

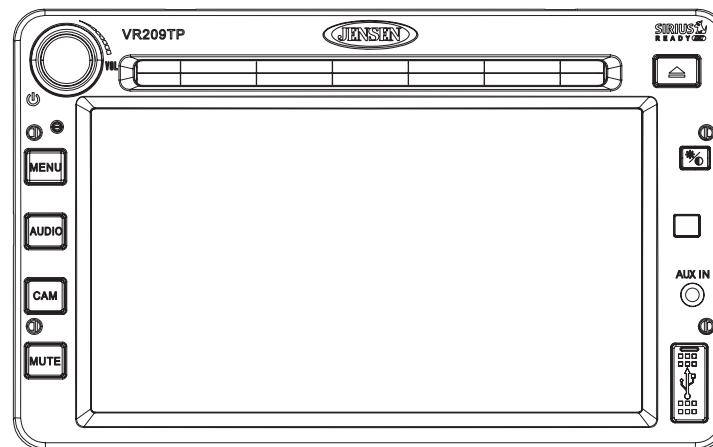


DESIGNED TO MOVE [YOU]

VR209TP

TOUCH PANEL MOBILE AUDIO AND OBSERVATION SYSTEM

Installation and Operation Manual





DESIGNED TO MOVE [you]

VR209TP

SAFETY INFORMATION

When Driving

Keep the volume level low enough to be aware of the road and traffic conditions.

Protect from Water

Do not expose the product to water, as this can cause electrical shorts, fire or other damage.

Protect from High Temperatures

Exposure to direct sunlight for an extended period of time can produce very high temperatures inside your vehicle. Give the interior a chance to cool down before starting playback.

Do not mount radio within close proximity of engine compartment.

Use the Proper Power Supply

This product is designed to operate with a 12 volt DC negative ground battery system.

Protect the Disc Mechanism

Avoid inserting any foreign objects into the disc slot. Misuse may cause malfunction or permanent damage due to the precise mechanism of this unit.

CAUTION:

THIS MOBILE CD PLAYER IS A CLASS I LASER PRODUCT. THIS UNIT USES A VISIBLE/ INVISIBLE LASER BEAM WHICH COULD CAUSE HAZARDOUS RADIATION IF EXPOSED DIRECTLY. BE SURE TO OPERATE THE MOBILE CD PLAYER AS INSTRUCTED.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OR PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

DO NOT OPEN COVERS AND DO NOT REPAIR BY YOURSELF. PLEASE REFER SERVICING TO A QUALIFIED TECHNICIAN.

WARNING:

- TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO WATER.
- TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK AND INTERFERENCE, USE ONLY THE RECOMMENDED ACCESSORIES.




DISC NOTES

Depending on the recording status, conditions of the disc, and the equipment used for recording, some CD-Rs/CD-RWs may not play on this unit. For more reliable playback, please adhere to the following recommendations:

- Use CD-RWs with speed 1x to 4x and write with speed 1x to 2x.
- Use CD-Rs with speed 1x to 8x and write with speed 1x to 2x.
- Do not play a CD-RW which has been written more than 5 times.

Compatible Disc Types

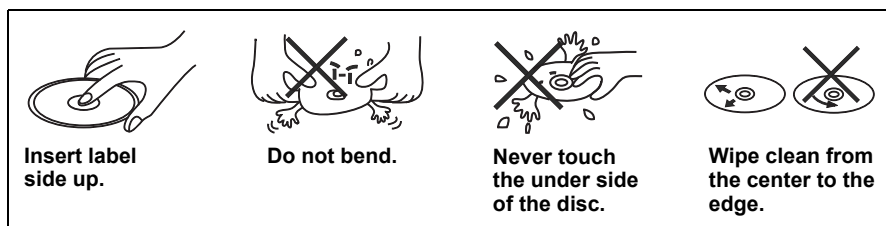
Table 1: General Disc Information

Disc Type	Logo	Diameter/ Playable Sides	Playback Time
Audio CD	  	12 cm single side	74 minutes

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

Disc Maintenance

- A dirty or defective disc may cause sound dropouts while playing. Before playing, wipe the disc using a clean cloth, working from the center hole towards the outside edge. Never use benzene, thinners, cleaning fluids, anti-static liquids or any other solvent.



- Be sure to use only round CDs for this unit and do not use any special shape CDs. Use of special shape CDs may cause the unit to malfunction.
- Do not stick paper or tape on the disc. Do not use CDs with labels or stickers attached or that have sticky residue from removed stickers.
- Do not expose discs to direct sunlight or heat sources such as hot air-ducts, or leave them in a vehicle parked in direct sunlight where there can be a considerable rise in temperature inside the vehicle.

NOTE: A disc may become scratched (although not enough to make it unusable) depending on how you handle it and other conditions in the usage environment. These scratches are not an indication of a problem with the player.

INSTALLATION

Before You Begin

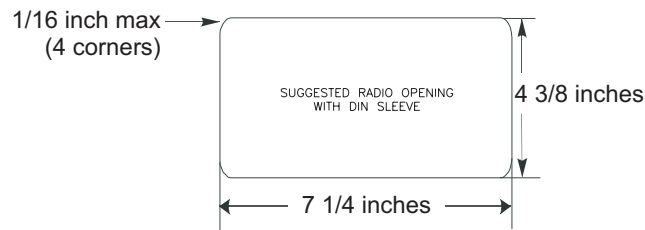
1. **Disconnect Battery**
Before you begin, always disconnect the battery negative terminal.
2. **Remove Transport Screws** and discard.

Important Notes

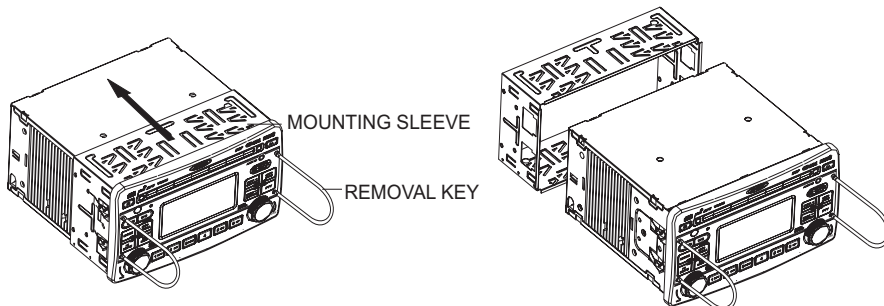
- Before final installation, test the wiring connections to make sure the unit is connected properly and the system works.
- Use only the parts included with the unit to ensure proper installation. The use of unauthorized parts can cause malfunctions.
- Consult with your nearest dealer if installation requires the drilling of holes or other modifications to your vehicle.
- Install the unit where it does not interfere with driving and cannot injure passengers if there is a sudden or emergency stop.
- If the installation angle exceeds 30° from horizontal, the unit might not give optimum performance.
- Avoid installing the unit where it will be subject to high temperatures from direct sunlight, hot air, or from a heater, or where it would be subject to excessive dust, dirt or vibration.

2-DIN Front Mount

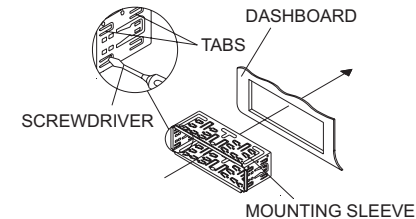
This unit can be installed in a dashboard with an opening of the following dimensions:



1. Slide the mounting sleeve off of the chassis if it has not already been removed. If it is locked into position, use the removal keys (supplied) to disengage it. Insert the keys through the holes in the front panel as far as they will go, and then slide the sleeve off the back of the unit.



2. Check the dashboard opening size by sliding the mounting sleeve into it. If the opening is not large enough, carefully cut or file as necessary until the sleeve easily slides into the opening. Do not force the sleeve into the opening or cause it to bend or bow. Check that there will be sufficient space behind the dashboard for the radio chassis.
3. Locate the series of bend tabs along the top, bottom and sides of the mounting sleeve. With the sleeve fully inserted into the dashboard opening, bend as many of the tabs outward as necessary to firmly secure the sleeve to the dashboard.



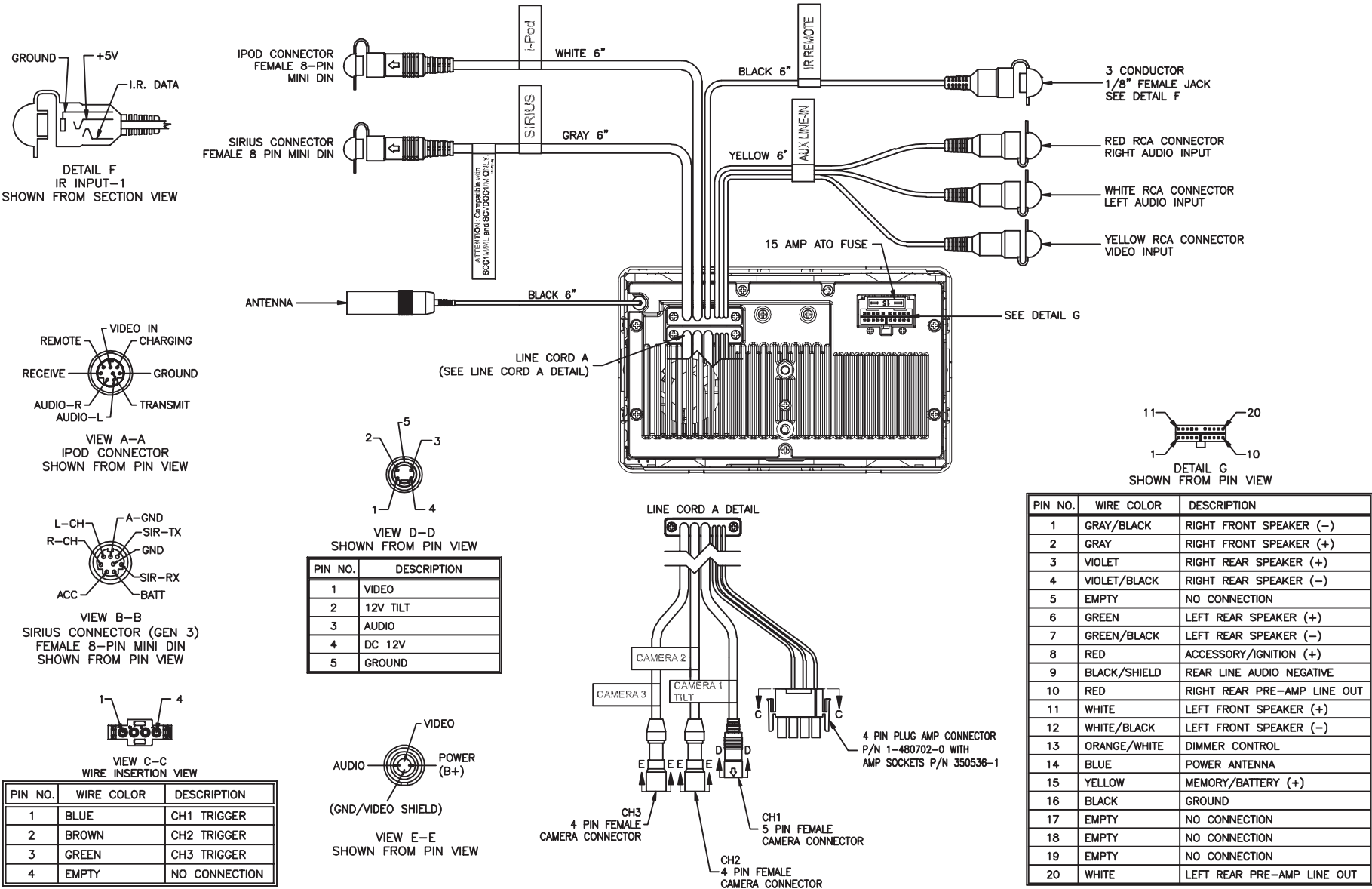
4. Place the radio in front of the dashboard opening so the wiring can be brought through the mounting sleeve.
5. Follow the wiring diagram carefully and make certain all connections are secure and insulated with crimp connectors or electrical tape to ensure proper operation.
6. After completing the wiring connections, reconnect battery and turn the unit on to confirm operation (vehicle ignition switch must be on). If the unit does not operate, recheck all wiring until the problem is corrected. Once proper operation is achieved, turn the ignition switch off and proceed with final mounting of the chassis.
7. Carefully slide the radio into the mounting sleeve making sure it is right-side-up until it is fully seated and the spring clips lock it into place.
8. Test radio operation by referring to the operating instructions for the unit.

Removing the Unit

To remove the radio after installation:

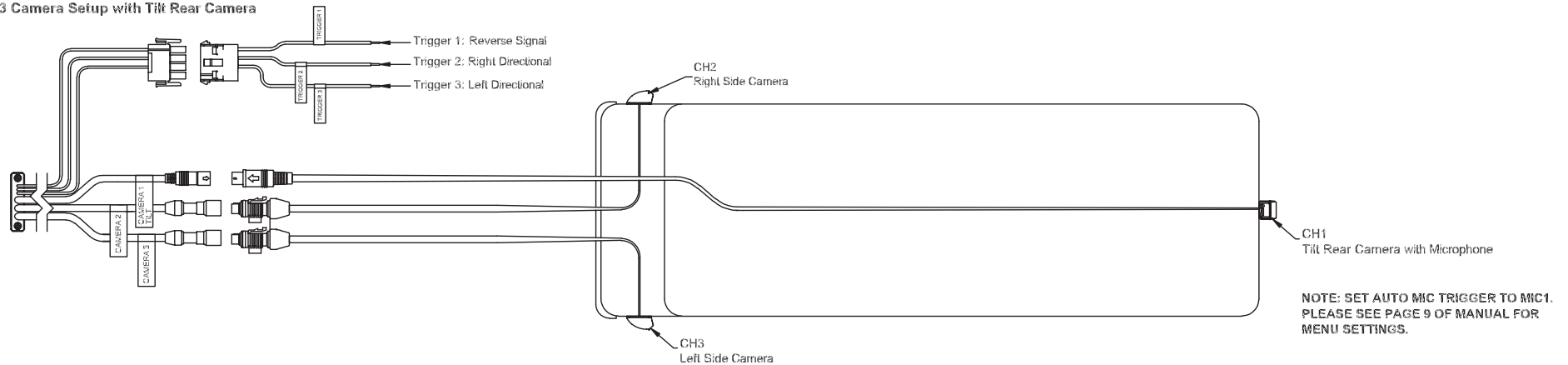
1. Make sure the ignition is turned off, and then disconnect the cable from the vehicle's battery negative (-) terminal.
2. Insert the removal keys straight into the holes on the front of the unit, as far as they will go.
3. Pull the radio straight out.

WIRING

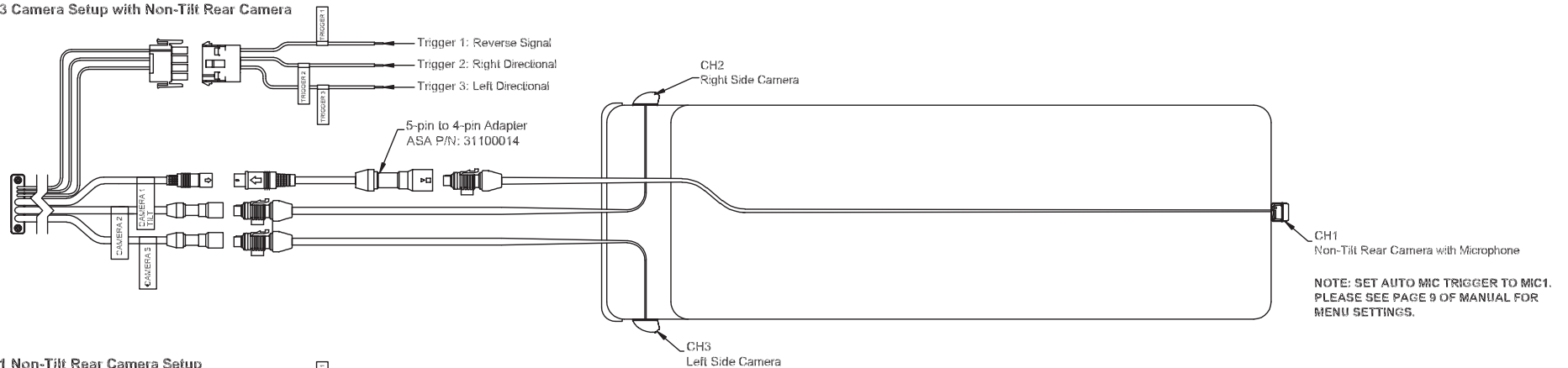


Recommended Camera Installation Configurations

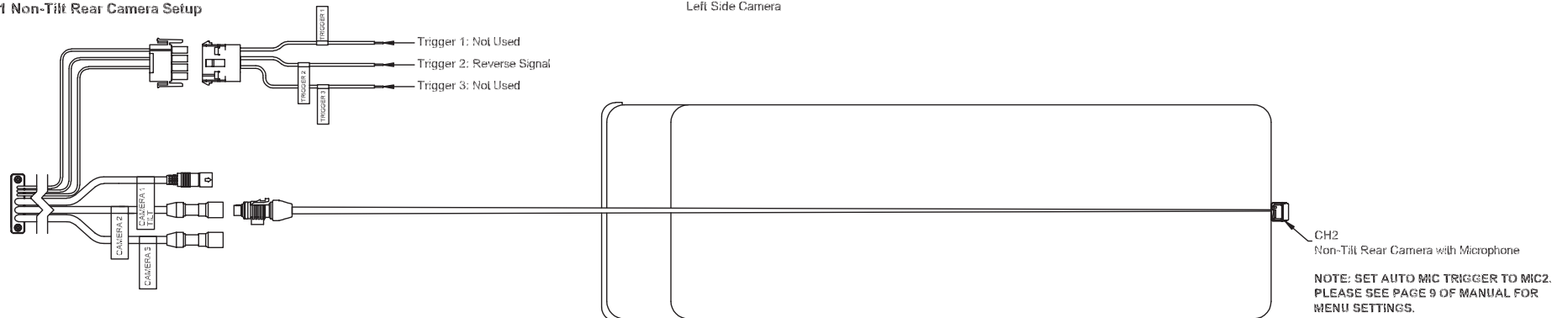
3 Camera Setup with Tilt Rear Camera



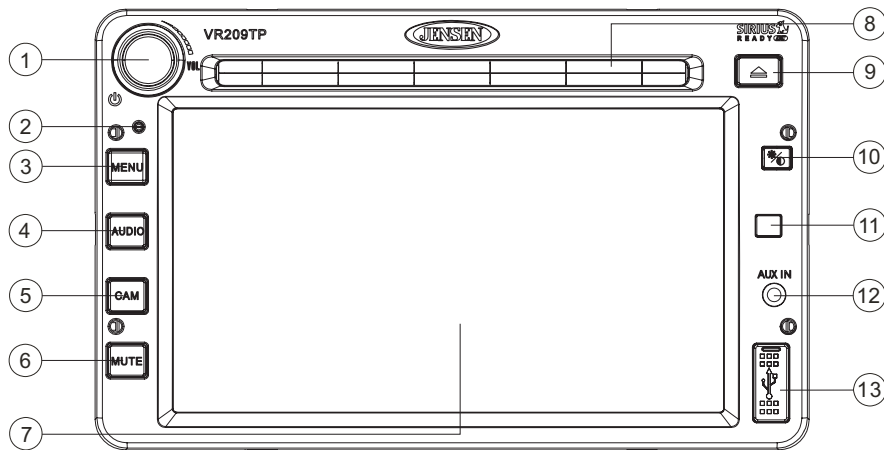
3 Camera Setup with Non-Tilt Rear Camera




1 Non-Tilt Rear Camera Setup



BASIC OPERATION



Power On/Off

- Press the power **VOL**/ button (1) to turn the unit on/off.
- Press and hold* to turn the touch screen backlighting off when driving at night. Audio playback is not interrupted.
- Touch any area of the screen to resume the previous display lighting and mode.

Volume Control

- To increase the volume, rotate the **VOL** control (1) clockwise.
- To decrease the volume, rotate the **VOL** control counter-clockwise.
- During adjustment, the volume level is displayed in the middle of the display as a horizontal bar graph with the associated numbered level setting from 0 (full mute) - 40 (0dB, no attenuation).
- The screen will display the volume indicator bar for 3 seconds and then revert to the previous mode information.

Reset

Use a ball point pin or thin metal object to press the **RESET** button (2). The reset button should be activated for the following reasons:

- initial installation of the unit when all wiring is completed
- function buttons do not operate
- error symbol on the display

Menu

- Press the **MENU** button (3) to access the main User Settings Menu.
- Touch the icon on the display to go to the desired menu for setting adjustment.
- Press and hold* the **MENU** button (3) to access the "System Setup" menu. See "User Settings Menu" on page 9.

Camera (CAM)

- Press the **CAM** button (5) to access camera mode.
- Press and Hold* to enter the "Camera Setup" menu. See "Camera Operation" on page 21.

Audio

- Press the **AUDIO** button (4) to access Audio Mode and select a source for playback.
- Press and hold* the **AUDIO** button to enter the "Audio Setup" menu. See "Source Select Menu" on page 10.

NOTE: CD/MP3/WMA, iPod or USB mode is inaccessible if the disc is not inserted or the module is not installed. These buttons will be gray on the screen.

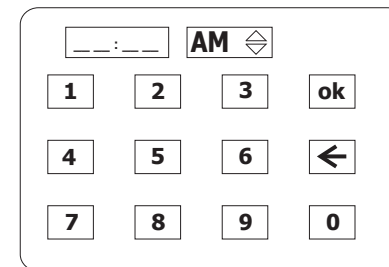
Mute

- Press the **MUTE** button (6) on the control panel to mute the audio output. "MUTE" will appear on the display.
- Press **MUTE** again or touch any area of the screen to restore the audio output to the previous level.

Adjusting the Clock

The current time is displayed in the top right hand corner of the LCD display. To adjust the clock:

- Press and hold* the **MENU** button (3) to view the System Setup menu.
- Touch the "Clock" field to view the clock set screen:

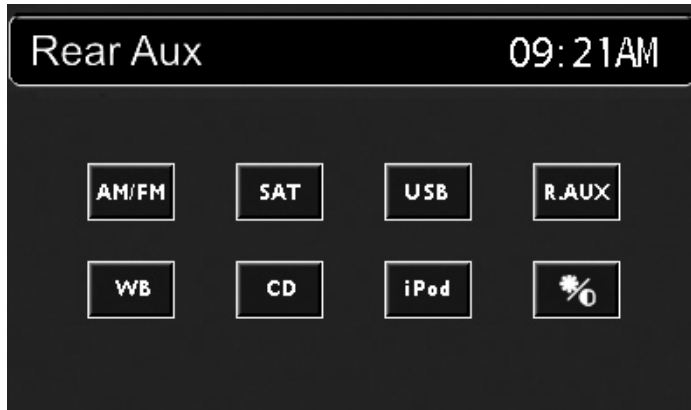


- Use the on-screen touch pad to enter 4 digits representing the time.
- Touch the "AM/PM" field to toggle between AM/PM, if necessary.

Auxiliary Input

To access an auxiliary device:

1. Connect the portable audio player to the AUX IN connector on the front panel (12) or to the AUX IN cables on the back of the radio.
2. Touch the **AUDIO** button on the left side of the screen to select AUX IN mode.
3. Touch the "F.AUX" (front AUX) or "R.AUX" (rear AUX) button to select front or rear AUX in. Video output is available for the Rear Aux input through video cables at the back of the unit.



Remote Sensor

Point the remote control handset (sold separately) at the remote sensor IR (11) and press the function keys on the handset to control the system.

Day/Night Backlight

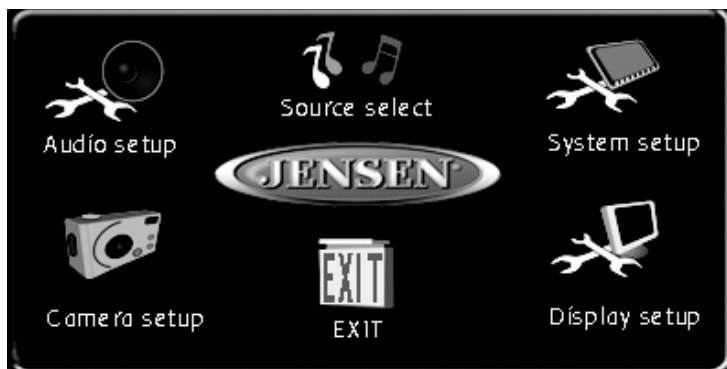
Pressing the **DAY/NIGHT** button (10) allows you to quickly toggle between preset dimming levels for night and day viewing of the display.

To set the preset dimming levels:

1. *Press and hold* the **DAY/NIGHT** button (10) to enter the "Display Setup" menu.
2. Adjust display backlight intensity using the "Dimming Day" and "Dimming Night" level settings under the "Display Setup" option on the User Settings Menu.

USER SETTINGS MENU

Press the **MENU** button (3) to access the User Settings Menu.



Touch to select the “Audio setup”, “Camera setup”, “Source select”, “System setup” or “Display setup” sub-menu, or touch “Exit” to leave the User Settings Menu screen.

Audio Setup Menu

NOTE: You can also press and hold the **AUDIO** button (4) on the front panel to enter the Audio Setup menu.

Each level adjustment is indicated as a horizontal bar graph and an associated numbered level setting. Adjustments are made by pressing virtual buttons at the end points of the bar graph.

The following “Audio Setup” options can be adjusted:

Table 2: Audio Setup Menu Options

Setting	Adjustable Range
Bass	-6 to +6
Treble	-6 to +6
Balance	-12 to +12
Fade	-12 to +12
EQ	Off
	Flat (default)
	Rock
	Pop
	Classic
Loudness	ON/OFF (OFF is default)

Table 2: Audio Setup Menu Options

Setting	Adjustable Range
NOTES: The Bass and Treble levels are only adjustable when EQ is set to “Off” mode. The Loud function compensates for deficiencies in sound ranges at low levels.	

Camera Setup Menu

NOTE: You can also press and hold the **CAM** button (5) on the front panel to enter the Camera Setup menu.

The following “Camera Setup” options can be adjusted:

Table 3: Camera Setup Menu Options

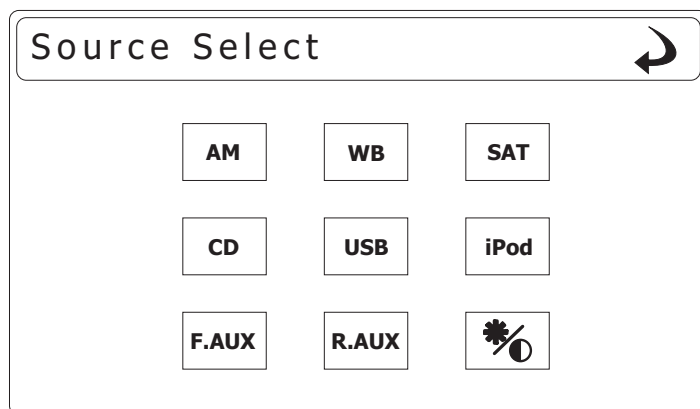
Setting	Options	Function
CH1	Skip	The output of CH1 image is skipped.
	Normal (default)	The output of CH1 image is in normal mode.
	Mirror	The output of CH1 image is in mirror mode.
CH2	Skip	The output of CH2 image is skipped.
	Normal (default)	The output of CH2 image is in normal mode.
	Mirror	The output of CH2 image is in mirror mode.
CH3	Skip	The output of CH3 image is skipped.
	Normal (default)	The output of CH3 image is in normal mode.
	Mirror	The output of CH3 image is in mirror mode.
Trigger Priority 1	CH1 (default)	Set the channel from 1 (highest) to 3 (lowest) for each Trigger Priority.
	CH2	
	CH3	
Trigger Priority 2	CH1	
	CH2 (default)	
	CH3	
Trigger Priority 3	CH1	
	CH2	
	CH3 (default)	

Table 3: Camera Setup Menu Options

Setting	Options	Function
Trigger Delay	1 SEC	Set delay time for displaying camera image after trigger signal is removed.
	2 SEC	
	3 SEC	
	4 SEC (default)	
	5 SEC	
	6 SEC	
Auto Mic Trigger	MIC 1	Select microphone to be used for rear camera.
	MIC 2	
Reset	Off (default)	Select "On" to restore camera factory settings.
	On	

Source Select Menu

Touch to select a playback source from the "Source Select" screen:



Display Setup Menu

The following "Display Setup" options can be adjusted:

Table 4: Display Setup Menu Options

Setting	Default	Options	Function
Dimming Day	07	00-10	Adjust display lighting level for day and night viewing.
Dimming Night	02	00-05	

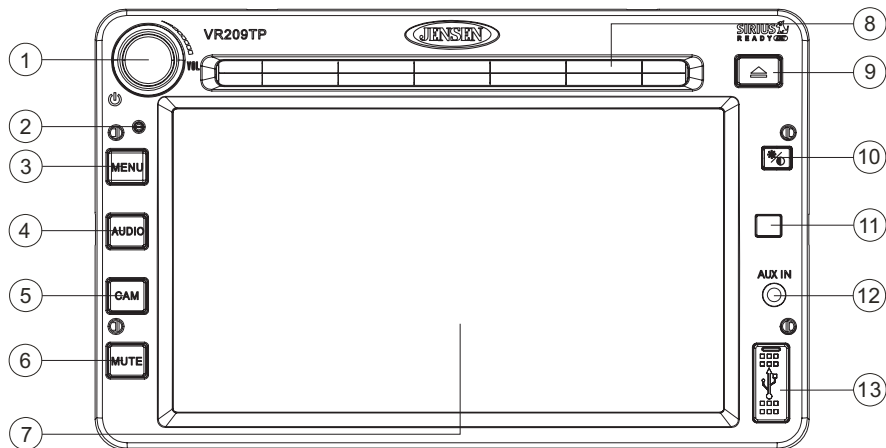
System Setup Menu

The following "System Setup" options can be adjusted:

Table 5: System Setup Menu Options

Setting	Options	Function
Beep Tone	Off (default)	Select "On" to hear audible confirmation when pushing front panel buttons.
	On	
Radio	USA (default)	Select the appropriate setting based on the country in which you reside.
	Europe	
Clock Format	12 Hr (default)	Clock displays in 12 hour mode with AM and PM.
	24 Hr	Clock displays in 24 hour mode up to 23:59
Clock	(HH:MM)	See "Adjusting the Clock" on page 7 to learn how to set the clock.
Time Zone	New Foundland	Only available in Sirius mode. Set correct time zone for correct time.
	Atlantic	
	Eastern	
	Central (default)	
	Mountain	
	Pacific	
DST Mode	Observed (default)	Only available in Sirius mode. Set for Daylight Savings Time.
	Not Observed	
WB Alert	On	Turn the WB alert function On/Off.
	Off (default)	
iPod Auto Detect	On (default)	Turn the iPod auto detect function On/Off.
	Off	
Alert Power	Off (default)	Select "On" to have the radio automatically turn on when a weather alert is received.
	On	
P-Volume	Off - 40 (off is the default value)	When set to "Off", the radio will turn on at the same volume level set when it was last turned off. Otherwise, you can choose a default turn-on level between 1 ~ 40.
TS Calibrate	No (default)	Select "Yes" to calibrate the touch screen
	Yes	
	NOTE: For proper calibration you must touch each pointer for 2 seconds. If pointers are not touched properly, the calibration sequence will start over until the calibration is done correctly.	
Factory Default	No (default)	Select "Yes" to restore factory default settings for the System Setup menu options.
	Yes	

AM/FM/RBDS CONTROLS



Enter FM/AM Mode

- Press the **AUDIO** button (4) on the front control panel to access Audio mode (if needed).
- Touch the **AM/FM** button on the touch screen to access AM/FM mode.



Information Bar

The top portion of the touch screen is the information bar. Information such as the current band and station, ST icon, and system clock is displayed on the information bar.

Select a Band

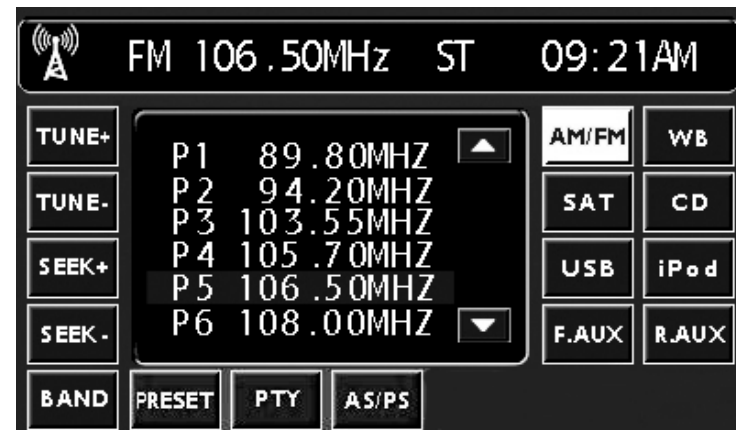
Touch the **BAND** button on the left side of the touch screen to change between FM and AM bands.

Tuning

- Touch the **TUNE +** or **TUNE -** buttons on the touch screen to tune up or down in one step increments.
- Touch the **SEEK +** or **SEEK -** button to seek the next strong station.

Preset Stations

18 FM or 12 AM numbered preset stations are listed on the touch screen and can be selected when touched. The selected station is displayed in highlighted font with a highlighted frame. All 18 presets can be navigated using the up/down arrows to the right of the list.



To store a station:

- Tune radio to desired station (large display mode is shown when tuning).
- Touch the **PRESET** button to return to the interface showing the preset list.
- Touch and hold* a preset location on the screen until the station is stored and appears in the preset list.

NOTE: Only six presets are displayed at one time. Touch the up/down arrows to the right of the list to access the next group of stored presets.

Automatic Store / Preset Scan (AS/PS)

Automatic Store

1. Select a band (if needed).
2. **Touch and hold the AS/PS button** for more than three seconds to automatically select 18 strong stations for FM (12 for AM) and store them in the current band. New stations replace any stations already stored in that band.
3. After stations have been stored, the radio will enter Preset Scan and preview each stored station.
4. Touch the blinking **AS/PS** button to select a preset station during preview (or for normal play).

Preset Scan

1. Select a band (if needed).
2. Touch the **AS/PS** button to scan stations stored in the current band. The unit will pause for ten seconds at each preset station.
3. Touch **AS/PS** again to stop scanning when the desired station is reached.

RBDS Operation

In FM radio mode, touch the **PTY** button to list the following search options in pages: Any/ News / Information / Sports / Talk/Rock / Classic Rock / Adult Hits / Soft Rock / Top 40 / Country / Oldies / Soft / Nostalgia / Jazz / Classical / Rhythm and Blues / Soft R&B / Language / Religious Music / Religious Talk / Personality/ Public / College / Weather / Emergency Test / Emergency.

Only six search options are displayed at one time. Touch the up/down arrows to the right of the list to access the next group of search options.

Touch the desired program type, and then touch **SEEK +** or **SEEK -** button to search for the corresponding program. If a corresponding program is found, the unit will play the program. If there is no corresponding program, the unit will resume the previous program.

Weather Band Selection

1. Press the **AUDIO** button (4) on the control panel to enter Audio mode (if needed).

2. Touch the **WB** button on the touch screen to access the weather band (NOAA seven frequency broadcast).
3. Touch the **TUNE +** or **TUNE -** button to choose one of the seven channels. The seven channels can also be accessed directly by touching the corresponding preset location on the touch screen. The selected channel is displayed in highlighted font with a highlighted frame.

NOAA Weather Alert

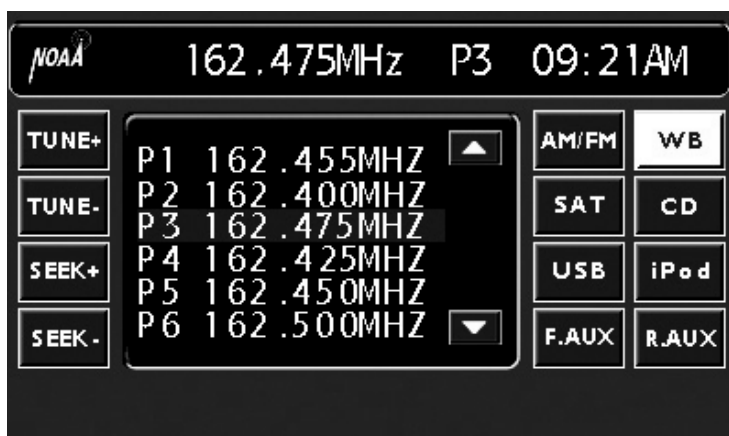
The VR209TP is equipped with a Weather Band Alert (WB Alert) and Weather "Alert Power" feature that will cause the radio to turn on automatically when a weather alert is detected, adding an additional level of user safety. The radio factory default setting for these features is "Off". When set to "On", the Weather Alert function automatically switches from any of the available function modes (Tuner, SAT, CD, iPod, AUX) to Weather Band when a NOAA warning tone is received/detected.

See "System Setup Menu" on page 10 to learn how to turn the WB Alert and Alert Power features on.

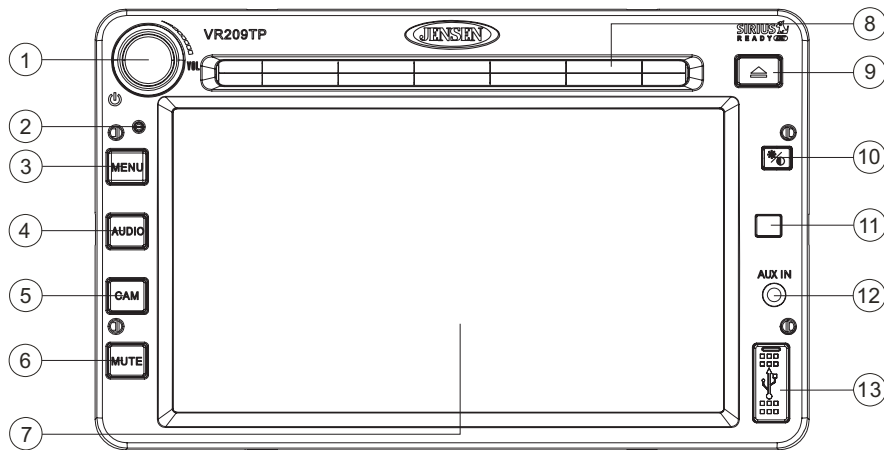
NOTE: The weather band channel frequency is fixed in preset memory and cannot be changed.

Stereo (ST)

The unit will automatically pick up an FM stereo signal, when available. When in stereo mode, the "ST" icon appears in the information bar on the screen. When no stereo signal is available, the unit will automatically revert to mono operation, and no icon will be displayed.

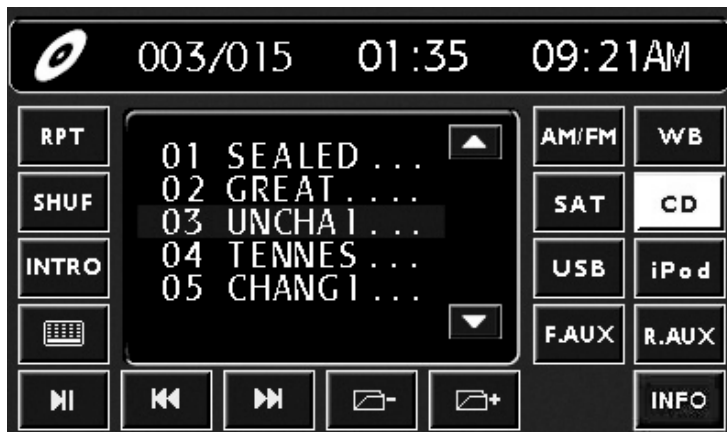


CD/MP3/WMA OPERATION



Inserting and Playing a Disc

Insert a disc, label-side up, into the disc slot (8) with the unit turned on. The unit will automatically draw the disc in, enter CD mode, and play the first track on the disc.



Elapsed playback time and track number of current track are displayed on the information bar at the top of the screen.

Ejecting a Disc

Press the eject button (9) on the front panel to stop disc play and eject the disc. The unit must be turned on to eject the disc. After the disc is ejected, the unit automatically returns to AM/FM mode.

MP3 Specifications

- A directory that does not include an MP3 file is skipped.
- Maximum number of folders: 512 (including skipped directories)
- Maximum number of folder levels: 12
- Maximum number of MP3 files: 999
- Maximum number of characters for MP3 file name and folder name: 32
- Sampling frequency: 16KHz, 22.05KHz, 24KHz, 32KHz, 44.1KHz, 48KHz.
- Bit rates: maximum 384 Kbps.
- Maximum number of Characters of ID3 Tag:
 - ID3 Tag version 1.0: 32
 - ID3 Tag version 2.x: 32

NOTE: After loading an MP3 disc, files and folders are accessed in the order in which they were written by the CD writer. Therefore, the playing order may not be the same as the order in which they are expected to played.

Controlling Disc Playback

Selecting Tracks

- Touch the ►► or ◀◀ button to go to the next or previous track/file on the disc. The selected track/file number will appear on the information bar at the top of the screen.
- Touch and hold the ►► or ◀◀ button to fast forward or fast reverse.
- Release to resume normal playback.
- For an MP3/WMA disc, touch the disc/directory button + (UP) or - (DOWN) button to skip to the following/previous folder.

NOTE: Directory UP/DOWN buttons are only available when playing an MP3/WMA disc.

Play/Pause Disc Playback

- Touch the ►|| button to suspend playback.
- Press the ►|| button again to resume playback.

Repeat Play (CD)

- Touch the RPT button during disc play to repeat play the current track.
- Touch RPT again to stop repeat play.

Repeat Play (MP3/WMA)

- Touch the RPT button during disc play to repeat play the current file.
- Touch RPT again to repeat play the entire folder.
- Touch RPT again to stop repeat play.

NOTE: Only six tracks are displayed at one time. Touch the up/down arrows to the right of the list to access additional tracks.


Shuffle Play

- Touch the **SHUF** button on the touch screen during disc play to play all tracks/files in random, shuffled order.
- During MP3/WMA/USB playback, touch **SHUF** a second time to play all songs in the current folder.
- Touch **SHUF** again for normal play.

Intro Play


- Touch the **INTRO** button to play an introduction of each file, beginning with the next track/file. The unit will play the first 10 seconds of each track.
- Touch **INTRO** again to stop intro play and play the current track/file in full.

Direct Track/File Access

1. Touch the  button to make the keypad appear on the screen.



2. Enter the track/file number using the keypad in the center of the screen to directly select a track/file.

NOTE: Touch the  button on the keypad to backspace and cancel wrong number input.

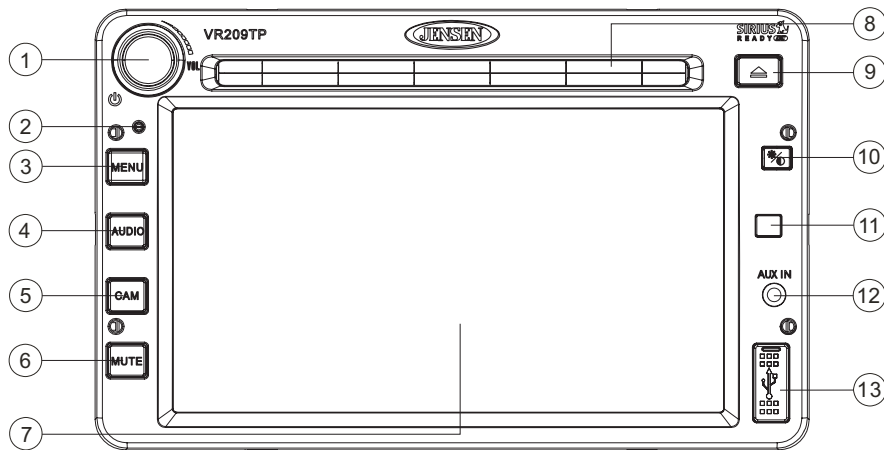
3. Touch the **ok** button to play the entered track/file number.

NOTE: To exit the screen without making an entry, touch the  button.

Display Modes (MP3 Discs)

Touch the **INFO** button to toggle between MP3 files/directories view and large screen format, where the artist, song title and album is displayed.

USB OPERATION



Inserting and Removing a USB Device

Inserting a USB Device

Insert the USB device into the USB jack (13) and then press the **AUDIO** button on the front control panel to access AV mode (if needed). The unit will automatically detect the USB device and display "Reading" while loading.



Elapsed playback time and track number of current track are displayed on the information bar at the top of the screen.

NOTE: The USB button is operative only when a USB device is connected.

Removing a USB Device

Change to another mode and then remove the USB device from the USB connector.

Accessing USB Mode from Another Playback Mode

Touch the **USB** button on the right side of the touch screen to access USB mode.

NOTE: After loading a USB device, files and folders are accessed in the order in which they were written to the device. Therefore, the playing order may not be the same as the order in which they are expected to played.

Controlling USB Playback

Selecting Tracks

- Touch the **▶▶** or **◀◀** button to go to the next or previous file on the USB device. The selected file number will appear in the information bar on the display.
- Touch and hold* the **▶▶** or **◀◀** button to fast forward or fast reverse. Release to resume normal playback.
- Touch the **INFO** button to toggle between MP3 files/directories view and large screen format.
 - In file/directory view, the current played file is highlighted. Touch the desired file name on the screen to play the file. The selected file is displayed in highlighted font with a highlighted frame.
 - In large format view, the song title, album and artist is displayed in the center of the screen.

Play/Pause Disc Playback

Touch the **▶/||** button to suspend playback. Press the **▶/||** button again to resume playback.

Repeat Play

- Touch the **RPT** button during playback to repeat play the current track/file.
- Touch **RPT** again to repeat play the entire folder.
- Touch **RPT** again to stop repeat play.

Shuffle Play


- Touch the **SHUF** button on the touch screen during playback to play all songs in random, shuffled order.
- Touch **SHUF** a second time to play all songs in the current folder.
- Touch **SHUF** again for normal play.

Intro Play

Touch the **INTRO** button to play an introduction of each file, beginning with the next file. The unit will play the first 10 seconds of each file. Touch **INTRO** again to stop intro play and play the current file in full.


NOTE: Only six files are displayed at one time. Touch the up/down arrows to the right of the list to access additional files.

Direct File Access

1. Touch the  button to make the keypad appear on the screen.





2. Enter the file number using the keypad in the center of the screen to directly select a file.

NOTE: Touch the  button on the keypad to backspace and cancel wrong number input.

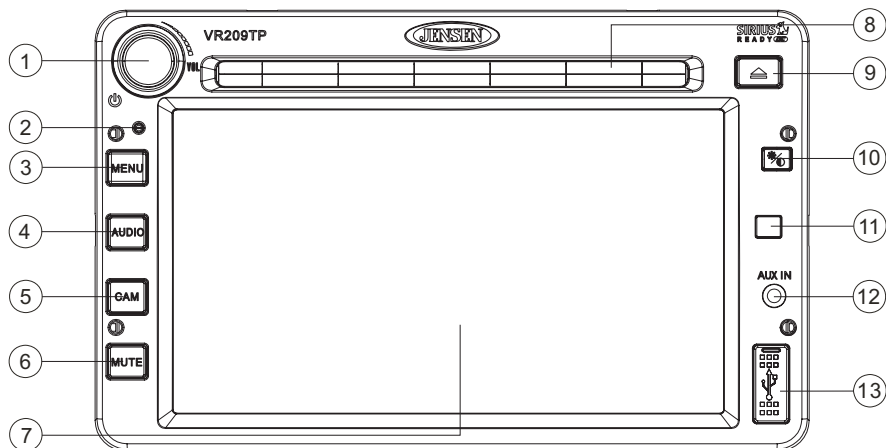
3. Touch the **ok** button to play the entered file number.

NOTE: To exit the screen without making an entry, touch the  button.

Navigating Folders

- Touch the desired folder button on the screen to access the folder.
- Touch "Root" at the beginning of the file/folder list to return to the previous directory from the current folder.
- Touch the directory + (UP) or - (DOWN) button to skip to the following/previous folder.

SIRIUS RADIO OPERATION



Switching to SIRIUS Mode

Press the **AUDIO** button (4) to access Audio mode (if needed). Touch the **SAT** button on the touch screen to access the Sirius Radio.



Activating Sirius Satellite Radio

Before you listen to Sirius Radio, you must subscribe to the service using your radio's identification number. To display the Radio ID, touch the **TUNE +** or **TUNE -** button to access channel "000". The screen displays "Radio ID" followed by a 12 figure ID number.

Tuning a Channel

Touch the **TUNE +** or **TUNE -** buttons to tune up or down in one step increments.

Display Information

- Touch the **INFO** button to toggle list display in the following order: Channel Name -> Song Title -> Artist.
- *Touch and hold* the **INFO** button and the screen information will scroll twice and then return to the default channel display.

Preset Channels

18 numbered preset stations are listed on the touch screen and can be selected when touched. The selected station is displayed in highlighted font with a highlighted frame. All 18 presets can be navigated using the up/down arrows to the right of the list.

Storing a Channel

1. Tune radio to desired channel (large display mode is shown when tuning).
2. Touch the **PRESET** button to view the preset list.
3. *Touch and hold* a preset location on the screen until the channel is stored and appears in the preset list.

Recalling a Stored Channel

The stored channels can be accessed directly by touching the corresponding preset location on the touch screen.

NOTE: Only five presets are displayed at one time. Touch the up/down arrows to the right of the list to access the next group of stored presets.

SIRIUS Tuning Modes

Channel Tuning Mode

Touch **TUNE +/-** to go to next/prev channel.


Preset Tuning Mode

- *Touch and hold* the **PRESET** button to enter Preset Tuning Mode.
- Touch **TUNE +/-** to go to the next/prev preset channel.
- *Touch and hold* to store the current channel.

Category Mode


- Touch **CAT +/-** to go to the next/prev category.
- Touch the screen to select a channel in the current category.
- Use the up/down arrows on the side of the screen to display additional choices.

Direct Channel Access

1. Touch the  button to make the keypad appear on the screen.



2. Enter the channel number using the keypad in the center of the screen to directly select a channel.

NOTE: Touch the  button on the keypad to backspace and cancel wrong number input.

3. Touch the **ok** button to play the entered channel number.

NOTE: To exit the screen without making an entry, touch the  button.

Parental Lock

User code setting

1. Touch and hold the **LOCK** button to access user code setting mode. "Old Code: ____" appears on the screen indicating that the user should input the default user code (1111).
2. Use the on-screen number pad to enter the default code (1111), and then press the **ok** button.

NOTE: If the wrong code is entered, "Code Error" is displayed on the screen and the unit will return to SIRIUS mode.


3. After entering the default code, "New Code: ____" appears on the screen indicating that the user should enter a new code.
4. Use the on-screen number pad to enter a new 4-digit code, and then press the **ok** button.
5. After entering a new code, "Confirm: ____" appears on the screen indicating that the user should re-enter the new code.

6. Use the on-screen number pad to re-enter the new 4-digit code, and then press the **ok** button.
7. If the new code is correctly entered twice, "Code Saved" appears on the screen and the radio returns to SIRIUS mode.

Lock a Channel

1. In Sirius mode, tune to the channel you want to lock.
2. Touch the **LOCK** button on screen. The keypad appears with fields for the code entry.
3. Enter your user code to lock the channel. "Channel Locked" appears and the audio is muted for this channel. When a user returns to this channel, the user code must be entered to hear the audio.
4. If a user code is not entered within 3 seconds, the unit returns to the previous channel.

Listen to a Locked Channel

- In Sirius mode, when tuning to a locked channel, the audio output is muted and "Channel Locked" appears on the display.
- Locked channels are skipped during tuning mode. To access a locked channel, touch the  button to make the keypad appear on the screen and then enter the channel number directly. The listen to a locked channel, enter the user code when "____" appears on the screen.
- If a user code is not entered within 3 seconds, the unit returns to the previous channel.
- If the wrong code is entered, "CODE ERROR" is displayed on the screen and the unit will return to the previous channel.
- After entering the correct code, touch the **ok** button next to "Access".

Unlock Channel

1. To unlock a locked channel, tune to that channel and enter the user code when "____" appears on the screen.
2. After entering the correct code, touch the **ok** button next to "Unlock" to allow continued access. Mute for this channel will be deactivated and the channel will remain unlocked.

NOTE: The master unlock code is "0209" and cannot be changed. This code will unlock all locked channels. Please note this code and keep it in a safe place.

iPod OPERATION

This unit is equipped with an iPod ready function that will allow you to control your iPod (if compatible) using the control panel buttons. The following iPod versions are supported:

- iPod 3G (firmware version 2.2 only)
- iPod Mini
- iPod 4G
- iPod Photo
- iPod Nano (1st, 2nd and 3rd generation)
- iPod 5G (Video)

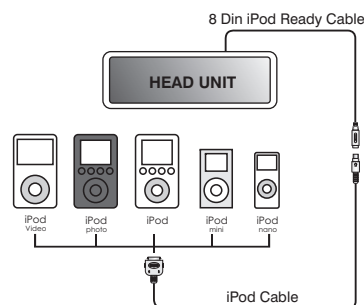
NOTE: iPod Touch and iPhone are not supported. iPod and iPod Cable sold separately.

Accessing iPod Mode

If "iPod Auto Detect" is "On" in the system menu, your iPod will play automatically when connected to the unit.

If "iPod Auto Detect" is "Off" in the system menu, your iPod will not play automatically when connected. In this case, touch the **iPod** button on the right side of the screen to change to IPOD mode.

If you switch to another mode during iPod playback, the iPod will resume playback when you return to IPOD mode.



Turning the iPod On/Off

The iPod power turns on automatically when an iPod is connected to a 30-pin iPod cable, as long as the vehicle ignition is turned on. You can turn the iPod off by disconnecting it from the cable or by turning the ignition off. When the ignition is turned off, the iPod will pause and then enter sleep mode after 2 minutes. While the iPod is connected, the power cannot be turned on or off from the iPod itself.

NOTE: The iPod will continuously recharge when connected to the unit, as long as the vehicle ignition is turned on. Please note that the VR209TP will not support charging of the iPod Nano 4th generation (Chromatic) or any iPod models released after September 2008.

Selecting a Playlist

1. When an iPod is playing, press the **SEARCH** button (15) to display the playlists on the LCD.
2. Touch the desired search mode to view a complete list: Playlist, Artist, Album, Genre, Song, or Composer.
3. Press the **BACK** button to return to the previous list.

Controlling Playback

Selecting Files

- Touch the **▶▶** or **◀◀** button to go to the next or previous file on the iPod. The selected file number will appear on the information bar at the top of the screen.

- *Touch and hold* the **▶▶** or **◀◀** button to fast forward or fast reverse. Release to resume normal playback.



- In list view, touch the desired file name on the screen to play the file. The artist and song title is displayed in the middle of the screen.



- If the played song file does not include artist, album, or genre information, the corresponding information is blank.

NOTE: Only six files are displayed at one time. Touch the up/down arrows to the right of the list to access additional files.

Play/Pause Playback

- Touch the ►|| button to suspend playback.
- Press the ►|| button again to resume playback.


Repeat Play

- Touch the **RPT** button during playback to repeat play the current file.
- Touch **RPT** again to stop repeat play.

Shuffle Play


- During playback, touch the **SHUF** button on the screen to play all files on the iPod in random order.
- Touch **SHUF** again for normal playback.

Direct File Access

1. Touch the  button to make the keypad appear on the screen.



2. Enter the file number using the keypad in the center of the screen to directly select a file.

NOTE: Touch the  button on the keypad to backspace and cancel wrong number input.

3. Touch the **ok** button to play the entered file number.

NOTE: To exit the screen without making an entry, touch the  button.

CAMERA OPERATION

Enter Camera Mode

Connect the cameras to the unit using camera connection cable at the back of the unit. Press the **CAM** key on the front control panel to access camera mode.



Camera Connection and Camera Trigger

This unit can connect 3 cameras: CAMERA (CH1), CH2, and CH3. Each camera can be triggered separately and can be set in different trigger priority. There are 3 trigger wires at the back of the unit. If trigger signals are detected on more than one trigger wire, the channel that has the highest priority is triggered first. Once a channel is triggered, the triggered channel video will be displayed on the full screen. Only one camera channel has audio input, which is available only when the selected camera channel is triggered and the **MIC** option is turned on. See "Camera Setup Menu" on page 9 for information about the Auto Mic Trigger setting.

Auto Mic Trigger

The Auto Mic Trigger feature allows you to select which camera/microphone combination to use for rear observation.

With the Auto Mic Trigger selected for Mic 1, the current playback audio will be muted and the microphone for camera 1 will be automatically turned on when the vehicle is placed in reverse gear.

Likewise, when Auto Mic Trigger selected for Mic 2, the current playback audio will be muted and the microphone for camera 2 will be automatically turned on when the vehicle is placed in reverse gear.

Table 6: Auto Mic Trigger

Rear Camera	Auto Mic Trigger
CH1	MIC 1
CH2	MIC 2

It is important to set this correctly so that the proper camera/microphone combination will be used to interrupt playback when the vehicle is backing up.

Audio Output and Volume Adjustment

In camera mode, if the title camera is not triggered, the front audio output will be the from the last audio source played. Rotate the **VOL** control (1) to adjust the volume of the audio source.

When the title camera is triggered and the **MIC** option is on, the title camera video will appear on the entire screen and the audio output from the camera is played. In this case, rotate the **VOL** control (1) to adjust the volume of the title camera. If the **MIC** option is off, no audio is available when the title camera is triggered.



NOTE: The upper area of the screen is the current playback information bar area. Press the top of the screen to remove the bar or make the bar reappear.

Camera Control Option

Touch the lower part of the screen to make the camera controls appear.

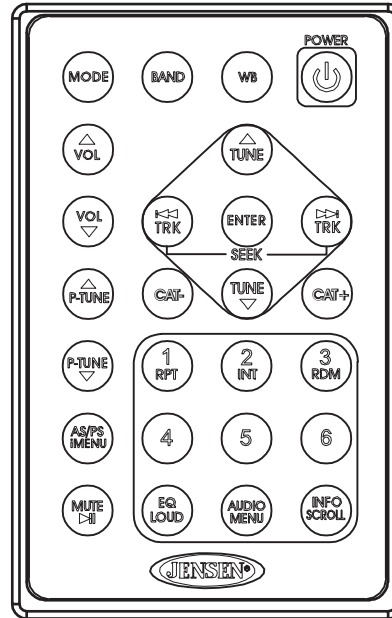
- Touch the CH1 button on the front screen to view the CH1 video in full screen.
- Touch the CH2 button on the front screen to view the CH2 video in full screen.
- Touch the CH3 button on the front screen to view the CH3 video in full screen.
- Touch the **TILT-** or **TILT+** button to adjust the camera tilt angle downwards/upwards.

NOTE: The **TILT-** and **TILT+** button is operative only when the CH1 is displayed in full screen.

- Touch the **MIC** button on the screen to turn the camera audio ON/OFF.
- Touch the  button on the screen or press  button (10) on the control panel to select Brightness, Contrast and Color settings.

REMVRCC CARD REMOTE CONTROL (SOLD SEPARATELY)

- **POWER:** Powers on/off.
- **MODE:** Cycles through all available play modes (Radio, CDP, SAT, iPod, Aux).
- **VOL \wedge / \vee :** Adjusts volume level.
- **AUDIO MENU:** Accesses Audio and System Menu.
- **ENTER:** Enter key.
- **TUNE \wedge / TUNE \vee :** Changes frequency/channel by one step in AM/FM/SAT modes.
- **P-TUNE \wedge / \vee :** Navigate/tune to preset stations.
- **MUTE:** Mutes audio in all modes.
- **WB:** Directly accesses weatherband.
- **BAND:** Sequences bands/preset-banks (FM1, FM2, FM3, AM1, AM2) in Radio mode. Sequences preset banks (SAT1, SAT2, SAT3) in satellite mode.
- **AS/PS MENU:** Scans all stored presets in SAT or radio mode (any button press during PS will stop the scan).
- **INFO SCROLL:** Sets clock. Scrolls information.
- **|<< TRK/TRK >>|/SEEK:** Select next/previous track, file or station. *Press and hold* to seek next/previous station. Navigate list in iPod mode.
- **CAT-/+:** Changes category in SAT/iPod mode.
- **EQ LOUD:** Turns on/selects preset Equalizer functions.



CARE AND MAINTENANCE

- Keep the product dry. If it does get wet, wipe it dry immediately. Liquids might contain minerals that can corrode the electronic circuits.
- Keep the product away from dust and dirt, which can cause premature wear of parts.
- Handle the product gently and carefully. Dropping it can damage circuit boards and cases, and can cause the product to work improperly.
- Wipe the product with a dampened cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the product.
- Use and store the product only in normal temperature environments. High temperature can shorten the life of electronic devices, damage batteries, and distort or melt plastic parts.

Ignition

The most common source of noise in reception is the ignition system. This is often a result of the radio being placed relatively close to the ignition system (engine). This type of noise can be easily detected because it will vary in intensity of pitch with the speed of the engine.

Usually, the ignition noise can be suppressed considerably by using a radio suppression type high voltage ignition wire and suppressor resistor in the ignition system. (Most vehicles employ this wire and resistor, but it may be necessary to check them for correct operation.) Another method of suppression is the use of additional noise suppressors. These can be obtained from most CB/A radio or electronic supply shops.

Interference

Radio reception in a moving environment (automobile) is very different from reception in a stationary (home) environment. AM reception will deteriorate when passing through a tunnel or when passing under high voltage lines. Noise can be picked up from passing automobiles. Although AM is subject to environmental noise, it can be received at great distances. This is because broadcasting signals follow the curvature of the earth and are reflected back by the upper atmosphere.

TROUBLESHOOTING

Symptom	Cause	Solution
No power	The vehicle's ignition is not on	If the power supply is properly connected to the vehicle accessory terminal, switch the ignition key to "ACC".
	The fuse is blown	Replace the fuse.
Disc cannot be loaded or ejected	Presence of CD disc inside the player	Remove the disc in the player and insert the new one.
	Inserting the disc in reverse direction	Insert the compact disc with the label facing upward.
	Compact disc is extremely dirty or disc is defective	Clean the disc or try to play a new one.
	Temperature inside the vehicle is too high	Wait until the ambient temperature returns to normal.
	Condensation	Leave the player off for an hour or so, then try again.
No sound	Volume is too low	Adjust volume to audible level.
	Fader is set incorrectly	Press AUDIO button to access menu and adjust Fader settings.
	Wiring is not properly connected.	Check wiring connections.
	Mute is on or Camera Mic is active in camera mode	Turn Mute Off or Turn Mic Off in camera mode
The operation keys do not work	The built-in microcomputer is not operating properly due to noise	Press the RESET button.
Sound skips	The installation angle is more than 30 degrees.	Adjust the installation angle to less than 30 degrees.
	The disc is dirty or defective.	Clean the disc and try to play again or use new disc.
Cannot tune to radio station, auto-seek does not work	The antenna cable is not connected.	Insert the antenna cable firmly.
	The signals are too weak.	Select a station manually.
Radio automatically switches to WB (Weather Band)	This is a normal function. A Weather Band warning is being received.	If you do not want this to occur, set the WB Alert setting to "Off" in the System Setup menu.
Radio automatically turns on (ignition on) and tunes to WB (Weather Band)	This is a normal function when the Alert Power feature is set to "On" in the System Setup menu. A Weather Band warning is being received.	If you do not want this to occur, set the Alert Power setting to "Off" in the System Setup menu.
Radio mutes audio when vehicle is in reverse gear.	It is a normal function for the audio to mute when the vehicle is backing up.	If the camera has a microphone, the camera audio will be played when in reverse gear.

SPECIFICATIONS

CD

Signal to Noise Ratio..... ≥ 60 dB
Channel Separation More than 50 dB
Frequency Response 40Hz - 18 kHz
CD Format Compatibility CD-DA, CD-R, CD-RW

FM Radio

Frequency Range (USA)..... 87.5 to 107.9 MHz
Frequency Range (Europe)..... 87.5 to 108 MHz
Sensitivity (S/N=30dB) 4 μ V
Image Rejection >45 dB
Stereo Separation >25dB

AM/MW

Frequency Range (USA)..... 530-1710KHz
Frequency Range (Europe)..... 522-1620KHz
Sensitivity (S/N=20dB) 36 dB

General

Operating Voltage DC 12 Volts
Grounding System Negative Ground
Speaker Impedance 4-8 ohms per channel
Tone Controls
 Bass (at 100 Hz) ± 10 dB
 Treble (at 10 kHz)..... ± 10 dB
Power Output 50W x 4
Current Drain..... 15 Ampere (max.)
Dimensions 80 (W) x 183 (D) x 100 (H)
Digital Media File Format Compatibility MP3, WMA



DESIGNED TO MOVE [you]

VR209TP



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