about these topics.

NOTE: CD-R and CD-RW will not play unless the recording session is closed.

The file naming formats listed below are compatible with this unit:

• ISO 9660 – file name: 12 characters, file extension: 3 characters
• ISO 9660 – file name: 31 characters, file extension: 3 characters
• Joliet – 64 characters

If the file or folder name does not conform to ISO 9660 file system standards, it may not be displayed or played back correctly.

CD Player User Interface

The on-screen indicators and touch key areas for CD playback are outlined below.
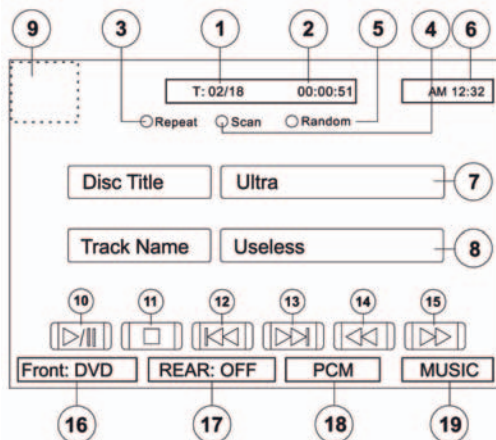
1. Current track and total number of tracks on disc
2. Elapsed playing time
3. Touch to activate/deactivate Repeat play mode
4. Touch to activate/deactivate Scan mode
5. Touch to activate/deactivate Random mode
6. Current time
7. Disc Title
8. Track Title
9. Touch to return to MAIN MENU
10. ▶/II: Touch to play/pause disc playback
11. ■: Touch to stop disc playback
12. I◀◀: Touch to move to previous track
13. ▶▶I: Touch to move to next track
14. I◀◀: Touch to rewind current track
15. ▶▶: Touch to fast forward current track
16. Front Zone Playing Mode
17. Rear Zone Playing Mode
18. Encoding method of media being played
19. "Surround Music" effect selected

SUBJECT TO TECHNICAL CHANGE

MP3/WMA Discs
This player allows you to playback MP3 files recorded on CD-ROM, CD-R, and CD-RW. For CD-RW discs, please make sure it is formatted using the full method and not the quick method to prevent illegal disc operation.

Use the following settings when compressing audio data for your MP3 disc:
• Transfer Bit Rate: 320kbps
• Sampling Frequency: 48kHz

When recording MP3 up to the maximum disc capacity, disable additional writing. For recording on an empty disc up to maximum disc capacity, use the "Disc at once" setting.

Playing MP3/WMA Files
After inserting a MP3/WMA disc, files will play in the sequence of the "Root' directory.
Use the numeric keypad (29) on the remote control to access files directly.

Selecting a Playback Mode
1. Press the ■/**BAND** button (20) on the remote control to stop disc play.
2. Press the ▶▶ button (19) on the remote control or the ▶ button on the joystick (9) to enter playback mode (PLAY MOD).
3. Press the ▶/II, ◀◀, or ▶▶ buttons (18, 17, 19) on the remote control, or the ◀ or ▶ button (8, 9) on the joystick to choose from the following playback options:

MP3/WMA Playback Modes

Play Mode	Playback Details
Disc Normal	Playback all files on the disc and stop at the end.
Disc Repeat	Repeat playback of all files on the disc.
Random	Randomly play all files and stop at the end.
Single Track	Play a specific file and stop.
Repeat Track	Repeat playback of a specific file.
Folder Normal	Play all files in a folder and stop at the end.
Folder Repeat	Repeat playback of all files in a folder/directory.

4. Press the ▸▸ button (14) on the remote control to confirm the playback mode then press the ▸/II button (18) to begin playback.

SD CARD READER OPERATION

Accessing SD Card Mode
To switch to SD card mode, press the SD button (19) on the front panel.

Using the Touch-Screen Controls
The touch keys for SD card playback are described below.

- ▸/∎: Play/Pause playback
- ∎: Stop playback
- PAGE -: View previous page
- PAGE +: View next page
- DIR -: View previous directory
- DIR +: View next directory

Controlling Playback
Stopping Playback
Touch the stop button (∎) on the screen or press the ∎/**BAND** button (20) on the remote control to stop playback.

Pausing Playback
Touch the play/pause button (▸/II) on the screen, press the ▸/II button on the remote control (18), or press the joystick button (5) on the front panel to suspend or resume playback.

Repeat Playback
Press the **REPT** button (7) on the remote control or touch "Repeat" on the screen to alter repeat mode according to the following: Repeat Single, Repeat Folder, Repeat Off

Random Playback
Press the **RDM** button (33) on the remote control or touch "Random" on the screen to activate random playback and play all tracks in random order.

SUBJECT TO TECHNICAL CHANGE

Moving Through Chapters

Press the ▶▶ button (19) on the remote control or the ▶ button on the joystick (17) to advance to the next chapter.

Press the ◀◀ button (17) on the remote control or the ◀ button on the joystick (16) to move to the previous chapter.

Change Directory

Touch the ([DIR+] / [DIR-]) key on the screen to navigate through the Directories / Folders

Previous/Next Page

Touch the ([PAGE+] / [PAGE-]) key on the screen to navigate through Pages / Files.

Direct Chapter / Track Selection

During DVD, VCD and CD playback, you can use the numeric keypad on the remote control (29) to access a track directly.
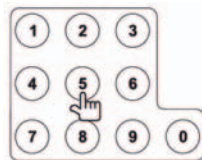
NOTE: Media (SD Card / CD-R / DVD) with a ROOT directory containing only music, movie or JPEG files may cause the RANDOM / REPEAT function to work incorrectly. To ensure the proper playback of music, movie, and JPEG files, place all media files inside folders on the data storage media.

iPod OPERATION

Accessing iPod Mode
The unit will automatically switch to iPod mode when an iPod is plugged into the media module. To return to the iPod menu from any other source menu, press the **SRC** button (15) on the front panel or remote control (8) until the iPod menu appears on the screen.

```
                              AM 12:17
           ▶      NOW PLAYING
           1/20

                 Love and Affection
                     Def Leppard
                       Hysteria
   MENU
     ○      ○
   ◄◄        ►►    2 : 26
     ○      ○
     ►/◼      Music ╞╡ Photos ╞╡ Videos
```
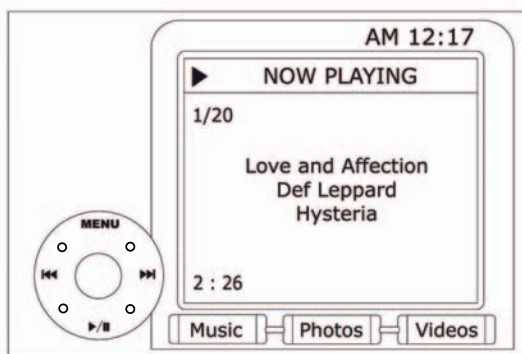
picture 1

Controlling your iPod by touch screen
The left upper corner brings you back to the source selection menu. If you touch the corresponding areas at the touch screen you gain access to the corresponding functions. (see picture 1)

Controlling your iPod
The following remote control buttons are used to access the iPod menus:

TITLE = Music
MENU = Photos
AUDIO = Videos

Use the joystick on the unit or the directional keys on the remote control to navigate the iPod menus.

Music Playback

Press the ⏭ button (19) on remote control, or the ▶ button on the joystick (9) to move to the next item on the menu.
Press the ⏮ button (17) on the remote control, or the ◀ button on the joystick (8) to move to the previous item on the menu.

Press the ▶/II button (18) on the remote control or the joystick **ENTER** button (20) on the head unit to select the highlighted menu option.
Press the ⏩ button (14) on the remote control or the ▲ button (6) on the joystick to return to the previous menu.

Video Playback

While iPod video can be viewed on the screen, you must use the iPod to control video playback options.

Press the **AUDIO** button (5) on the remote control to access the iPod VIDEO mode. The Moniceiver will release control back to the iPod so you can select video media to be displayed on the TFT monitor. To exit VIDEO mode, press the ⏩ button (14) on the remote control or **MENU** button on the iPod.

NOTE: To transmit the video from your iPod to the screen, you must set the following options through the iPod video settings menu: TV Out = On, TV Signal = PAL, and Widescreen = On

Photo Playback

While iPod photos can be viewed on the screen, you must use the iPod to control photo playback options.
Press the **MENU** button (1) on the remote control to access the iPod PHOTO mode. The Moniceiver will release control back to the iPod so you can select video media to be displayed on the TFT monitor. To exit PHOTO mode, press the ⏩ button (14) on the remote control or **MENU** button on the iPod.

NOTE: After disconnecting your iPod, the Moniceiver will always return to last mode accessed when your iPod is plugged back into the unit.

Fast Forward/Fast Reverse

To fast forward or fast reverse, press and hold the ◄◄ or ►► buttons (17, 19) for 1 second and continue to hold. Release to resume normal play.

Search Playlist/Artist/Album/Song

To search through Playlists, Artists, Albums and Songs, press the **1** button (29) on the remote control while in one of the following directories: Playlist, Artist, Album or Song. The selected directory will be accessed with the number of pages and files in that directory displayed at the top of the page. To access the page or file, enter the page or file number directly from the remote control keypad. Press the ◄◄ or ►► button (17, 19) on the remote control or the ◄ or ► button (8, 9) on the joystick to select the desired song or track.

TV TUNER OPERATION

Accessing TV Mode
To switch to TV mode, press the **TV** button (16) on the front panel or press the **SRC** button (8) on the remote control until TV appears at the bottom of the screen.

NOTE: Touch the top left corner to access the MAIN MENU Multi-ZONE SETUP menu and the top right corner to access the Multi-ZONE menu (rear zone setup).

Auto Tuning
Press the ▸▸ button (19) on remote control, or the ▸ button on the joystick (9) to seek the next available TV station by increasing the tuning frequency.

Press the ◂◂ button (17) on the remote control, or the ◂ button on the joystick (8) to seek the next available TV station by decreasing the tuning frequency.

Press the ∎/**BAND**, ◂◂, ▸▸, ◂ or ▸ button to stop searching.

Once a TV station is searched, the auto seeking stops and the TV station is played. If no station is searched, the tuning stops at the first channel after performing a round search.

Manual Tuning
Press and hold the ◂ or ▸ buttons (8, 9) on the joystick to increase or decrease the TV frequency one step.

Storing Stations (AS)
Automatic Preset Memory
To select the strong stations in the current TV frequency range, press and hold the joystick button (5) to activate the Auto Store function. The new stations replace stations already stored. Press the joystick button again or press the ∎/**BAND** button (20) on the remote control to stop searching.

Using Preset Scan
To scan stored stations:
1. Press the joystick button (5) to scan all stored TV stations. The unit pauses for 10 seconds at each station.

2. Press the joystick button again or press the ■/**BAND** button (20) on the remote control to stop scanning and play the current station.

Selecting a TV Station
To browse through stored stations:
• Press the ◀◀ button (15) on the remote control or the ▼ button (6) on the joystick or to tune the previous stored station.

• Press the II ▶ button (22) on the remote control, or the ▲ button (7) on the joystick to tune the next stored station.

Direct Channel Selection
Use the numeric keypad on the remote control (29) to enter a specific TV station.

Display Current Channel
Press the **DISP** button (10) on the remote control to display information regarding the current TV station.
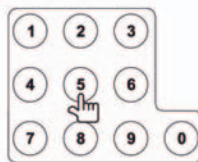
TROUBLESHOOTING

GENERAL

Problem	Cause	Corrective Action
Unit will not power on	- Radio Fuse blown - Car battery fuse blown - Illegal operation	- Install new fuse with correct rating - Install new fuse with correct rating - Press the RESET button located in the bottom right corner of the front panel
Remote control does not function	- Battery depleted - Battery installed incorrectly	- Replace battery with new one - Remove battery and install correctly
No/low audio output	- Improver audio output connection - Volume set too low - Improver "MUTE" connection - Speakers damaged - Heavily biased volume balance - Speaker wirings is in contact with metal part of car	- Check wiring and correct - Increase volume level - Review wiring diagram and check "MUTE" connection - Replace speakers - Adjust the channel balance to the center position - Insulate all speaker wiring connections
Poor sound quality or distortion	- Pirated disc in use - Speaker power rating not compatible with unit - Speaker is shorted	- Use original copy - Connect proper speakers - Check speaker contact
Tel-Mute malfunction	- "MUTE" wire is grounded	- Check that "MUTE" connection is not grounded and that it´s properly insulated
Unit resets itself when engine is off	- Incorrect connection between ACC and positive battery wire	- Check wiring and correct

TFT MONITOR

Monitor does not open automatically	- TFT Auto Open is turned off	- Turn TFT Auto Open on
No image	- Incorrect connection to parking brake wire - PRK SW is activated and parking brake is not engaged	- Check wiring and correct - 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 - Improper video signal connections	- Change setup to accommodate disc - Check wiring and correct
Prolonged image or improper height/width ratio display	- Improper aspect ratio setup	- Use correct aspect ratio setting
Monitor stops at incorrect position	- Moving path is blocked	- Press OPEN key to restart monitor movement

TUNER

Weak station searching	- Auto antenna is not fully extended - Auto antenna is not properly connected - LOCAL function is activated	- Connect the auto antenna control cable property - Connect the auto antenna control cable property - Turn LOCAL function off
Cannot insert disc	- Disc already inside unit	- Eject current disc and insert new one

Problem	Cause	Corrective Action
Disc does not play back	- Disc is warped or scratched - Disc is dirty or wet - Laser pickup is dirty - Incompatible disc is used - Disc rating exceeds Parental Lock rating limit - Disc region code is not compatible with unit - Disc is inserted upside down	- Use disc in good condition - Clean disc with soft cloth - Clean laser pickup with cleaning disc - Use compatible disc - Change Parental Lock settings to lower restriction - Use disc with proper region code - Insert disc with label side up
Image blurred, distorted, or dark	- Disc is illegally copied	- Use original disc
PBC cannot be used during VCD playback	- PCB is not available on the disc	
No repeat or searching while playing VCD	- PCB is on	- Turn PCB off

MP3

Interruption occurred during playback	- Disc is dirty or scratched - File is damaged/bad recording	- Clean disc or replace - Recreate disc with good files
Incorrect playback message displayed	- Message is longer than LCD can display	

Error Message

Message Displayed	Cause	Corrective Action
Loading	- Disc is being read	
No Disc	- Disc is dirty - Disc is upside down - Disc not present in loading compartment	- Clean disc with soft cloth - Insert disc with label side up - Insert disc
Bad Disc	- Disc is dirty - Disc is upside down	- Clean disc with soft cloth - Insert disc with label side up
Unknown disc	- Disc format is not compatible with this unit	
Region Error	- DVD is not compatible with region code of unit	
Error	- illegal mechanism operation	- Press EJECT key for 5 seconds to reset loading mechanism

Care and Maintenance

1. Use only a clean silicone cloth and neutral detergent to clean the front panel or monitor. A rough cloth and nonneutral detergent (such as alcohol) may result in scratching or discoloration.

2. Do not get water or cleaning fluids on the unit.

3. If the temperature inside the player gets too hot, a protective circuit automatically stops play of the disc. If this occurs, allow the unit to cool before operating the player again.

4. Never insert anything other than a 5" (12 cm) compact disc into the player as the mechanism can be damaged by foreign objects.

5. Do not attempt to use a 3" (8 cm) CD-Single disc in this unit, either with or without an adaptor, as damage to the player and/or disc may occur. Such damage is not covered by the Warranty on this product.

6. The CD player may not operate properly in extreme hot or cold. If such conditions occur, allow the interior of the vehicle to reach a normal temperature before using player.

7. When the vehicle warms up during cold weather or under damp conditions, condensation may appear on the LCD panel. Should this occur, the screen will not operate properly until the moisture has evaporated.

8. We suggest you use a cleaning disc in this unit more frequently than in the unit in your home due to the environmental conditions of the vehicle.

SPECIFICATIONS

CEA Power Ratings
Main Amplifier
Power Output: 18 watts RMS X 4 channels into 4-ohms @ < 1% THD+N
Signal to Noise Ratio: 70dBA below reference. (Reference: 1 watt, 4-ohms)
Dynamic Power: 88 watts into 4-ohms, all channels driven
Frequency Response: 20Hz to 20kHz, -3dB. Aux input used as source reference
Reference Supply Voltage: 14.4VDC

Center Amplifier
Power Output: 22 watts RMS X 1 channels into 4-ohms @ < 1% THD+N
Signal to Noise Ratio: 70dBA below reference. (Reference: 1 watt, 4-ohms)
Dynamic Power: 25 watts into 4-ohms, all channels driven
Frequency Response: 20Hz to 20kHz, -3dB
Reference Supply Voltage: 14.4VDC

DVD/CD Player
Compatible formats: DVD-R, DVD-RW, DVD+R, DVD+RW, CD-R, CD-RW, CD-DA, MP3, WMA, HDCD, SVCD, VCD, MPEG, JPEG, MP3/WMA files burned onto a DVD+R/W or DVD-R/W and Kodak Picture CD
Signal to Noise Ratio: 95dBA
Dynamic Range: >95dB
Frequency Response: 20Hz to 20kHz, -3dB
Channel Separation: > 60dB @ 1kHz

SUBJECT TO TECHNICAL CHANGE

D/A Converter(s): 6-channel high performance 24-bit, 192kHz, multi-bit Sigma Delta modulation. DAC supports sample rates from 8~192kHz.
Electronic Skip Protection (ESP): 16Mbit high-speed flash memory
DVD: 2-3 sec, CD-DA: 10 sec, MP3: 100 sec, WMA: 200 sec (ESP time is approximate)

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

FM RDS Tuner
Tuning Range: 87.5MHz - 107.9MHz
Mono Sensitivity (-30dB): 9dBf
Quieting Sensitivity (-50dB): 15dBf
Alternate Channel Selectivity: 70dB
Signal to Noise Ratio @ 1kHz: 58dB
Image Rejection: 80dB
Stereo Separation @ 1kHz: 30dB
Frequency Response: 30Hz - 15kHz, -3dB

AM Tuner
Tuning Range: 530kHz - 1710kHz
Sensitivity (-20dB): 30uV
Signal to Noise Ratio @ 1kHz: 50dB
Image Rejection: 60dB
Frequency Response: 50Hz - 2kHz, -3dB

Monitor

Screen Size: • 6.5" (Measured diagonally), 16:9 Widescreen
　　　　　　• 6.1" (155 mm) W X 3.51" (89.2 mm) H
Screen Type: TFT Liquid Crystal Display (LCD), active matrix
Brightness: 400 cd/m2
Contrast Ratio: 350
Response Time: 15mSec rise time, 50mSec fall time
Resolution:
　　　　　　• 280,800 sub pixels, 1200 (W) X 234 (H)
Viewing angle:
　　　　　　• 65 degrees left or right
　　　　　　• 40 degrees up
　　　　　　• 65 degrees down
Anti-glare screen

General

Auxiliary Input impedance: 10k
Power Supply: 11 to 16VDC, negative ground
Fuse: 10-amp, mini ATM type
Double-DIN chassis dimensions: 7" X 7" X 4" (178mm x 178mm x 100mm)

SUBJECT TO TECHNICAL CHANGE

GARANTIEKARTE
WARRANTY CARD

Typ/*Type*

Serien-Nr./*Serial-No.*

Name und Anschrift des Händlers/Stempel
Name and address of the dealer/stamp

Käufer/*Customer*

Name/*Name*

Straße/*Street*

PLZ, Ort/*City*

Land/*Country*

Kaufdatum/*buying date*

Nur gültig in Verbindung mit Ihrer Kaufquittung!
No warranty without receipt!