

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

FCC ID:V8VCNE8213FA



OPERATION MANUAL

CAR NAVIGATION SYSTEM

IM-8213B



Contents

Thank you for your choosing our product. We hope you will find the instructions in this user manual clear and easy to follow. If you take a few minutes to look through it, you'll learn how to use all the features of your new unit for maximum enjoyment.

After you have finished reading the instructions, please keep this manual in a safe place for future reference.

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- NOTE:** 1. certain description in the book may differ from the actual unit.
 2. Some pictures or icons in the book may differ from actual display.
 3. Specifications subject to change without notice.

Precautions

To avoid the risk of injury or accident, read the following precautions before installing and operating the unit.

On safety

Comply with your local traffic rules and regulations.

- While driving
 - ☞ You must not watch or operate the monitor. It may lead to distraction and cause an accident. Park your car in a safe place to watch the monitor and operate the unit.
- While operating
 - ☞ Do not insert your hands, fingers or foreign object into the unit while the monitor is functioning. It may cause injury or damage to the unit.
 - ☞ Keep small articles out of the reach of children.
- If your car was parked in direct sunlight resulting in a considerable rise in temperature inside the car, allow the unit to cool off before operating it.
-

Preventing accidents

The video pictures appear only after you park the car and set the parking brake.

When the car starts moving, the video pictures automatically disappear for safety reasons, after displaying the following caution.

CAUTION!!!

IT'S UNLAWFUL TO OPERATE A VEHICLE WHILE VIDEO IS DISPLAYED IN THE DRIVERS VIEWING AREA.

ENGAGE EMERGENCY BRAKE TO ENJOY VIDEO

Do not watch the monitor while driving. You may cause a traffic accident if your attention is distracted by the monitor.

- Do not use the System Setup feature while driving, or perform any other function which could divert your attention from the road.
- When you connect the back camera:
 - ☞ When you drive, watch the surroundings carefully for your safety. Do not depend on the back camera exclusively.
- When backing up your car, be sure to look back for your safety.
- Do not touch the liquid crystal fluid if the LCD is damaged or broken. The liquid crystal fluid may be hazardous to your health or fatal. If the liquid crystal fluid from the LCD contacts your body or clothing, wash it off with soap immediately.

Moisture condensation

When the temperature of the unit falls (as in winter), the liquid crystal inside the screen will become darker than usual. Normal brightness will return after using the monitor for a while.

To maintain high sound quality

Be careful not to splash juice or other soft drinks onto the unit or discs.

Playable discs

The following types of discs/files are compatible:

- CD-ROM (ISO), CD-R, CD-RW, DVD+R/RW, DVD-R/RW
- CD-DA, DVD Video
- MP3 data
- WMA data
- JPG images
- WMV format

- DivX format
- AVI format
- MPG format

The following types of discs/files are not compatible:

- WMA files that are protected by DRM (Digital Rights Management)
- WMA lossless format
- Discs recorded with Track At Once or packet writing
- MP3 PRO format
- MP3 playlists
- WAV format

Some recordable DVDs and CDs may be incompatible with this unit, depending on media type and recording method.

DVD Region Management

Some DVD discs can be played only in certain playback modes according to the intentions of the software. As the unit plays discs according to their intentions, some functions may not work as intended. Please be sure to read the instructions provided with each disc. This player has been designed to play back DVD software that has been encoded for specific region areas. It cannot play back DVD software encoded for other region areas than the region areas for which it has been designed.

The unit will play discs labeled "All".

DVD region codes:

- 1 - USA, Canada
- 2 - Japan, Europe, South Africa, Middle East
- 3 - Rep. of Korea, Taiwan, Hong Kong, Parts of Southeast Asia
- 4 - Australia, New Zealand, Mexico, South America
- 5 - Eastern Europe, Russia, India, Africa
- 6 - China



Preparation

Please read all of the instructions below before beginning your installation. We recommend that you have your unit installed by an experienced car navigation system installer

Features

- Double DIN size, all-in-one highly integrated entertainment system
- Built-in DVD Player, automotive specification slot loading mechanism
- Built-in FM/AM Tuner,
- High resolution 6.2"(16:9) TFT color monitor, contrast and brightness adjustment
- Built-in 40W X 4 output amplifier, 4.1 channel surround sound output.
- Dual zone function with easy operation.
- Smart Touch-screen operation
- All functions can be operated by touch screen, included Remote Controls
- Built-in iPod Control, Navigation system
- Powerful Graphic User Interface and software update ability.

Tools and Supplies

We suggest using these tools and supplies to install the unit.

- 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
- Heatshrink tubing
- Soldering iron and solder

WARNING!

1. Only connect the unit to a 12-volt negative ground system.
2. Never install this unit where operation and viewing could interfere with safe driving conditions.
3. To reduce the risk of a traffic accident (except when using for rear view video camera) never use the video display function while driving the vehicle. This may be in violation of local laws.
4. Never disassemble or adjust the unit without the assistance of a professional. For details, please consult your local car stereo specialty shop.
5. To prevent injury from shock or fire, never expose this unit to moisture or water.
6. Never use irregular discs, the only recommended disc size is a 12cm round disc.
7. To prevent damage to the mechanism inside this unit, avoid impact to the TFT monitor.
8. Do not change the fuse on the power wire without professional guidance. Using an improper fuse may cause damage to the unit and result in a fire.
9. The monitor employs an automatic motorized mechanism. To prevent damage to the core mechanism, please do not push, pull or swivel the monitor manually.

Disconnecting the Battery

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

NOTE: If the unit 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.

NOTE: It is especially important that you read the **WARNINGS** and **NOTES** in this manual

Controls and Indicators

Button Operation



1、EJECT

Press for disc insertion/ejection.

2、POWER OFF/VOL/Smart dial

Rotary encoder volume control.

Press to power on when the machine is in power off estate.

Press and hold to power off while unit is on.

Short press while unit off to enter EQ setting

Rotary encoder to browse mode while in main menu, and press to enter chosed mode

Rotary encoder to browse mode while in NAVI mode, and press to enter chosed mode

3、Menu

Press to enter main menu, press again back to previous mode

4、Navi

Press to enter navigation mode, Press again back to previous mode while in Navi mode

5、SD SLOT.

6、USB PORT

7、Microphone

8、Touch screen TFT

9、Front AUX-IN Jack

10、Disc slot

11、Disc indicative LED

Red is with disc

Blue is without disc

12、Remote sensor

13、RESET

The key areas of touch screen

The touch key areas are outlined below, for DVD, VCD playback mode and so forth.



A — Return to MAIN MENU

B — Display playing information

C — Select previous chapter

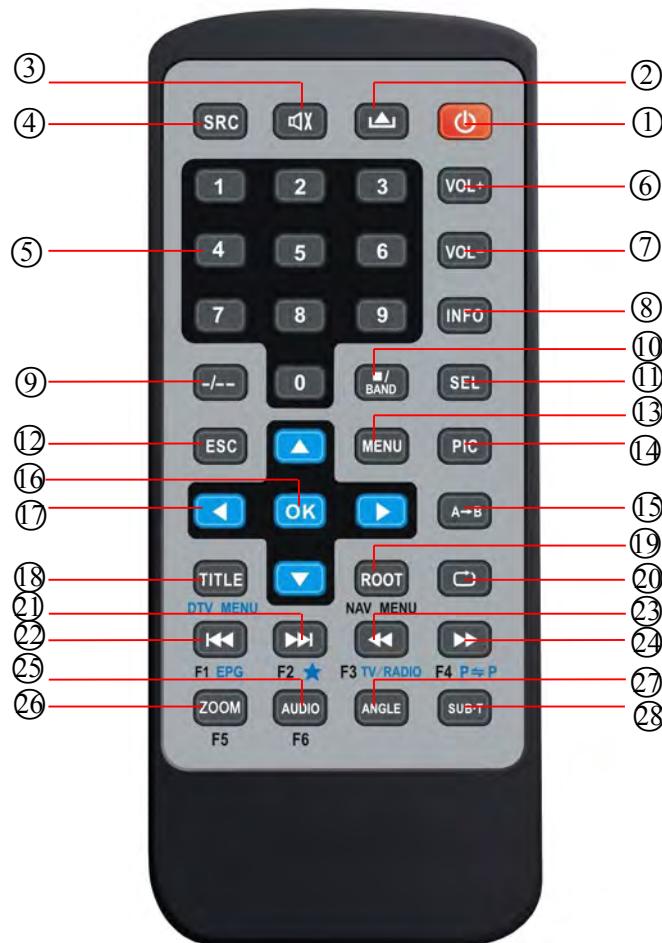
D — Select next chapter

E — Display the on-screen controls, and different mode displays different menu.

F — On DVD/VCD mode, display the GOTO search menu on the screen directly.

Remote Control

Front Zone Remote Control



Name	Ref #	Signal	Function
Power	1	⊕	Turn the power on/off
Open	2	▲	disc insertion/ejection.
Mute	3	□X	Toggle on/off audio output
SRC	4	SRC	Select playing mode
Numeric button	5	1.2.3.4.5. 6.7.8.9.0	Directly access certain chapter / track / preset station in current band
VOL up	6	VOL+	Increase the volume
VOL down	7	VOL-	Decrease the volume
Information	8	INFO	Display playing information
GOTO search	9	-/-	Position search function on VCD/DVD mode
Stop/Band	10	■/BAND	Select FM/AM band on Tuner mode Stop playback
Select	11	SEL	Enter the audio settings
ESC	12	ESC	Exit the current menu
Menu	13	MENU	Enter the main menu of system
Picture	14	PIC	Adjust the parameter of TFT settings
Repeat A→B	15	A→B	Set start point A and end point B to repeat continually
OK	16	OK	Start or pause playback, confirm the settings
Direction buttons	17	◀▶	Up/down/left/right to select items for setting

Title	18	TITLE	Also can activate and disable SCAN mode while playing CD
Root	19	ROOT	Enter the main menu of the disc Turn on PBC while playing VCD
Repeat	20	⟳	Repeat playback for current chapter
Next	21	▶▶	Select the next chapter/track for playback Search an available radio station by increasing tuning frequency on tuner mode
Previous	22	◀◀	Select the previous chapter/track for playback Search an available radio station by decreasing tuning frequency on tuner mode
Fast Reverse	23	◀◀	Fast reverse the disc content
Fast Forward	24	▶▶	Fast forward the disc content
Audio	25	AUDIO	Change the audio language for disc playback
Zoom	26	ZOOM	Zooming in/out on an image
Angle	27	ANGLE	Play in different angle for a scene (if it is applicable)
SUB Title	28	SUB-T	Language selection for subtitle

TFT Monitor Operation

Rear Camera Mode

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

Image Setting

Video Output Format

The table below shows the video output format for each source.

Video Output Format	
Playing Source	Video Output Format
FM/AM Tuner	RGB Mode
DVD	RGB Mode
NAVI	RGB Mode
AUX IN	CVBS Mode
CAMERA	CVBS Mode
iPod(video)	CVBS Mode

*CVBS-- Composite Video Base band Signal

Adjustable Parameters

While in RGB mode, the only parameter that can be adjusted is brightness (BRIGHT). To access "SHARPNESS" "COLOR" "CONTRAST" "BRIGHTNESS" and "TINT" you must be in CVBS mode.

Parameter Adjustment Procedure

1. Enter Picture Quality Setting mode:

Press the **PIC** button on the remote

2. Set Parameters:

Press the (**◀/▶**) buttons on the remote or rotate the **SMART DIAL** clockwise/counterclockwise to adjust the selected feature to the desired setting.

3. Exit Picture Quality Setting Mode:

Press the **PIC** button on the remote

NOTE: There must be a video signal present on the AUX or CAMERA input to adjust the above settings.

Parking Brake Inhibit

1. When the "PARKING" cable is connected to the brake switch, the display on the TFT monitor will display video **only** when the vehicle is stopped and the parking brake is applied.
2. Parking brake function is overridden when the video source is set to CAMERA.
3. When the "parking brake inhibit" is active, the front monitor displays "Caution" with blue background, preventing the driver from watching video while driving to reduce the risk of a traffic accident. Rear video screens are not affected.

Please see "INSTALLATION SECTION" for installation.

Operation Instructions

Power On / Off

Press the **POWER/VOL** button to turn the unit on. You can also turn on the unit by pressing the button () on the remote.

Press and hold the **POWER/VOL** button on the front panel or press the **POWER** button () on the remote to power off the unit.

Playing Source Selection

Press the **MENU** Button on the front panel and use Smart dial; or the (**SRC**) button on the remote to change among available playing sources: TUNER, Disc, iPod, AUX IN 1, AUX-IN 2, CAMERA (rear view video camera), NAVI, Bluetooth, USB and SD Card. The playing mode is displayed on the TFT display.

AUX IN Mode

An external audio/video device can be connected to this unit via RCA cables(Front jack or rear RCA connector) to the "AUX-IN".

CAMERA Mode

"CAMERA" mode is only available when the camera is connected and when backing up. To install a rear view video camera, connect the CAMERA video input cable to the rear view camera output cable.

NOTE: If you have not connected a device to the unit, the source can not be selected.

Example: If you have not connected an iPod to the unit, the iPod source will not be available.

Volume Adjustment

To increase or decrease the volume level, turn the **POWER/VOL** on the front panel or press the **VOL+ / VOL-** buttons on the remote control. The volume ranges from "0" to "40".

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.

Accessing the Audio Control Menu

Press the **POWER/VOL** button on the front panel or press the (**SEL**) button on the remote control to display the "Audio" menu.

Selecting an Audio Feature for Adjustment

Press the (/) buttons on the remote or press the **POWER/VOL** button on the front panel once to select a audio feature to be adjusted.

Adjusting an Audio Feature

Press the (/) buttons on the remote or rotate the **POWER/VOL** clockwise/counterclockwise to adjust the selected feature to the desired setting.

Audio Adjustments

Audio Function	Adjustable Range
	User
	Flat
	Jazz
	Pop
	Classical
EQ	
BASS	-7 to +7
TREBLE	-7 to +7
FADE	-7 to +7
BAL	-7 to +7
SW	-7 to +7
Loudness	Off, or ON

NOTE: The Bass and Treble levels are only adjustable when EQ is on “User” mode. The Loudness function compensates for deficiencies in sound ranges at low levels.

Exiting the Audio Control Menu

Press and hold the **POWER/VOL** button on the front panel to exit the audio control menu, or touch the return arrow on the top right of the display.

Press the **(ESC)** button on the remote control to exit the audio control menu.

Five-Channel Audio Control

5-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
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. **Only the front zone is in DVD mode, then Rear zone DVD can be activated. Rear USB and SD is the same.**

System Reset

To correct a system halt or other unusual operation, use the tip of a pen to press the **RESET** button located on the front top-left corner of the unit. After a system reset, the unit restores the settings before last power off.

Mute

The volume will be muted when the following cases occur:

- Manual: Press the **MUTE** button () on the remote to mute the volume from the unit. Or rotary the knob of smart dial and reduce the value to "0"

NOTE: Press the **MUTE** button on the remote again to restore the volume.

Adjusting the volume or using any of the audio set-up features will cancel the mute function.

Standby

1. Setup Standby mode on setup menu directly.
2. In the standby mode, the LCD is off with audio output only.
3. In the standby mode, the screen will return to normal through any operation.

System Setup Menu

MAIN Menu

There are three methods to access the **MAIN** menu.

- Press the **MENU** button on the front panel .
- Press the **MENU** button on the remote control .
- Touch the **A area** on the touch-screen .

Note: Remote, Smart dial, touch screen operations and buttons on front panel are all useable to select menu and adjust settings. The following instructions will show the different ways to access menus and adjustments.



Rear zone Menu

Press M-zone icon to enter rear zone menu

Note: Only the front zone is in DVD mode, then Rear zone DVD can be activated. Rear USB and SD is the same.

Screen Setting

Accessing the Screen Setup Menu

Menu

- Press the **Setup** on the screen.
- Select the "Other" Icon on the screen to access the Screen setup.



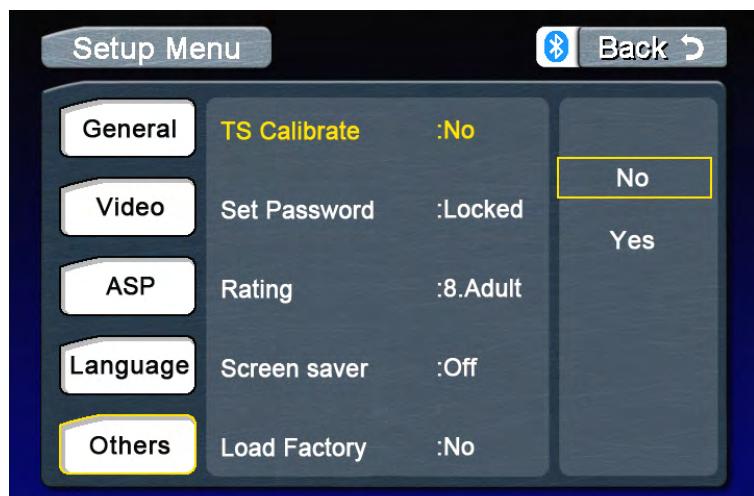
Selecting a Feature for Adjustment

Press the (**▲/▼**) buttons on the remote to select a feature to be adjusted.

Rotate **SMART DIAL**

clockwise/anticlockwise to select a feature to be adjusted.

Touch directly the options on the screen to select a feature to be adjusted.



Adjusting a Feature

Setting	Options	Function
TS Calibrate	No / Yes	Touch "Yes" to enter the touch screen calibration mode.
Set password	----	Enter a password of at least four characters to activate the parental control function. A lock symbol is used to indicate the parental control status
Rating	1.2.3.4.5.6.7.8	Choose different ratings
Screen Saver	On / Off	Touch to activate/deactivate the Screen Saver.
Bluetooth	On / Off	Activation/deactivation of the integrated Bluetooth function.
Antenna	On / Off	Select "On" to turn on tuning antenna.
Load factory	Yes / No	Select "Yes" to restore the factory settings of the multimedia system (except for password and parental control).

General setup Menu

Accessing the General Setup Menu

- Select the **General** icon on the screen to access the General setup.

Selecting a Feature for Adjustment

Press the direction buttons on the remote control or touch the option directly on the screen 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 **(OK)** button on the remote or by pressing the **SMART DIAL** button. A submenu appears in a second row with the selected option.
2. Select a new value by pressing the direction button.
3. Confirm your selection by pressing **(OK)** button or pressing the **SMART DIAL** button. The new value setup is complete.

Adjusting the Clock

1. Access the "Clock" setting under the General Setup menu.
2. Press the direction button on the remote to move the cursor to the "Hour" or "Min" position, and press the **(OK)** button. You also can touch the "Hour" or "Min" position directly.
3. The numeric keypad will pop up.
4. Press the numeric button on the remote control or touch the numeric keypad on the screen to adjust the hour or minutes.
5. Press the **(OK)** button on the remote control or on the keypad of the screen to confirm setup.

Return to normal playback

The system will automatically return the previous playback mode that it was in before accessing the setup menu 20 seconds after the last operation.

Setting	Options	Function
Radio	USA	Select the appropriate setting based on the country in which you reside.
	S-America1	
	S-America2	
	Europe	
	Korea	
	China	
	Arabia	
Clock	(HH:MM)	See "Adjusting the clock" to learn how to set the clock.
Clock Mode	12Hr	Clock displays 12 hour time using AM and PM.
	24Hr	Clock displays 24 hour time up to 23:59
Version		Version display

Video

Accessing the Video Setup Menu

- Select the **video** Icon on the screen to access the **video** setup.



Selecting a Feature for Adjustment

Press the direction buttons on the remote control or touch the option directly on the screen to select a feature to be adjusted.

Adjusting a Feature

1. Enter the option field for the feature you want to adjust by pressing the **(OK)** button on the remote or by pressing the **SMART DIAL**. A submenu appears in a second row with the selected option.
2. Select a new value by pressing the direction button.
3. Confirm your selection by pressing **(OK)** button on the remote control or pressing the **SMART DIAL** on the front panel. The new setup is complete.

Return to normal playback

The system will automatically return the previous playback mode that it was in before accessing the setup menu 20 seconds after the last operation.

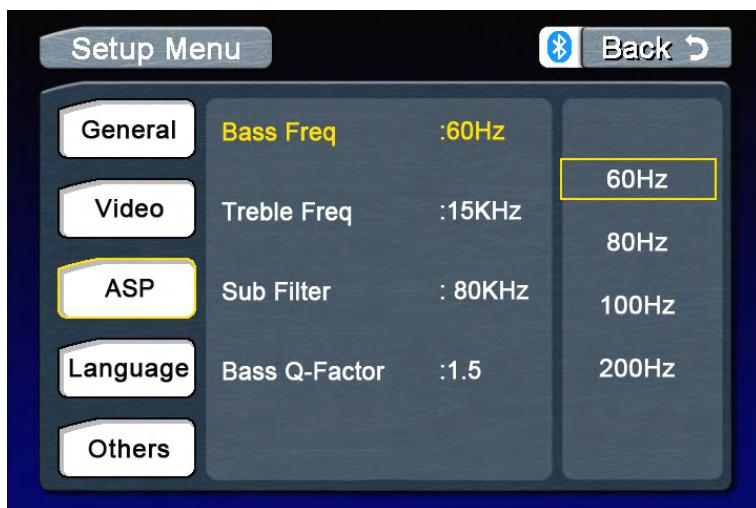
Setting	Options	Function
TV Shape	16:9	Select the appropriate setting based on the country in which you reside.
	4:3	
Video format	Auto	The video output is switched automatically based on the current disc.
	NTSC	The video output is in the standard NTSC format
	PAL	The video output is in the standard PAL format
	SECAM	The video output is in the standard SECAM format

ASP(Audio Signal Processing) Configuration Menu

The ASP Configuration menu allows you to make fine audio adjustment.

Accessing the ASP Configuration Menu

- Press the **MENU** on the front panel or press the **(MENU)** button on the remote control to access **MAIN** menu.



Selecting a Feature for Adjustment

Press the direction buttons on the remote control or touch the option directly on the screen to select a feature to be adjusted.

Adjusting a Feature

- Enter the option field for the feature you want to adjust by pressing the **(OK)** button on the remote or by pressing the **SMART DIAL**. A submenu appears in a second row with the selected option.
- Select a new value by pressing the direction button.
- Confirm your selection by pressing **(OK)** button on the remote control or pressing the **SMART DIAL** on the front panel. The new setup is complete.

Return to normal playback

The system will automatically return the previous playback mode that it was in before accessing the setup menu 20 seconds after the last operation.

Setting	Options	Function
Bass Freq	60Hz	Depending on the audio source, select the Bass Center Frequency to achieve the best Bass effect.
	80Hz	
	100Hz	
	200Hz	
Treble Freq	10KHz	Depending on the audio source, select the Treble Center Frequency to achieve the best Treble effect.
	12.5KHz	
	15KHz	

	17KHz	
Sub 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	
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	

Language Menu

Accessing the ASP Configuration Menu

Press the **MENU** on the front panel or press the (**MENU**) button on the remote control to access **MAIN** menu.

Selecting a Feature for Adjustment

Press the direction buttons on the remote control or touch the option directly on the screen to select a feature to be adjusted.

Adjusting a Feature

1. Enter the option field for the feature you want to adjust by pressing the (**OK**) button on the remote or by pressing the **SMART DIAL**. A submenu appears in a second row with the selected option.
2. Select a new value by pressing the direction button.
3. Confirm your selection by pressing (**OK**) button on the remote control or pressing the **SMART DIAL** on the front panel. The new setup is complete.

Return to normal playback

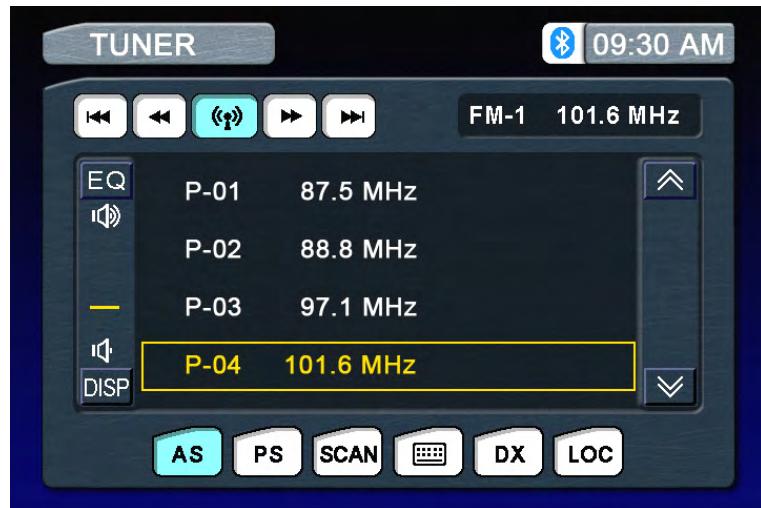
The system will automatically return the previous playback mode that it was in before accessing the setup menu 20 seconds after the last operation.



Setting	Options	Function
Language	OSD language	English / Russian
	English	
	Spanish	
	Russian	
	Auto	
	Off	
	Audio	English / Russian

Tuner(FM/AM) Operation

Tuner TFT Display



1. : Touch to change among the following bands: FM-1, FM-2, FM-3 and AM.
2. : Touch to seek down.
3. : Touch to seek up.
4. : Touch to tune down once a step.
5. : Touch to tune up once a step.
6. : Touch to activate/deactivate Scan Mode
7. : Auto store
8. : Program scan
9. : Touch to display the numeric keypad on the screen

Switch to Radio Tuner source

Press the remote control to switch to the **Tuner** source.

Select FM/AM Band

Touch the button on the screen, or press the BAND button (on the remote control to change among the following bands: FM-1, FM-2, FM-3 and AM.

Auto Tuning

Press the button () on remote control or touch the button on the screen to seek the next available channel by increasing the tuning frequency. Press the button again to stop searching.

Press the button () on the remote control or touch the button on the screen to seek the next available channel by decreasing the tuning frequency. Press the button again to stop searching.

Manual Tuning

Press the  button on the remote control or touch the  button to increase the tuning frequency one step at a time.

Press the  button on the remote control or touch the  button to decrease the tuning frequency one step at a time.

Using Preset Stations

12 numbered preset buttons store and recall stations for each band. Front 6 stored stations (P1-P6) for the current band appear on the screen, touch the channel directly for use.

You can touch the arrow buttons  or  on the screen to see the other 6 stations.

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 screen.

Recalling a Station

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

Auto Store (AS)

Press AS button on the screen to automatically scan and store all stations in current band.

Program Scan (PS)

1. press the PS button on the screen.scan the stations in the 12 preset channels in the current band.
2. Touch the  button on the screen to automatically scan all stations in current band to preview stations.
3. Press any button to stop scanning and listen to the selected station.

DX and Loc Stations Seeking (LOC)

When the Local function is on, only radio stations with a strong signal are tuned. When the Local function is active, "LOC" appears on the screen and an indicator is illuminated.

To activate the Local function in AM/FM tuner mode, touch the  button on the screen .

Touch the  to Activate the DX function

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 caution information with a blue background. Rear video screens, if applicable, will operate normally.

Insert/Eject Disc

Inserting a Disc

When inserting a DVD disc, DVD mode is entered and disc play begins.

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"). 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  on the unit to eject the disc. The unit automatically reverts to Tuner mode at the same time.

Reset the Loading Mechanism

If the disc loads abnormally or does not play properly, press and hold the button  on the unit to reset the loading mechanism. The disc is ejected and normal operation resumes.

Accessing DVD Mode

To switch to DVD mode when a disc is already inserted, press the **SRC** button on the front panel or on the remote control till DVD appears at the top of the screen.

Using the Touch-Screen Controls



1. Touch to Play/Pause
2. Touch to stop
3. Touch to fast reverse
4. Touch to fast forward
5. Touch to repeat playback
6. Touch to repeat from A to B. Select the repeat point A wherever you want to start and the point B wherever you want to end, then, DVD displays from A to B continually.
7. Touch to switch among LEFT, RIGHT and STEREO.

8. Touch to return to DVD main menu
9. Touch to display Sub-title

Controlling Playback

Stopping Playback

Touch the stop button  on the screen or press the **(STOP)** button on the remote control to stop DVD play; touch the play/pause button  on the screen or the **(OK)** button on the remote control to resume disk play.

Pausing Playback

Touch the play/pause button  on the screen to suspend or resume disc play.

Repeat Playback

Press the **Repeat** button  on the screen or 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 All, Repeat Off

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

PBC (Play back Control) (VCD Only)

For VCD with play back functionality, play back control (PBC) provides additional controls for VCD playback.

Press the **(ROOT)** button 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.

Sectional Repeat Function (A-B)

Use the A-B function to define a specific area of a disc to repeat.

- Press the **Repeat A-B** button (A-B) on the screen or on the remote control to set the start point (A) of the repeated section.
- Press the **Repeat A-B** button (A-B) 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 **Repeat A-B** button (A-B) again to cancel the A-B section setting and stop repeat play.

Accessing the DVD Menu

1. You can touch the area F, and then touch the  button to recall the main DVD menu.
2. Use the arrow buttons on the remote to select a title from the menu.
3. Press the **(TITLE)** button on the remote control to select a different title for playback.
4. Press the **(OK)** button on the remote control or touch the item directly to confirm your selection and begin playback.

Moving Through Chapters

Press the **(▶▶)** button on the remote control to advance to the next chapter on the DVD.

Press the **(◀◀)** button on the remote control to move to the previous chapter on the DVD.

Touch the right side of the screen to advance to the next chapter, or touch the left side of the screen to move to the previous chapter.

Fast Forward/Fast Reverse

Press the **(▶▶)** button on the remote control or touch the  of area E on the screen to fast forward. Keep pressing or touching and releasing the button to increase the rate from “X 2” to “X 4”, “X 8”, and “X 16”.

Press the **(◀◀)** button on the remote control or touch the  of area E on the screen to fast reverse. Keep pressing or touching and releasing the button to increase the rate from “X 2” to “X 4”, “X 8”, and “X 16”.

Selecting 2-Channel and 5-Channel Audio Playback

2-Channel Audio (Down Mix) Support for CD, 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.

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

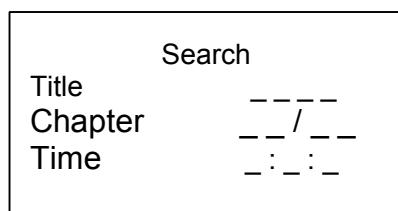
Table 8: Speaker Output Options

Speaker Setup	Front speaker	Rear Speaker	Center Speaker	Sub-Woofer
2CH mode	*	*		*
Play 2CH audio in 5CH mode with surround "off"	*			
Play 2-channel (DownMix) audio in 5-channel mode with surround "on"	*	*	*	*
Play 6-channel audio in 5-channel mode with surround "on"	*	*	*	*

GOTO Search

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

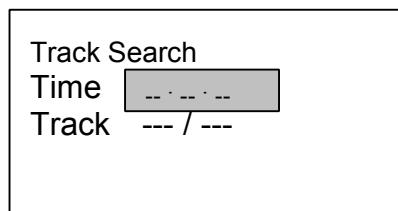
1. Press the(-->) button on remote control or touch Area F on the screen to enter "GOTO" mode.
2. Press the (▲/▼) buttons on the remote control to select a category.
- For DVD mode, you can choose Time or Title/ Chapter search.
- For VCD mode, press the(-->) button to choose between Track Search, Disc Search and Exit.



DVD Search

Time – Go to specific time in current title

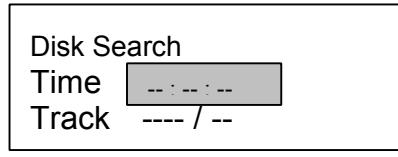
Title/Chapter – Go to specific time in a chapter



VCD Track Search

Time – Go to specific time in the current track

Track – Go to specific track



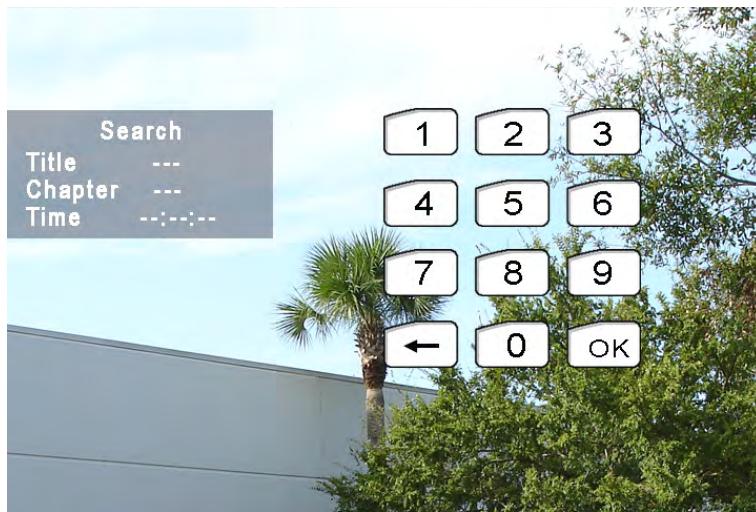
VCD Disc Search

Time – Go to specific time on disc

Track – Go to specific track

3. Touch the(--- : ---)/ (--- / --) area on the screen

to display a numeric keypad on the touch screen.



4. Enter a time/Track number into the field using the numeric keypad on the remote control or on the screen.
5. Press the **OK** button on the remote control or on the touch screen to go to the specified location on the disc.
6. Press the (--)button on the remote control or touch the F Area on the screen again to exit.

Direct Chapter / Track Selection

During DVD, VCD and CD playback, you can use the numeric keypad on the remote control 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 on the remote control to toggle available angles of the on-screen image.

Zooming

Press the **ZOOM** button 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 on the

remote control to choose a language. You also can touch area E, and then touch the  button.

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

Changing Subtitle Language

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

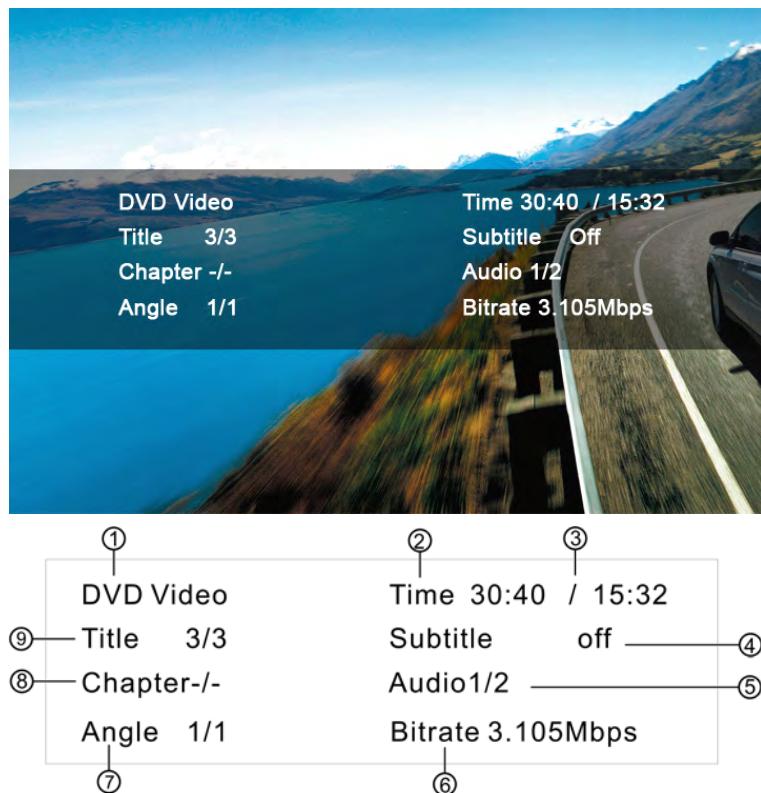
also can touch area E, and then touch the  button.

Playback Information

During DVD and VCD playback, press the (**INFO**) button on the remote control or touch area B 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 middle of the screen during DVD playback:



- ① indicates Current playing source.
- ② ③ Indicates the playback time of the current title.
- ④ Indicates the status of subtitle
- ⑤ Indicates the audio channel
- ⑥ Indicates velocity
- ⑦ Indicates angle
- ⑧ Indicates chapters on the DVD is currently playing.
- ⑨ Indicates the third of 3 titles on the DVD is currently playing.

VCD Playback Information

The following information is displayed at the middle of the screen during VCD playback:

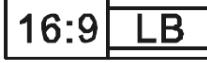


- ① indicates Current playing source.
- ②, ③ Indicates the playback time of the current title.
- ④ Indicates the second of 15 tracks on the DVD is currently playing.

General Disc Information

Symbol	12cm Disc Properties	Max Play Time
	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
	Single side single layer (VCD)	(MPEG 1 Method) 74 minutes
	Single side single layer	74 minutes

Disc Symbols

Symbol	Meaning
	Number of voice languages recorded. The number inside the icon indicates the number languages on the disc (maximum of 8).
	Number of subtitle languages available on the disc (maximum of 32).
	Number of angles provided (maximum of 9).
	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.
	Indicates the region code where the disc can be played. <ul style="list-style-type: none"> 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

CD/MP3/WMA/JPEG 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.

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



1: Previous track

2: Touch to fast backward current track

3: Play

4: Touch to fast forward current track

5: Next track

6: Current track and total number of tracks on disk

7: Elapsed playing time

8: Previous page display of TFT

9: Next page display of TFT

10: Touch to activate/deactivate Random Mode

11: Touch to activate/deactivate Repeat Single Mode

12: Touch to display the numeric keypad on the screen and then you can use the numeric keypad to access a track directly.

13: Touch to activate/deactivate Scan And you can press the (Title) button on the remote control to toggle the scan function "on/off"

14: Touch to stop disc playback

15: Volume indicator

Playing CD Files

After inserting a CD disc, files will play in the sequence of the directory. In playing back, you can press the numeric button on the remote control or touch a track on the onscreen directly to play.

Fast backward/fast forward

Touch the  or  on the screen to Fast backward or fast forward play.

MP3/WMA Discs

This player allows you to playback MP3/WMA files recorded on CDROM, CD-R, CD-RW, DVD+R/RW and DVD-R/RW. For CD-RW discs, please make sure they are formatted using the full method and not the quick method to prevent improper 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.

The touch keys for MP3/WMA CD/DVD playback are described below.



1. : Touch to display previous folder
2. : Touch to display next folder

Playing MP3/WMA Files

After inserting a MP3/WMA disc, files will play in the sequence of the directories/folders. In playing back, you can press the numeric button on the remote control or touch the a track directly to play.

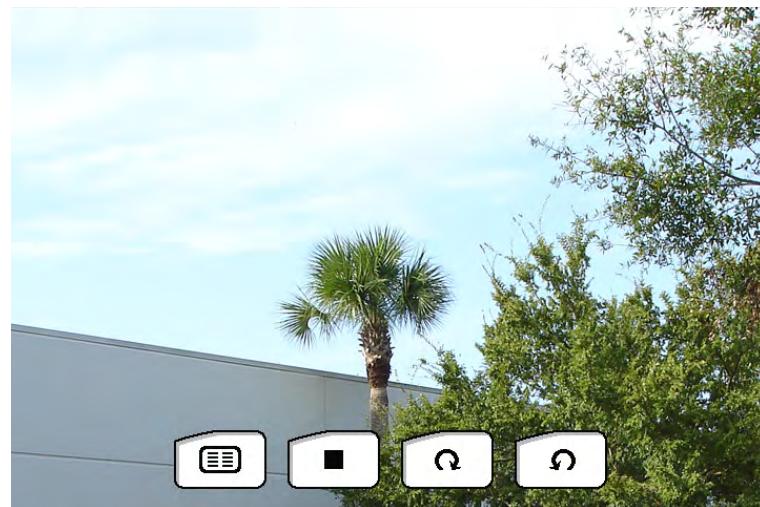
Change Directory/Folder

Touch the  or  on the screen to navigate through the directories/folders.

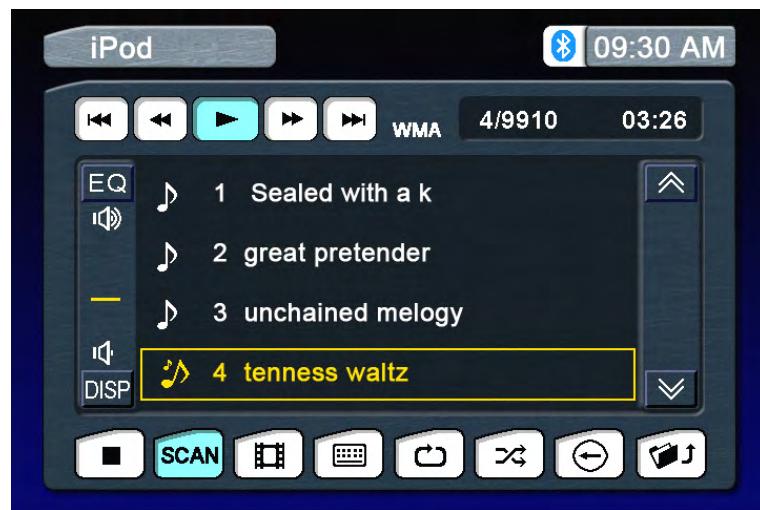
Previous/Next Page

Touch the  or  on the screen to navigate through the pages/files.

JPEG picture



1. Browse picture via Anti-clockwise
2. Browse picture via Clockwise



iPod Operation

Accessing iPod Mode

1. To switch to iPod mode, press the **Menu** button on the front panel or the **(SRC)** button on the remote control repeatedly until iPod appears at the top left corner of the screen.
2. Select the Main menu, then touch the iPod icon to select iPod as your source.

iPod Instructions

The touch keys on the screen for iPod playback are described below.

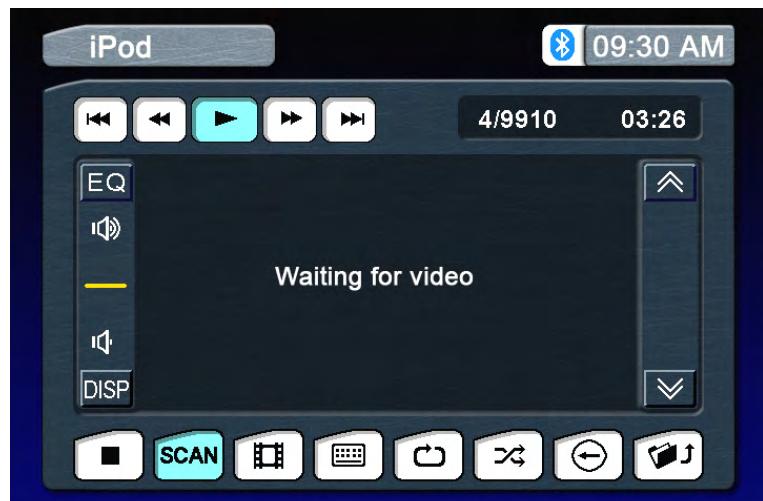
1. : Back to previous directory
2. : Go to root directory
3. : Enter iPOD Vedio(Only for old certain iPod model)

Playback of video on iPod

For playback of video on iPod, press the button to enter, the touch screen will display the following.

If there are videos on iPod and you select them on iPod, they will start to play, otherwise there will be nothing on the display. However, you can return to listen to your music by pressing the button again.

NOTE: All video control functions are done on the iPOD video, the touchscreen only controls audio portions of iPOD functionality.



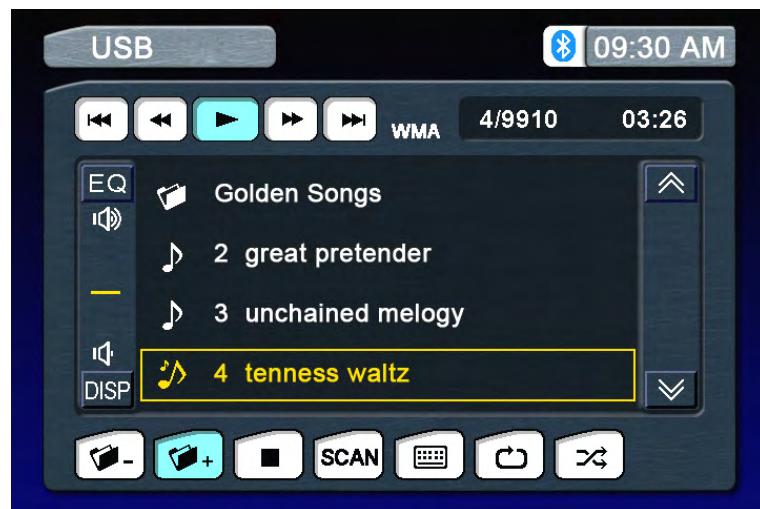
USB operation

Accessing USB Mode

1. To switch to **USB** mode, press the **Menu** button on the front panel or the **(SRC)** button on the remote control repeatedly until **USB** appears at the top left corner of the screen.
2. Select the Main menu, then touch the **USB** icon to select **USB** as your source.

USB Instructions

The touch keys on the screen for **USB** playback are described below, Icons definition see other modes.



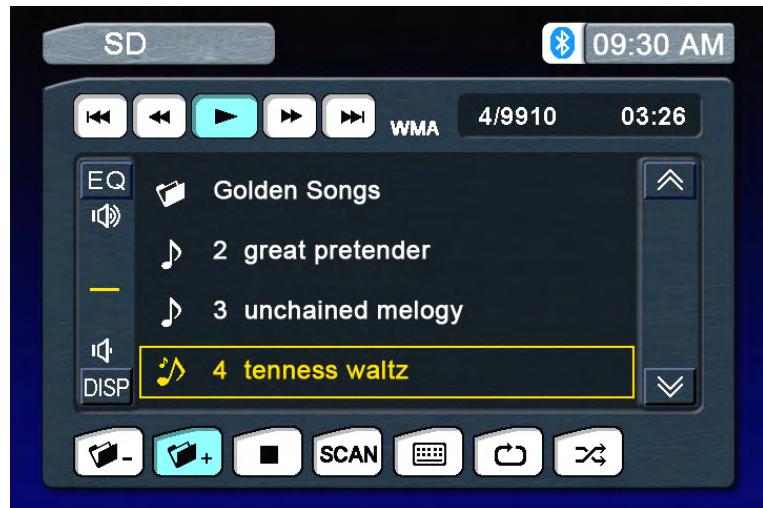
SD operation

Accessing SD Mode

1. To switch to **SD** mode, press the **Menu** button on the front panel or the **(SRC)** button on the remote control repeatedly until **SD** appears at the top left corner of the screen.
2. Select the Main menu, then touch the **SD** icon to select **SD** as your source.

USB Instructions

The touch keys on the screen for **SD** playback are described below, Icons definition see other modes.



Navigation Operation

Accessing Navigation

1. Access the **MAIN** menu and select the **NAVI** button on the touch-screen to enter the Navigation Operation interface.
2. Press the remote control to switch the source to Navigation.
3. Press **NAVI** button on the front panel of the unit.

Navigation Operation

Please read the **Navigation Software User Manual**

Follow the instructions on loading mapping information from the DVD-ROM to the SD Card **in the Navigation Software User Manual**. This must be done prior to loading the SD Card into the Navigation Unit.

Listening to an Audio program while using/viewing the Navigation

You can listen to an audio program while using Navigation. To do so, do the following:

Select the audio source. The source can be the Tuner, Satellite Radio, iPod or the audio from the AUX input.

Touch the **NAVI** button on the front panel to select Navigation. The map will be shown on the TFT display, and audio will continue to play while you are in the Navigation mode.

Navigation voice prompts will mute the audio source, give the instruction, and then return to the audio source

To adjust a parameter of the audio source (i.e., select a different radio station), touch the **NAVI** button. This will return you to the audio source screen. Make your adjustments, and then press the **NAVI** button to return the Navigation function. Navigation will continue while you are in an audio source screen, and voice prompts will continue while you make adjustments.

Bluetooth Operation

Before using the Bluetooth

Before using the Bluetooth, it's necessary to perform the following steps. For more operating details, refer to each section below.

1. Select the “Bluetooth” option in the General setup and select the “On” option to activate the Bluetooth feature.
2. Pair your mobile phone to this unit (refer to the “Pairing” operation). It is necessary to pair your phone to the unit. Without pairing, Bluetooth is not available.

The Bluetooth Indicator

There is a Bluetooth indicator  at the top of the touch screen.

When the Bluetooth function is “Off”, the indicator is grey.

When the Bluetooth function is “On” and no phone is connected to the unit, the indicator will blink. If a phone has been connected to the unit, the indicator is on solid.

Accessing Bluetooth Mode

Touch the  button at the top of the touch screen to access Bluetooth mode directly.

Bluetooth User Interface

Dial Interface



① Current source indicator.

② Touch to return to the

previous menu.

③ Touch to access the dial

interface.

④ Touch to access the Phone

book.

⑤ Touch to access A2DP control

menu.

⑥ Touch to access Bluetooth setup.



Phone Book



Press the button to access the Phone Book.

You can see phone book list, SIM book list, dialed call list, received call list, missed call list.

If the number has been stored in the Phonebook, it can be accessed by touching or on the screen to navigate through the Phone Book entries.

Then, touch the number to initiate the phone call

NOTE: Not all Bluetooth enabled phones support this feature

Bluetooth setup



Select the button to access the Bluetooth setup.

LANGUAGE Menu Features

Setting	Options	Function
Pairing	Off	Press the "Handsfree" button to start to wait for pairing with one phone without A2DP.
	Handsfree	
	AV Unit	Press the "AV Unit" button to start to wait for pairing with one phone within A2DP.
Auto Answer	Off	Answer an incoming call manually.
	On	The unit will automatically answer an incoming call (based on the cell phone Bluetooth functions)

Connect	Manual	If this function is set to Auto, connection between the Last Used phone and this unit will take place automatically as soon as the devices are less than a few meters apart.
	Auto	

Pairing

Access the Bluetooth setup and press “Handsfree” or “AV Unit” option on the screen, then “Wait pairing” displays on the screen. Now you can pair a phone with the unit.

This unit can pair with 5 mobile phones in all, but just one can be active at a time.

The Default phone will be retained only if all other paired phones are deleted. (Default Phone: The phone that was first paired with the unit.)

When maximum pairing has been completed, that is, four mobile phones have been connected with the unit, and you want to still pair a new one, then the system will retain the default phone and last used phone used. The phone least used (except the default phone) will be deleted and the new paired phone will become the last used phone. (Last Used Phone: The phone connected with the unit that was used last.)

If you want pair your phone with the unit, the password 1234 is used to complete the pairing. When asked, enter this password in the phone you are pairing with this unit.

Note: when you press “handsfree”, the unit won’t activate A2DP function.

Auto Connect

If the unit has been set to auto connect, it will attempt to connect to the last used phone first. If Auto Connect is not activated, the unit will return to the previous operating mode.

When the phone connects to the unit successfully, all of the cell phone’s Bluetooth enabled options will be active.

Making a phone call

There are four ways to make a phone call from this unit:

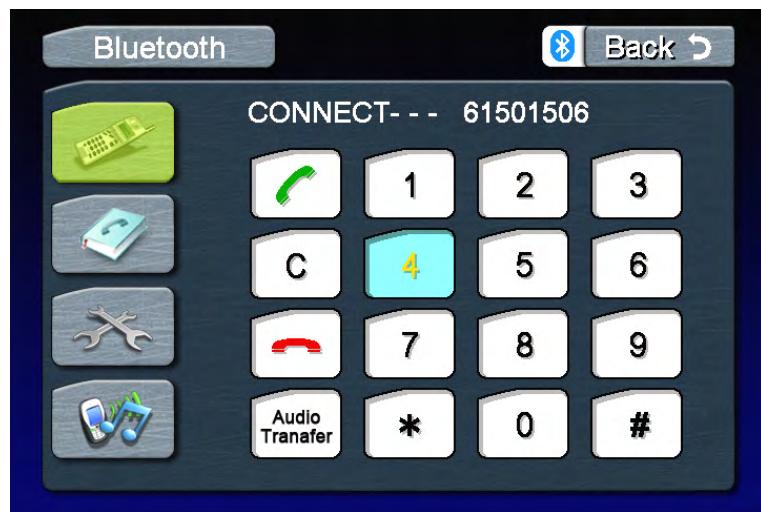
1. Make use of the Number dial on the screen to make a call.
2. You can enter the phone number using the numeric keypad and press the **OK** button on the remote control to make a call. (must be in the Bluetooth mode)
3. You can open the phone book and select one to make a call directly. (Your cell phone must support this option)
4. If your phone supports voice dial, access this mode on your phone instead of using the Phonebook

Answering an incoming call

You can answer an incoming call even if the source other than the telephone is selected.

You can answer an incoming call automatically or manually (refer to Bluetooth setup and the Controls and Indicators title (Button Operation) for exact instructions)

When a call comes in, this interface will display on the screen:



End a call

Touch the  button to end a call.

Troubleshooting

Problem	Cause	Corrective Action
GENERAL		
Unit will not power on	Radio Fuse blown	Install new fuse with correct rating
	Car battery fuse blown	Install new fuse with correct rating
	Illegal operation	Press the RESET button located in the bottom right corner of the front panel
Remote control does not function	Battery depleted	Replace battery with new one
	Battery installed incorrectly	Remove battery and install correctly
No/low audio output	Improper audio output connection	Check wiring and correct
	Volume set too low	Increase volume level
	Improper "MUTE" connection	Review wiring diagram and check "MUTE" connection
	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
Poor sound quality or distortion	Unauthorized disc is in use	Use original copy
	Speaker power rating not compatible with unit	Connect proper speakers
	Speaker is shorted	Check speaker connections
Unit resets itself when engine is off	Incorrect connection between yellow memory wire and positive battery wire	Check wiring and correct
TFT MONITOR		
No image	Incorrect connection to parking brake wire	Check wiring and correct
	PRK SW is activated and 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
TUNER		
Weak station searching	Auto antenna is not fully extended	Connect the auto antenna control cable properly
	Auto antenna not properly connected	Connect the auto antenna control cable properly
	LOCAL function is activated	Turn LOCAL function off
DISC		
Cannot insert disc	Disc already inside unit	Eject current disc and insert new one
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
	Incompatible disc is used	Use compatible disc
	Disc rating exceeds Parental Lock rating limit	Change Parental Lock settings to lower restriction
	Disc region code is not compatible with unit	Use disc with proper region cod

	Disc is inserted upside down	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	Clean disc or replace
	File is damaged/bad recording	Recreate disc with good files
Incorrect playback message displayed	Message is longer than LCD can display	

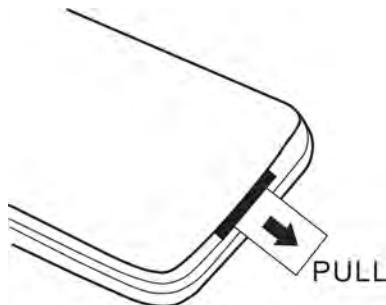
Error Messages

Message Displayed	Cause	Corrective Action
Loading	Disc is being read	
No Disc	Disc is dirty	Clean disc with soft cloth
	Disc is upside down	Insert disc with label side up
	Disc not present in loading compartment	Insert disc
Bad Disc	Disc is dirty	Clean disc with soft cloth
	Disc is upside down	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

Remote control

Remote control does not function	Battery is covered with insulation tape	Pull out the insulation tape
	Battery depleted	Replace battery with new one
	Battery installed incorrectly	Remove battery and install correctly

- When using the remote for the first time, you must pull out the insulation tape.

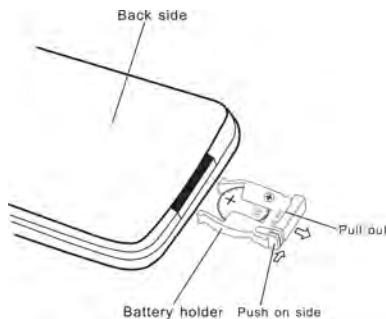


- Remove the battery if the remote control is not used for a month or longer.

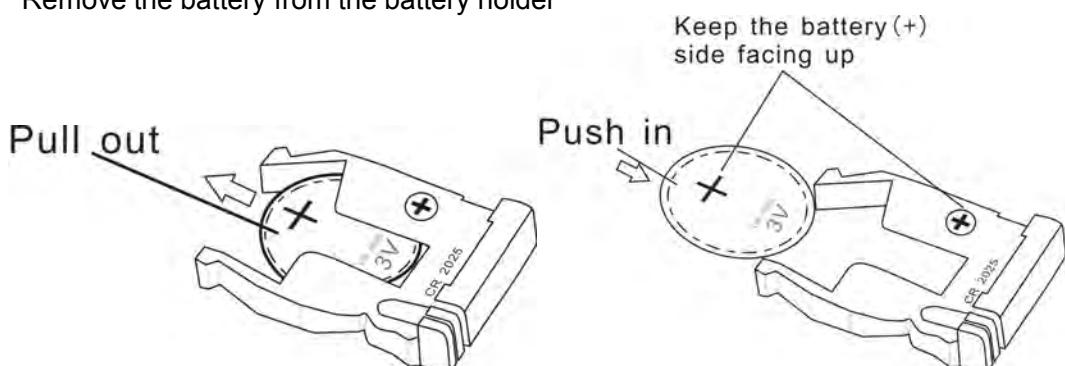
Remove and dispose of the old battery immediately.
Do not store the battery with metallic materials.

- Inserting/Replacing the Battery:

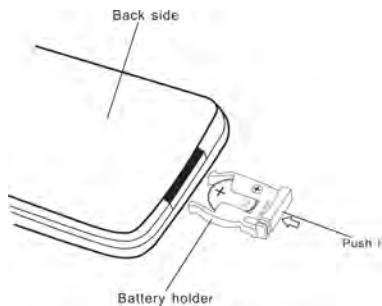
Remove the battery holder



Remove the battery from the battery holder



Install the battery



Insert the battery holder

NOTE: Use only one CR2025(3V) lithium battery.

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.

Do not recharge, disassemble, heat or dispose of the battery in fire.

Keep batteries away from children to avoid the risk of accident.

Suggestions

1. Only use a piece of clean silicone cloth and neutral detergent to clean the front panel or monitor. A rough cloth and non neutral detergent (such as alcohol) may result in scratching or discoloration.
2. Keep off water and other liquid things.
3. If the temperature inside the player gets too high, a protective circuit automatically stops playing the disc. And then, please wait for the unit to cool down 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 it will damage the player and disc. Such damages are not covered by the Warranty on this product.
6. When the vehicle warms up during cold weather or under damp conditions, condensation may appear on the LCD panel. If this occurs, the screen will not operate properly until the moisture has evaporated.
7. We suggest that you should clean the discs used in this unit more frequently than used in your home, because of the environmental conditions of the vehicle.

Specifications

CEA Power Ratings

Main Amplifier

Power Output: 20 watts RMS X 4 channels into 4-ohms @ < 10% THD+N

Signal to Noise Ratio: 70dBA below reference. (Reference: 1 watt, 4-ohms)

MAX Power: 40 X 4 watts into 4-ohms, all channels driven

Frequency Response: 20Hz to 20kHz, -3dB. Aux input used as source reference

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, HCD, SVCD, VCD, MPEG, JPEG, MP3/WMA files burned onto a DVD+R/W or DVD-R/W and CD-R/RW

Signal to Noise Ratio: 85dBA

Dynamic Range: >95dB

Frequency Response: 20Hz to 20kHz, -3dB

Channel Separation: > 60dB @ 1kHz

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): DVD: 2-3 sec, CD-DA: 10 sec, MP3: 100 sec, WMA: 200 sec (ESP time is approximate)

Mechanical anti vibration ability: 10~200Hz, X/Y/Z direction: 1.0G

Video Section

Format: NTSC, PAL (auto-detection)

Output: 1Vp-p (75-ohm), buffered

Input: 1Vp-p (75-ohm)

FM Tuner Section

Tuning Range: 87.5MHz - 107.9MHz

Mono Sensitivity (-30dB): 10dBu

Quieting Sensitivity (-50dB): 15dBu

Alternate Channel Selectivity: 70dB

Signal to Noise Ratio @ 1kHz: 58dB

Image Rejection: 60dB

Stereo Separation @ 1kHz: 30dB

Frequency Response: 30Hz - 15kHz, -3dB

AM Tuner Section

Tuning Range: 530kHz - 1710kHz

Sensitivity (-20dB): 20dBu

Signal to Noise Ratio @ 1kHz: 50dB

Image Rejection: 60dB

Frequency Response: 50Hz - 2kHz, -3dB

Integrated SD Card Reader

Monitor Section

Screen Size: 6.5" (Measured diagonally).

Screen Type: TFT Liquid Crystal Display (LCD) active matrix

Response Time: 30mSec rise time, 50mSec fall time

Resolution, DVD/Composite Video in: 280,280 sub pixels,

1200 (W) X 234 (H)

Viewing angle:

- 60 degrees left or right

- 30 degrees up

- 60 degrees down

General

Auxiliary Input impedance: 10k

Power Supply: 10.5 to 16V DC, negative ground

Fuse: 10-amp, mini ATM type

DIN chassis dimensions: 7" X 7" X 2" (178mm x 178mm x100mm)

*** Specifications subject to change without notice.**