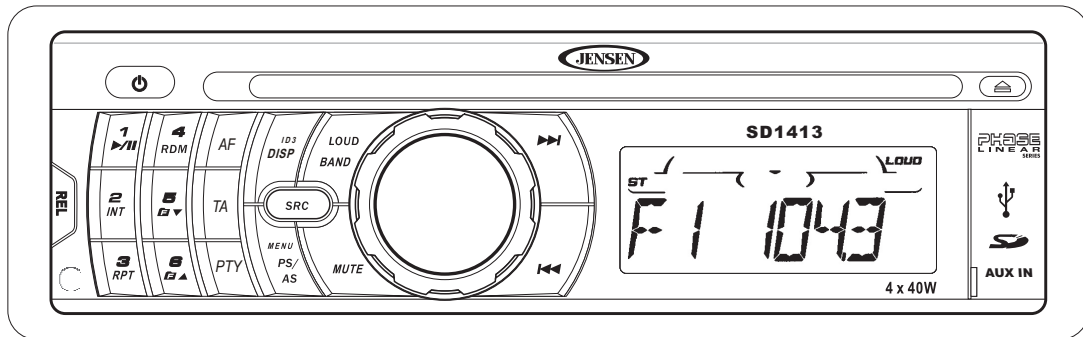


PHASE
LINEAR
SERIES

SD1413

Owner's Manual



AM/FM/CD/MP3/SD/USB
RDS/ Receiver

Para obtener instrucciones en Español, dirijase a la página 19.

Pour des instructions en Français, référez-vous à la page 39.

INTRODUCTION

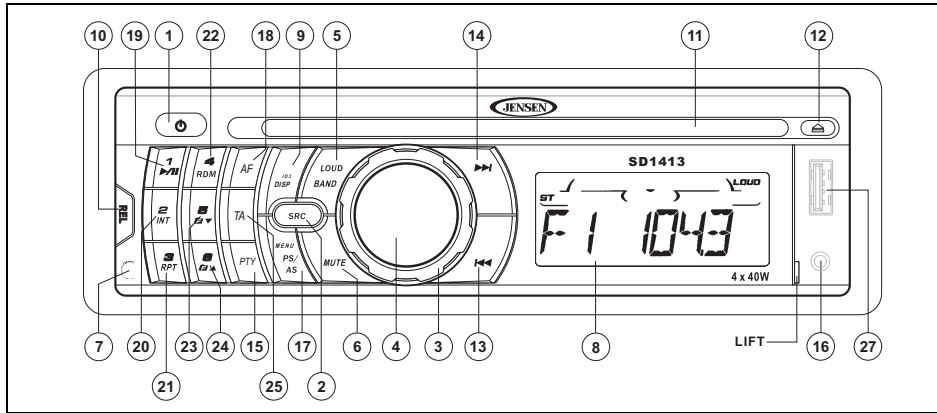
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Toll-Free Installation Assistance

If you require assistance, contact Technical Support at 1-800-323-4815 from 9:00 a.m. to 6:00 p.m. EST Monday through Friday (U.S.A. and Canada only).

OPERATING INSTRUCTIONS



Power

Press the power  button (1) or any other button on the face of the receiver to turn the unit on when the ignition switch is on. Press the power button again to turn the receiver off. If the radio was left on when the ignition was last turned off, the receiver will turn on automatically when the ignition switch is again turned on. If the receiver was off when the ignition was last turned off, the receiver must be turned on manually when restarting the vehicle.

Source

Press the **SRC** button (2) to select a different mode of operation as indicated on the display panel. Available sources include Tuner, CD, SD, USB and Auxiliary Input. During CD player operation, pressing **SRC** will change to the tuner source without ejecting the disc. To access the Auxiliary Input source, press the **SRC** button until "AUX" is indicated in the display.

Volume

To increase the volume, turn the **AUDIO CONTROL** (3) clockwise. To decrease the volume, rotate the **AUDIO CONTROL** counter clockwise. When volume is adjusted, the volume level is shown on the display panel as a number ranging from "00" (lowest) to "100" (highest).

Select

Press the **AUDIO CONTROL** button (4) to step through the menu of audio functions: volume (VOL), bass (BAS), treble (TRB), balance (BAL), fader (FAD),

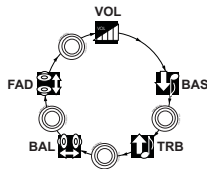
and volume (VOL). When adjusting audio functions, the unit will automatically exit select mode and return to the normal display after five seconds or when another function is activated.

Bass

Press the **AUDIO CONTROL** button (4) twice until "BAS" appears in the display. Within five seconds, turn the **AUDIO CONTROL** (3) clockwise or counter clockwise to adjust the bass from "-10" to "+10". "00" represents a flat response. The bass level is shown on the display for five seconds or until another function is activated.

Treble

Press the **AUDIO CONTROL** button (4) three times until "TRB" appears in the display. Within five seconds, turn the **AUDIO CONTROL** (3) clockwise or counter clockwise to adjust Treble from "-10" to "+10". "00" represents a flat response. The treble level is shown on the display for five seconds or until another function is activated.



Balance

Press the **AUDIO CONTROL** button (4) four times until "BAL" appears in the display. Within five seconds, turn the **AUDIO CONTROL** (3) clockwise (or counter clockwise) to adjust Balance between the right and left speakers from "BAL 10R" (full right) to "BAL 10L" (full left). "BAL L=R" represents an equal balance level between the right and left speakers. The balance position is shown on the display for five seconds or until another function is activated.

Fader

Press the **AUDIO CONTROL** (4) five times until "FAD" appears in the display. Within five seconds, turn the **AUDIO CONTROL** (3) clockwise or counter clockwise to adjust balance between the front and rear speakers from "FAD 10R" (full rear) to "FAD 10F" (full front). "FAD F=R" represents an equal balance level between the front and rear speakers. The fader position is shown on the display for five seconds or until another function is activated.

Loudness (BAND)

Press and hold the **LOUD/BAND** button (5) for two seconds to activate the **LOUD** feature. When listening to music at low volume levels, this feature will boost the bass and treble ranges to compensate for the characteristics of human hearing. When activated, "LOUD"

appears on the display. Press **LOUD/BAND** again for two seconds to deactivate this feature.

Audio Mute (MUTE)

Press the **MUTE** button (6) to mute the audio volume. "MUTE" flashes on the display. Restore volume to the previous setting by pressing the mute button again, adjusting the **AUDIO CONTROL**.

Equalizer Selector (PEQ)

The equalizer function applies preset sound effects to the unit's audio output signal. Press the **PEQ** button *on the remote control* to activate one of the following operating modes: FLAT, CLASSICS, POP M, ROCK M or DSP OFF. When the equalizer function is activated, the most recently selected bass/treble levels are ignored. If the bass and/or treble levels are adjusted while the equalizer function is active, the equalizer function will revert to FLAT. When the equalizer function is not active, the unit will return to the most recently selected bass and treble levels.

Beep Tone

The beep tone feature allows the selection of an audible beep tone to be heard each time a button is pressed on the face of the radio. To access the Beep Tone menu, *press and hold* the **AUDIO CONTROL** (4). Turn the **AUDIO**

CONTROL to select from the following Beep Tone options:

- BEEP ALL: Beep is heard any time a button is pressed (function activated).
- BEEP 2ND: Beep is heard only when a secondary function is activated (press and hold).
- BEEP OFF: Beep is not heard.

Liquid Crystal Display (LCD)

The liquid crystal display (LCD) panel (8) displays the frequency, time and activated functions of the unit.

NOTE: After being subjected to cold temperatures, LCD panels may take longer to respond and visibility of the numbers on the LCD may decrease slightly. The LCD display will return to normal when the temperature increases to a normal range.

Display (DISP)

Press this button to view Clock, Programme Type (PTY), and Frequency of the station in listening.

Auxiliary Input

Lift the cover on the right side of the radio to reveal the **AUX IN** connector (16). Use the included 3.5mm media cable to connect a portable media device for playback through the vehicle sound system.

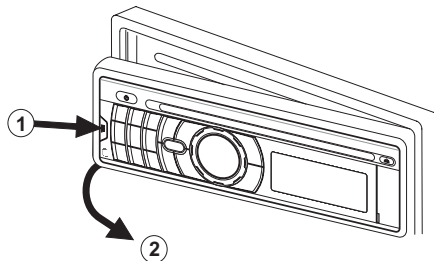
Front Panel Release

The front panel **REL** (release) button (10) releases the mechanism that holds the front panel to the chassis.

Detaching the Front Panel

To detach the front panel, first press the **REL** button (10) to release the left side of the panel. Next, grasp the released side and pull the panel off the chassis. After removing the front panel, store it in the supplied carrying case to protect it from dirt and damage.

REMOVE FRONT PANEL

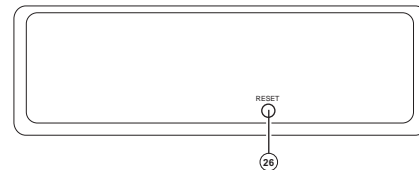


Re-attaching the Front Panel

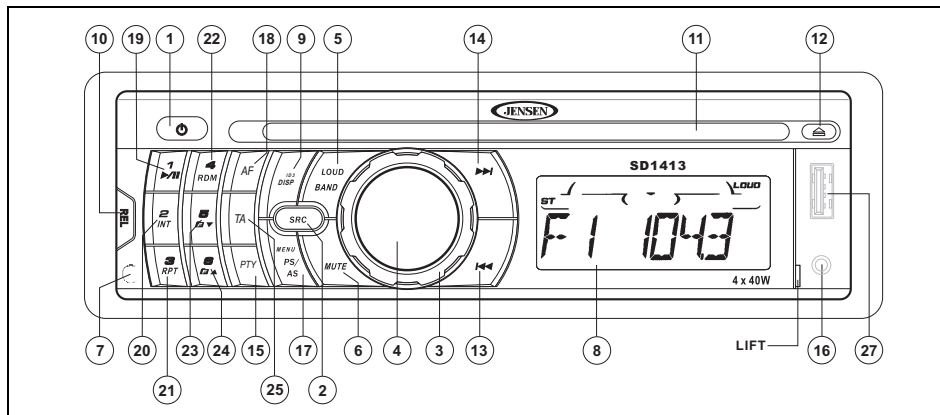
To re-attach the front panel, make sure the electrical terminals on the back of the panel are free of dust and dirt, as debris could cause intermittent operation or other malfunctions. Position the right side of the panel in place so that it is correctly engaged, and then lightly press the left side of the panel until the panel locks into place.

Reset Button

The reset button (26) is located on the front of the chassis and can only be accessed with the front panel removed. The reset circuitry protects the microprocessor circuitry. Since resetting the unit will erase the time and preset memories, it should only be activated upon initial installation after all wiring is complete, or if there is a malfunction of any of the switches on the unit. In these circumstances, pressing the reset button will clear the system and return the unit to normal operation.



TUNER OPERATION



AM/FM Band Selector (BAND)

Press the **BAND** button (5) during radio play to switch between three FM bands and one AM band. “F1”, “F2”, “F3” or “AM” will appear in the display to indicate the band currently selected.

Tuning

Automatic Tuning

Press the **>>|** button (14) to tune upward in frequency and the **|<<** button (13) to tune downward in frequency. The unit will automatically stop at the next strong station. If

the Local mode is active, the radio will seek the next strong local station when either button is pressed.

Manual Tuning

Press the **>>|** (14) or **|<<** (13) button for more than two seconds to select manual tuning mode. “MANUAL” will appear in the display. Press the Up or Down Tuning buttons to move radio frequency up or down two digits at a time. Press and hold the Up or Down Tuning buttons to quickly advance to a certain frequency. Release when the desired frequency is

reached. If tuning is not adjusted within five seconds of entering manual tuning mode, the radio will revert to automatic tuning and “AUTO” will appear in the display.

PTY Button

Each time when this button is pressed, the PTY mode will toggle in the following order:

PTY Music Group -> PTY Speech Group ->PTY Off
The current PTY code is displayed on the LCD, use the 6 preset buttons to select the other PTY code, the distribution of program type are as follows:

Button Number	Music Group	Speech Group
M1	POP , ROCK	NEWS, AFFAIRS, INFO
M2	EASY, LIGHT	SPORT, EDUCATE, DRAMA
M3	CLASSICS,	CULTURE, SCIENCE, VARIED
M4	JAZZ, COUNTRY	WEATHER, FINANCE, CHILDREN
M5	NATION, OLDIES	SOCIAL, RELIGION, PHONE IN
M6	FOLK	TRAVEL, LEISURE, DOCUMENT

When PTY code is selected, the radio will search the band for the station that matches the PTY code.

Preset Stations

Up to six stations on each band can be stored as presets and can then be instantly recalled by pressing the associated preset button on the front panel (19-24) or remote control. To store a station, turn the radio on and select the desired band and station. *Press and hold* the desired preset button (numbered one through six on the face of the radio or remote control) for more than two seconds. When stored, the preset number will appear in the display. The station is now stored and can be recalled at any time by pressing the corresponding preset button. Repeat for the remaining five presets on the current band and for all presets on the other three bands.

Preset Scan/Automatically Store (PS/AS)

Automatically Store

Select six strong stations and store them for all bands using the Automatic Store feature. To enable this feature, *press and hold* the **PS/AS** button (17) for more than two seconds. The radio will automatically scan each band and enter strong stations into the preset memory positions. After entering the stations into memory, the unit will automatically stop at each station for five seconds so each can be heard. When using the Automatically Store feature, the new stations replace any stations already stored in preset memory.

Preset Scan

Press the **PS/AS** button (17) to scan the six preset stations in the AM band or all FM bands. The unit will stop at each station for five seconds before continuing to the next preset station, and the preset number will flash on the display during the preset scan. Press **PS/AS** again to stop scanning and listen to the current station.

AF BUTTON(ALTERNATIVE FREQUENCIES)

When pressed short, AF button (18) switching mode is selected. When AF switching mode is selected, the radio check the signal strength of the AF all the time. When pressed long, it is activated as regional mode ON/OFF.

- Regional mode ON:

AF Switching or PI SEEK is implemented to the station which have all PI codes are same as current station. REG segment is turned on, in LCD display.

- Regional mode OFF:

The Regional code in the format of PI code is ignored when AF switching or PI SEEK is implemented. Some broadcasting stations may change their program from normal broadcasting to regional broadcasting for a certain period. When regional mode is off, the region identification in the PI code is ignored; the radio may switch to a local variant of the current program. When region mode is on, the radio will only switch to a program carrying the exact same PI code.

Note: When AF switch is on, at this moment use tuning up/down to search station will only stop at station which has RDS broadcasting.

TA BUTTON(TRAFFIC ANNOUNCEMENT)

When pressed short, it is activated as TA button (25) mode on or off

When TA mode is on and traffic announcement is transmittude

- When the unit is in CD mode, it will switch to radio mode temporarily.

- If the volume lever was under the threshold point, it will be raised to the threshold point.

- When TP station is received, TP segment is turned on in LCD display.

When pressed long, EON TA LOCAL /EON TA DISTANCE mode is selected.

- EON TA LOCAL mode

When the field strength level of EON linked is less than the threshold level. The radio does not switch that station and user can hardly listen to any disturbances. "EON TA LO " is displayed a few second.

- EON TA DISTANCE mode

EON TA switching is try to implemented by the information of current station "EON TA DX " is displayed a few second this mode is selected

Note: When TA switch is on, at this moment use tuning up/down to search station will only stop at station which has TA broadcasting.

PTY Button

Each time when this button is pressed, the PTY button(15)mode will toggle in the following order:

PTY Music Group -> PTY Speech Group ->PTY Off



The current PTY code is displayed on the LCD, use the 6 preset buttons to select the other PTY code, the distribution of program type are as follow:

Button Number	Music Group	Speech Group
M1	POP , ROCK	NEWS, AFFAIRS, INFO
M2	EASY, LIGHT	SPORT, EDUCATE, DRAMA
M3	CLASSICS,	CULTURE, SCIENCE, VARIED
M4	JAZZ, COUNTRY	WEATHER, FINANCE, CHILDREN
M5	NATION, OLDIES	SOCIAL, RELIGION, PHONE IN
M6	FOLK	TRAVEL, LEISURE, DOCUMENT

When PTY code is selected, the radio will search the band for the station that matches the PTY code.

OVERVIEW OF THE RDS FUNCTION

Radio Data System (RDS) is a broadcasting service that allows FM stations to send additional digital information along with the regular radio program signal. Your car stereo offers you a variety of services. Here are just a few:

- PI (Program identification)

It is a code that identified RDS stations; it is unique for each station.

- PS (PROGRAM Service Name)

The name of current station, it is shown on the display.

- AF (Alternative Frequencies List)

The list(s) of Alternative Frequencies give information on the various transmitters broadcasting the same program in the same or adjacent reception area. If the main frequency should get worse, the radio will tune automatically to the strongest Alternative frequency.

- TP (Traffic Program)

If the tuned program carries Traffic Announcement, the TP indicator will turn on.

- TA (Traffic Announcement)

When an actual traffic bulletin is on air, the TA indicator will also turn on.

- PTY (Program Type Codes)

This code is used to designate the current program material being broadcast. With this feature, you can search the programs that match the selected program type, which is chosen from a specific list of types.

- CT (Clock Time)

This function permits to update the clock of the receiver the nation from which the station is broadcasting (from PI). It could happen that on the display will be shown the wrong hour; this happens because in Italy the Clock Time function is not working yet.

Notes

- Depending on the country or region, not all of the RDS functions are available in Italy.
- RDS may not work properly if the signal strength is weak or if the station you are tuned to is not transmitting RDS data.

PROGRAMMABLE OPTIONALS

To use this function keep press long **SEL** Button for few seconds, each time you press this button the mode will move and the functions will shown on the display, turn the **encoder volume knob up/down** to set the desires functions ,the function states as following:

- TA SEEK, TA ALARM

To determine what action will the radio take if the newly tuned station does not receive TP information for 5 seconds.

TA SEEK

The radio retunes to a different station which

contains TP information.

TA ALARM

The radio does not retune but beeps will come out.

- PI SOUND, PI MUTE

When the vehicle is crossing the area where two stations with same AF but different PI code can be received at the same time, the receiver will become unstable, under this situation two modes can be selected.

PI SOUND

The different PI sounds will be heard.

PI MUTE

Under the same situation, the radio will be muted.

- RETUNE L, RETUNE S

To determine the initial time of automatic TA Search or PI Search.

RETUNE L 90 seconds

RETUNE S 30 seconds

- MASK PI, MASK ALL

"PI" is referred to "Different PI with same AF". During AF search, PI stations and non-RDS stations with strong signal will be masked, in the latter case, the non-RDS stations may cause interference, resulting the real AF to be masked due to the misjudgment of the radio under interference. There are two options to handle this situation. MASK PI to mask only the AF with different PI. MASK ALL mask both PI and strong signal non-RDS stations.

- BEEPS 2ND,BEEP ALL ,BEEP OFF

To determine how the beep sound is generated when the keys are pressed.

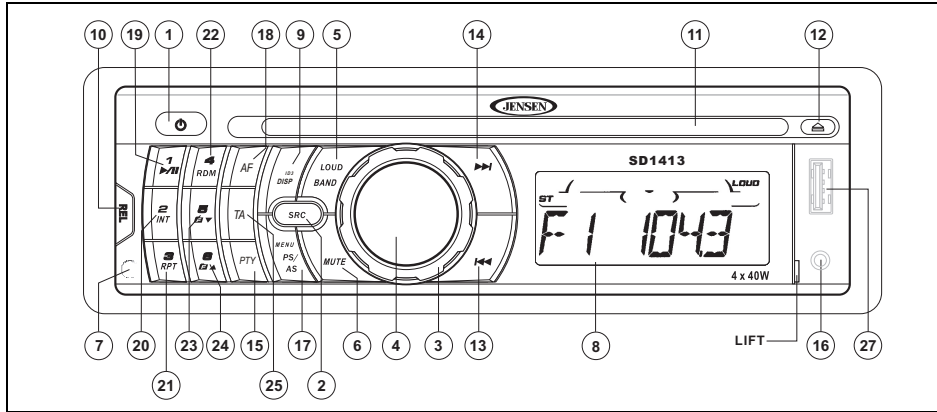
BEEP 2ND Beeps only when the second function of the dual function button is selected (long press).

BEEP ALL Beeps when any buttons is pressed.

BEEP OFF To disable the beep option.



CD PLAYER OPERATION



Insert CD

With the label surface facing up, gently insert the disc into the CD slot (11) until the soft-loading mechanism engages and pulls the disc in. Disc play begins and “CDP PLAY” will appear in the display. The track number and elapsed time appear in the display.

Track Select

Track select features are used to quickly access the beginning of a particular track when a disc is in play. Press the >>| button (14) to move forward or the |<< button (13) to move

backward on the disc to locate the desired track. Track numbers will appear in the display as they are accessed.

Press and hold the >>| or |<< button to fast forward or fast reverse through a disc. During either function, the elapsed time will appear on the display. Release the button to resume CD play.

Play/Pause

Press the play/pause button (19) to suspend disc play. “S--PAUSE” will appear in the display. Press the play/pause button again to resume

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

disc play. The “S--PAUSE” indication will disappear from the display, and play will resume from the pausing point.

Disc Intro Scan (INT)

During disc play, press the **2 INT** button (20) to play the first 10 seconds of each track on the disc. “S--SCN” will appear in the display. When the desired track is reached, press **2 INT** again to end the scan function and play the selected track. “S--SCN” will disappear from the display. The scan function will also be canceled when activating the repeat or shuffle functions.

Disc Repeat (RPT)

Press the **3 RPT** button (21) during disc play to continuously repeat the selected track. "S--RPT" will appear in the display. Press **3 RPT** again to stop repeating. "S--RPT" will disappear from the display, and regular play will resume. The repeat function will also be canceled when activating the scan or shuffle functions.

Disc Shuffle (RDM)

Press the **4 RDM** button (22) during disc play to play all tracks on a CD in random, shuffled order. "S--SHF" will appear in the display. Press **4 RDM** again to stop random play. "S--SHF" will disappear from the display and regular play will resume. The shuffle function will also be canceled when activating the scan or repeat functions.

Disc Eject

Press the eject button (12) to stop CD play and eject the disc. The unit will change to tuner or AUX operation, depending on which mode was in operation prior to disc play. If the disc is not removed from the unit within 15 seconds, the disc will be reloaded to prevent accidental damage. Disc play can be resumed by pressing **SRC** (2) to choose the CD player function.

CD Player Error Codes

If a problem should develop while operating the CD player, "Disc Error" or "Error 1" may appear on the display panel. If "Disc Error" appears, try ejecting and reloading the disc into the player. While the disc is out of the unit, make sure it is clean and undamaged, and then load it correctly. "Error 1" can indicate a number of problems with the unit, including a mechanical error or an error in the microprocessor control of the player. Pressing the reset button (26) may help, but will erase the time and preset memory. If the suggested measures do not solve the problem, contact an approved warranty station near you for further assistance.

MP3/WMA FILE REQUIREMENTS

MP3 and WMA (Windows Media Audio) music files are digital audio files that are compressed to allow more files on a single CD. This unit can play MP3/WMA directly from files contained on a CD-R/RW, USB device or SD card using the buttons on the receiver (or remote control) as described below. Many types of software are available for converting audio files into MP3/WMA formats. Phase Linear recommends *Nero* or *Roxio Easy CD Creator*. Depending on the media type and recording method, some CD-R/RWs may be incompatible with this unit. The unit supports playback of MP3/WMA and CDDA (CDA), Mixed-Mode CDs and CD-Extra (including multi-session discs), but **discs on which the session has not been closed will not play**.

Notes on MP3/WMA Play

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

Acceptable Media

The MP3/WMA recording media acceptable to this unit are CD-ROM, CD-R and CD-RW. When using CD-RW, use full format rather than quick format to prevent malfunction.

Acceptable Disc Formats

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

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

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

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

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

MP3/WMA Encoder and CD Writer Settings

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

- Transfer bit rate: 32 - 320 kbps
- Sampling frequency: 32, 44.1, 48kHz (WMA) and 16, 22.05, 24, 32, 44.1, 48kHz (MP3)

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

Entering ID3 Tag

This unit supports ID3 tag versions 1.0 and 1.1. For the character codes, refer to the table below.

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

Entering File and Folder Names

Names using the code list characters are the only file names and folder names that can be entered and displayed. Other characters will not display correctly. The unit recognizes and plays only files with the MP3/WMA extension.

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

Writing Files into a Disc

When a disc containing MP3/WMA data is loaded, the unit checks all data. If the disc contains many folders or non-MP3/WMA files, MP3/WMA play will be delayed, it may take time for the unit to move to the next file, and searches may not be performed smoothly. Loading such a disc may produce loud noise and cause damage to the speakers.

NOTE: Do not attempt to play a disc containing a non-MP3/WMA file with the MP3/WMA extension or a disc containing non MP3/WMA files.

Electronic Shock Protection

- 10 seconds for CDDA (CDA)
- 60 seconds for MP3/WMA recorded at 44.1kHz, 128kbps

Bit Rates

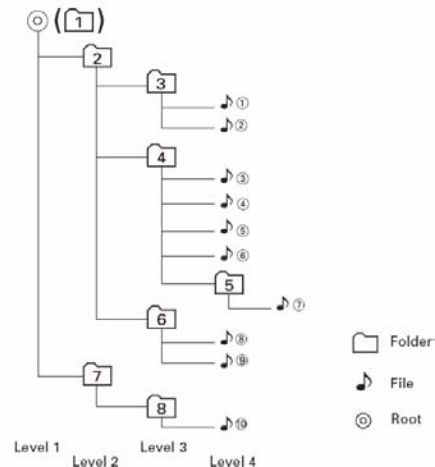
The unit supports bit rates from 32 - 320 kbps.

File Playing Order

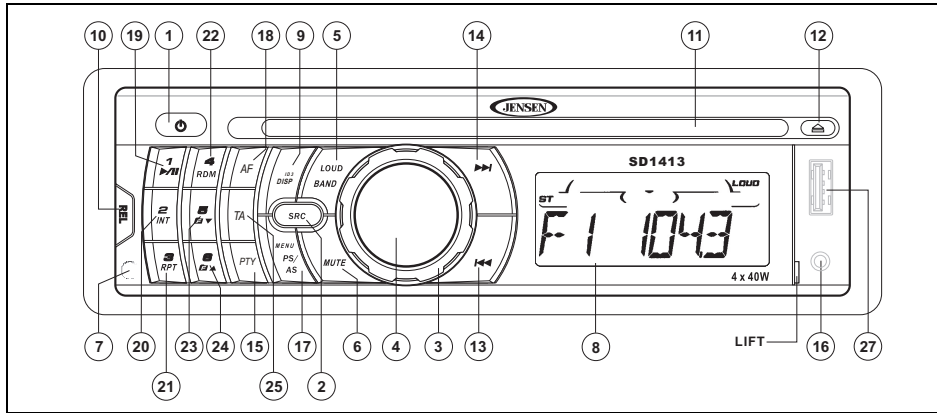
When selected for play, files and folders (Folder Search, File Search or Folder Select) are accessed in the order they were written by the CD writer. As a result, the order in which they are expected to be played may not match the order in which they are actually played.

You may be able to set the order in which MP3/WMA are to be played by writing them onto a disc such as a CD-R with their file names beginning with play sequence numbers such as "01" to "99".

For example, a disc with the following folder/file hierarchy is subject to Folder Search, File Search or Folder Select as shown below.



MP3/WMA OPERATION



Pause

Press the **1 >||** button (19) to suspend disc play. Press the play/pause button again to resume play.

Track Select

Press the **>>|** (14) or **|<<** (13) button for less than one second to advance to the next track on the disc, or *press and hold* to fast forward or fast reverse through the disc. Disc play starts when the button is released.

Navigating Folders

Press the **5 V** and **6 Λ** buttons (23, 24) to select the next or previous folder/directory.

Intro Scan (INT)

During disc play, press the **2 INT** button (20) to play the first 10 seconds of each track on the disc. When the desired track is reached, press **2 INT** again to end the scan and play the selected track.

Repeat (RPT)

Press the **3 RPT** button (21) to repeatedly play the current file. Press **3 RPT** again to resume normal playback.

Random (RDM)

Press the **4 RDM** button (22) to randomly play all files on the disc. Press **4 RDM** again to resume normal playback.

MP3/WMA File or Folder Search

The unit offers four methods of searching for files or folders on a disc.

Direct File Number Search

Press the **PS/AS** button (17) to enter Direct Track Search mode. The LCD will display "MP3 T" followed by a blinking asterisk. Refer to the Number column in Table 1 to enter a track number to play.

Table 1: Search Characters

Key	Number	Characters
1 >||	1	A, B, C
2 INT	2	D, E, F
3 RPT	3	G, H, I
4 RDM	4	J, K, L
5	5	M, N, O
6	6	P, Q, R
SRC	7	S, T, U
|<<	8	V, W, X
>>|	9	Y, Z, blank
DISP	0	_, -, +

If you enter a three-digit track number, the unit will search the track immediately. If you enter one or two digits, press the **AUDIO CONTROL** button (4) to begin the search, or wait a few seconds for the search to begin automatically.

You can also turn the rotary to access and file numbers sequentially. After locating the desired file, press the **BAND** button (5) to begin playback.

Directory/File Search

1. Press the **PS/AS** button (17) twice to enter Directory or File Name Search mode. The LCD will display a blinking asterisk.
2. Use the keys specified in Table 1 or turn the **AUDIO CONTROL** (3) to enter a search string. Pressing the appropriate key repeatedly will scroll through the corresponding number and characters.
3. Press the **AUDIO CONTROL** button (4) to confirm each character.
4. Press the **BAND** button (5) to begin the search.

If the search results in a directory name, a folder icon will appear on the display.

1. In this case, use the >>| (14) or |<< (13) buttons to select a song/folder in the directory.
2. Press the **BAND** button (5) to confirm and begin playback.

Repeat if the search results in another directory.

Root Directory Search

1. Press the **PS/AS** button (17) three times to enter Root Directory Search mode. The LCD will display the first folder or file name in the root directory.

2. Turn the **AUDIO CONTROL** (3) to browse all available folder or files in the root directory.
3. Press the **AUDIO CONTROL** button (4) to select a folder or file.
 - If a folder is selected, a folder icon appears on the LCD, indicating that the selection is a folder. Repeat steps 2 and 3 to select a file for playback.
 - If a file is selected, playback begins automatically.

Current Directory Search

1. Press the **PS/AS** button (17) four times to enter Current Directory Search mode. The LCD will display the current directory name, followed by the file currently playing.
2. Turn the **AUDIO CONTROL** (3) to browse all available folders or files in the current directory.
3. Press the **AUDIO CONTROL** button to select a folder or file.
 - If a folder is selected, a folder icon appears on the LCD, indicating that the selection is a folder. Repeat steps 2 and 3 to select a file for playback.
 - If a file is selected, playback begins automatically.
 - Select the folder icon to return to the previous file level and select a different directory or file.

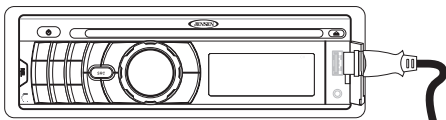
Display Information

Press the **DISP** button (9) to display the clock or available ID3 information, as follows: song title, directory name, artist name, etc.

USING A USB DEVICE OR SD CARD

Loading a USB Device

USB devices can be played through the USB connector on the front panel. To access files on a USB device, insert the USB device as indicated below:



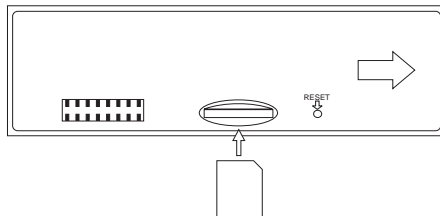
After inserting an USB device containing MP3 or WMA files, "USB HOST" appears on the display and the unit will automatically scan the card for music files and begin playback.

To eject the USB device, press the **SRC** button (2) to select a different source. Pull the USB device straight out and return the cover to the closed position.

Loading an SD Card

To insert an SD card, you must first remove the front panel to reveal the SD card slot (see "Front Panel Release" on page 4). Insert your

SD Card as illustrated below and then reinstall the front panel.



After inserting an SD card containing MP3 or WMA files, "SD/MMC" appears on the display and the unit will automatically scan the card for music files and begin playback.

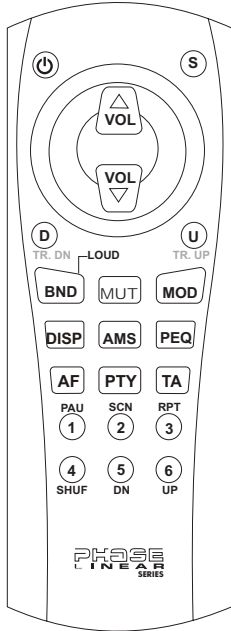
To eject the SD card, remove the front panel and then press in on the SD card to release it. Pull the SD card straight out and replace the front panel.

Navigating Files

Please refer to "MP3/WMA Operation" on page 11 for information regarding directory navigation and file searching.

REMOTE CONTROL

The remote control will allow you to control the basic functions of your head unit.



The remote control sensor is located on the left side of the front panel to the left of the **3 RPT** button (3).

Remote control functions are as follows:

- S = Select (audio menu)
- VOL \wedge = Volume Up
- VOL \vee = Volume Down
- D = Tune/Track Down
- U = Tune/Track Up
- BND = BAND/LOUD
- MUT = MUTE
- MOD = SRC
- DSP = DISP
- AMS = AS/PS
- SCN = Scan, AM, FM
- AF = AF
- PTY = PTY
- TA = TA
- PEQ = Preset Equalizer Settings



CARE AND MAINTENANCE

CD Player

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

1. When cleaning the vehicle interior, do not get water or cleaning fluids on the unit.
2. The CD player will not operate properly in extreme hot/cold or under damp conditions. In case of such conditions, wait until the vehicle interior reaches a normal temperature or any condensation on the disc player lens has evaporated before using the player.
3. Never insert anything other than round 5" CDs into the player. Attempting to insert CDs of other sizes (even with an adaptor) will cause damage not covered by the warranty.
4. Always remove the CD when the player is not in use.
5. The unit is designed with a vibration dampening CD mechanism to minimize interruption of disc play due to normal vibration in a moving vehicle. However, occasional sound skips may occur when driving on very rough roads. This will not scratch or damage the disc, and normal play will resume when the rough conditions cease.

Compact Discs

CD-R / CD-RW

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

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

CD Care and Handling

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

1. Carefully wipe fingerprints, dust and dirt from the disc's playing surface with a soft cloth. Wipe in a straight motion from the inside to the outside of the disc.

2. Never use chemicals such as record sprays or household cleaners to clean CDs, as they can irreparably damage the disc's surface.
3. Discs should be kept in their storage cases when not in use.
4. Do not expose discs to direct sunlight, high temperatures or high humidity for long periods.
5. **Do not stick paper, tape or CD labels on disc surfaces, as internal damage may occur.**

TROUBLESHOOTING

Problem	Cause	Corrective Action
Does not operate (display does not light)	No power to yellow wire; no power to red wire	Check connection with test light; check vehicle fuse with test light.
	Inline fuse blown	Replace fuse.
No power to unit	Inline fuse blown	Check/replace fuse.
Not all speakers operate	Incorrect splices or connections	Check all splices and connections.
	Speaker wires shorting to chassis ground or to each other	Check splices; insulate all bare wires.
Blows fuses	Power wire shorting to ground	Make sure wire is not pinched.
	Speaker wires shorting to ground	Make sure wire is not pinched.
	Incorrect fuse or fuse too small	Install fuse of correct rating.
CD skips too much	Receiver mount is not solid or backstrap is not secure	Check mounting and backstrap; tighten if needed.

SPECIFICATIONS

CEA Power Ratings



Power output: 13 watts RMS X 4 channels into 4-ohms @ \leq 1% THD+N
 Signal to noise ratio: 70dBA below reference.
 (Reference: 1 watt, 4-ohms)
 Frequency response: 20Hz to 20kHz (-3dB),
 Auxiliary input used as source reference
 Reference supply voltage: 14.4VDC

CD Player

Signal-to-noise ratio: >90dBA
 Frequency response: 20Hz-20kHz, -3dB
 Channel separation: >55dB @ 1kHz
 D/A converter: 1 Bit/CH

FM Tuner

Tuning range (Europe): 87.50MHz-108.00MHz
 Mono sensitivity: 12dBf
 50dB quieting sensitivity (stereo): 16dBf
 Stereo separation @ 1kHz: >35dB

Frequency response: 30Hz-14kHz. \pm 3dB

AM Tuner

Tuning range (Europe): 522kHz-1620kHz
 Sensitivity @ 20dB signal to noise: 30uV
 Frequency response: 50Hz-2kHz., -3dB

Auxiliary Input

Input sensitivity: 400mV RMS for 1 watt RMS into 4-ohms
 Frequency response: 20Hz to 20kHz, -3dB
 Input impedance: 10 k-ohms

General

Power supply: 11-16 VDC, negative ground
 Power Antenna (Blue): 500mA Max, current limited protection.
 Operating Temp: -10C~60C
 Fuses: 15 amp fast blow ATO
 DIN chassis dimensions: 2"H x 7"W x 7"D
 (51mm x 178mm x 178mm)

Specifications subject to change without notice.



Limited Warranty

CD or Multimedia Radios/Head Units

DO NOT RETURN THIS PRODUCT TO THE STORE

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

Who is covered?

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

What is covered?

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

What is not covered?

This Warranty does not cover the following:

- Damage incurred during shipping or transporting the product to the Company or a service center
- Elimination of car static or motor noise
- Defects in cosmetic, decorative or non-operative structural parts
- Correction of antenna problems
- Costs incurred for installation, removal or reinstallation of the product
- Consequential damage to compact discs, USB devices, digital media cards, accessories or vehicle electrical systems
- Damage caused by improper installation, mishandling, misuse, neglect, accident, blown fuse, battery leakage, theft or improper storage
- Products whose factory serial number/bar code label(s) or markings have been removed or defaced
- Damage resulting from moisture, humidity, excessive temperature, extreme environmental conditions or external natural causes

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

Limitations

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

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

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

Obtaining Warranty Service

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



PHASE
LINEAR
SERIES

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