JENSEN®

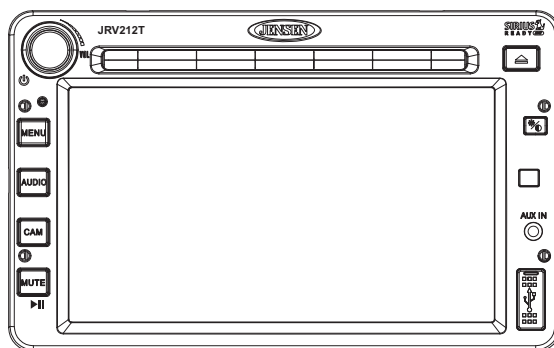## DESIGNED TO MOVE [YOU]

JRV212T

TOUCH PANEL MOBILE AUDIO AND OBSERVATION SYSTEM

Installation and Operation Manual

Made for
iPod iPhone

SIRIUS
READY

LEGAL AND SAFETY NOTICES

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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	COMPACT disc DIGITAL AUDIO COMPACT disc DIGITAL AUDIO RECORDABLE COMPACT disc DIGITAL AUDIO REWRITABLE	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.

Insert label side up.   **Do not bend.**   **Never touch the under side of the disc.**   **Wipe clean from the center to the edge.**

- 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.

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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 30º 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:

1/16 inch max (4 corners)

SUGGESTED RADIO OPENING WITH DIN SLEEVE

4 3/8 inches

7 1/4 inches
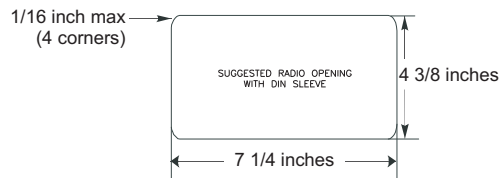
1. Slide the mounting sleeve off of the chassis if it has not already been removed. If it is locked into position, use the removal keys (supplied) to disengage it. Insert the keys through the holes in the front panel as far as they will go, and then slide the sleeve off the back of the unit.

MOUNTING SLEEVE

REMOVAL KEY
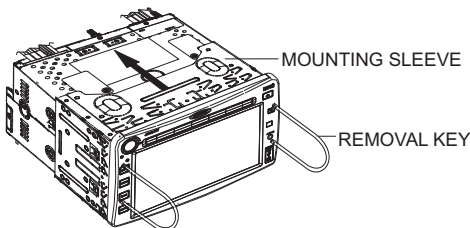
2. Check the dashboard opening size by sliding the mounting sleeve into it. If the opening is not large enough, carefully cut or file as necessary until the sleeve easily slides into the opening. Do not force the sleeve into the opening or cause it to bend or bow. Check that there will be sufficient 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.

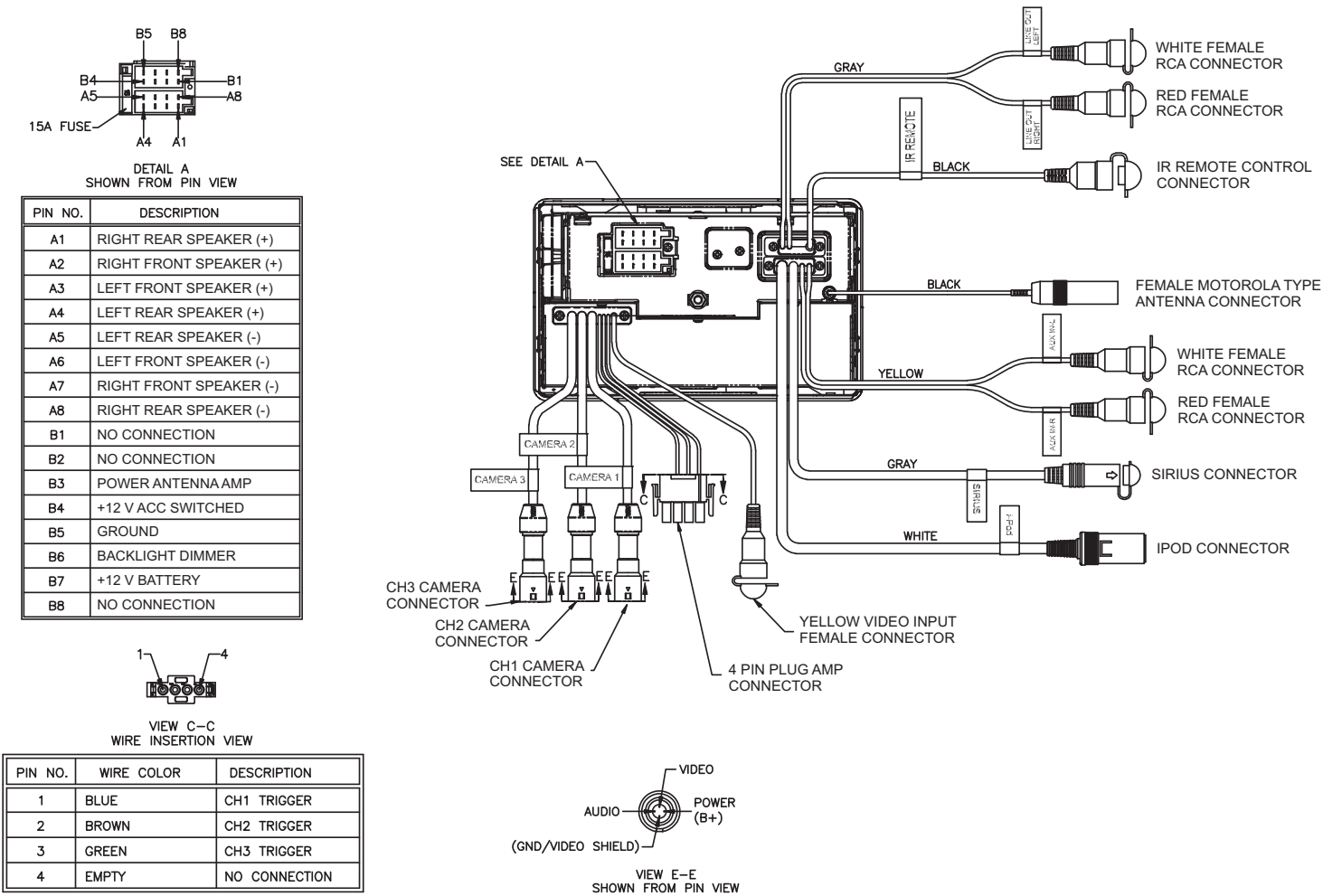DASHBOARD
TABS
SCREWDRIVER
MOUNTING SLEEVE
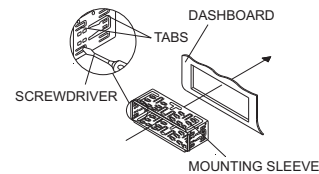
4. Place the radio in front of the dashboard opening so the wiring can be brought through the mounting sleeve.
5. Follow the wiring diagram carefully and make certain all connections are secure and insulated with crimp connectors or electrical tape to ensure proper operation.
6. After completing the 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
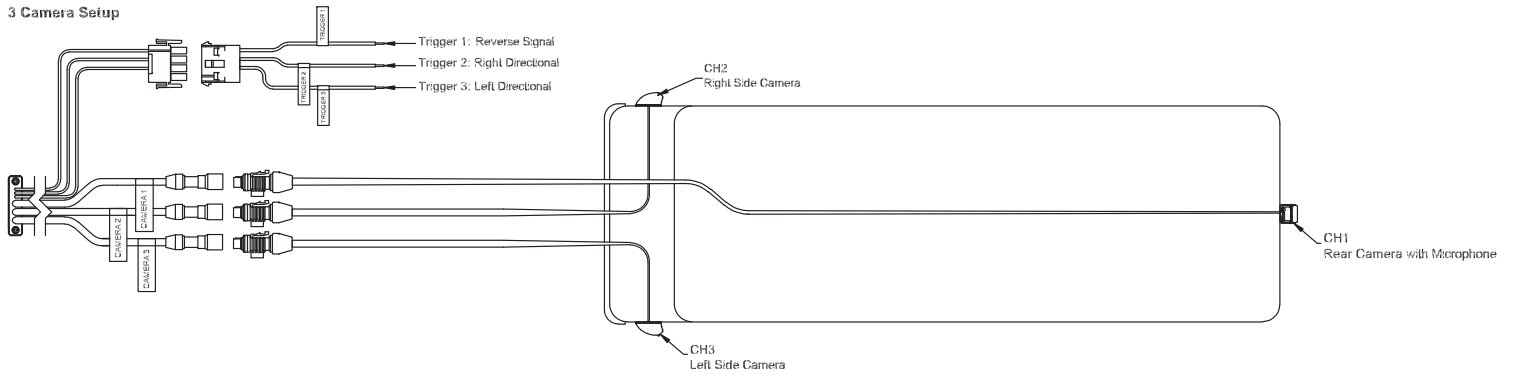
To remove the radio after installation:

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.
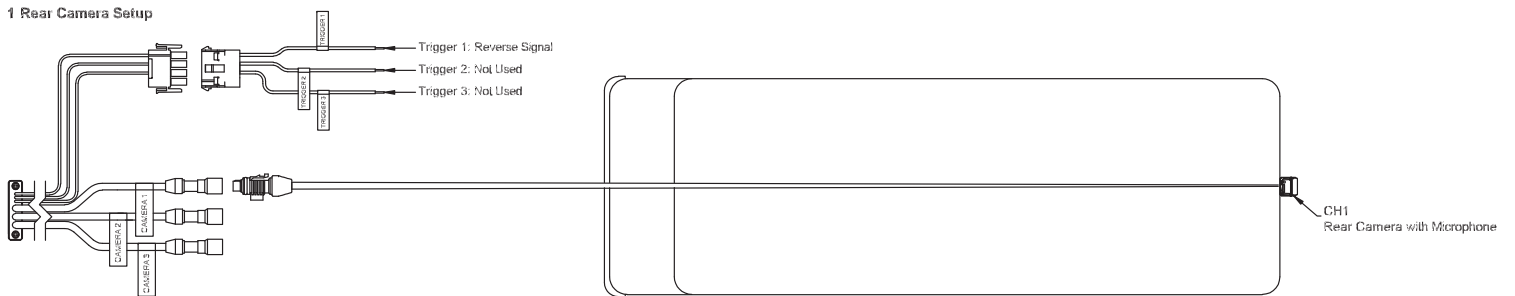3. Pull the radio straight out.

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WIRING

DETAIL A
SHOWN FROM PIN VIEW

PIN NO.	DESCRIPTION
A1	RIGHT REAR SPEAKER (+)
A2	RIGHT FRONT SPEAKER (+)
A3	LEFT FRONT SPEAKER (+)
A4	LEFT REAR SPEAKER (+)
A5	LEFT REAR SPEAKER (-)
A6	LEFT FRONT SPEAKER (-)
A7	RIGHT FRONT SPEAKER (-)
A8	RIGHT REAR SPEAKER (-)
B1	NO CONNECTION
B2	NO CONNECTION
B3	POWER ANTENNA AMP
B4	+12 V ACC SWITCHED
B5	GROUND
B6	BACKLIGHT DIMMER
B7	+12 V BATTERY
B8	NO CONNECTION

VIEW C–C
WIRE INSERTION VIEW

PIN NO.	WIRE COLOR	DESCRIPTION
1	BLUE	CH1 TRIGGER
2	BROWN	CH2 TRIGGER
3	GREEN	CH3 TRIGGER
4	EMPTY	NO CONNECTION

SEE DETAIL A

GRAY — WHITE FEMALE RCA CONNECTOR

RED FEMALE RCA CONNECTOR

IR REMOTE — BLACK — IR REMOTE CONTROL CONNECTOR

BLACK — FEMALE MOTOROLA TYPE ANTENNA CONNECTOR

YELLOW — WHITE FEMALE RCA CONNECTOR

RED FEMALE RCA CONNECTOR

GRAY — SIRIUS CONNECTOR

WHITE — IPOD CONNECTOR

LINE OUT LEFT
LINE OUT RIGHT
AUX IN L
AUX IN R
SIRIUS
IPOD

CAMERA 2
CAMERA 3
CAMERA 1

CH3 CAMERA CONNECTOR
CH2 CAMERA CONNECTOR
CH1 CAMERA CONNECTOR

4 PIN PLUG AMP CONNECTOR

YELLOW VIDEO INPUT FEMALE CONNECTOR

VIDEO
AUDIO
POWER (B+)
(GND/VIDEO SHIELD)

VIEW E–E
SHOWN FROM PIN VIEW

5

Recommended Camera Installation Configurations

3 Camera Setup

TRIGGER 1
TRIGGER 2
TRIGGER 3

— Trigger 1: Reverse Signal
— Trigger 2: Right Directional
— Trigger 3: Left Directional

CH2
Right Side Camera

CAMERA 1
CAMERA 2
CAMERA 3

CH1
Rear Camera with Microphone

CH3
Left Side Camera

1 Rear Camera Setup

TRIGGER 1
TRIGGER 2
TRIGGER 3

— Trigger 1: Reverse Signal
— Trigger 2: Not Used
— Trigger 3: Not Used

CAMERA 1
CAMERA 2
CAMERA 3

CH1
Rear Camera with Microphone

6

BASIC OPERATION
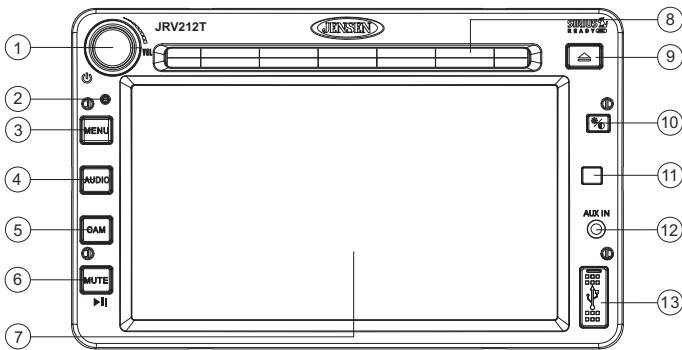
Power On/Off

- 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 pen 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 "System Menu".
- Use the on-screen arrows to navigate the menu options. Touch the highlighted option to adjust the settings for that option. See "System Menu" on page 9.

Camera (CAM)

- Press the **CAM** button (5) to access camera mode.
- *Press and hold* to view the "System Menu" Camera setup options. See "Camera Configuration" on page 10.

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 Menu" 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 Menu" options can be adjusted:

Table 2: Audio Menu Options

Setting	Adjustable Range
Bass	-7 to +7
Treble	-7 to +7
Balance	12 LEFT to 12 RIGHT
Fade	12 REAR to 12 FRONT
EQ	User
	Flat (default)
	Rock
	Classical
	Pop
Loudness	ON/OFF (OFF is default)
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.	

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.
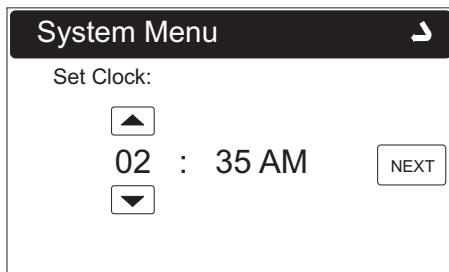
Mute

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

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Adjusting the Clock

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

1. *Press and hold* the **MENU** button (3) to view the "System Menu."
2. Use the on-screen arrows to highlight the "Set Clock" option.
3. Touch the "Set Clock" field to view the "Set Clock" screen:

```
┌─────────────────────────────────┐
│ System Menu              ↰       │
│                                  │
│     Set Clock:                   │
│            ▲                     │
│      02  :  35 AM    ┌──────┐    │
│            ▼         │ NEXT │    │
│                      └──────┘    │
│                                  │
└─────────────────────────────────┘
```
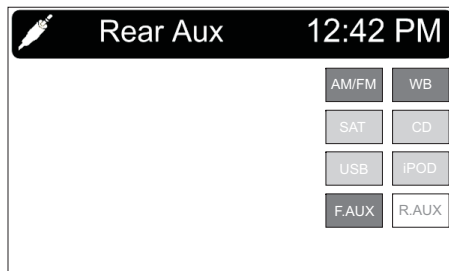
4. Use the on-screen arrows to adjust the hour. Continue adjusting to move between AM and PM. Touch the "NEXT" button to move to the minutes field.
5. Use the on-screen arrows to adjust the hour. Touch "OK" when finished.

Auxiliary Input

To access an auxiliary device:

1. Connect an audio source to the AUX IN connector on the front panel (12) or to the AUX IN cables on the back of the radio. Video input is accessible for the "R.AUX" mode through the VIDEO IN cable at the back of the unit.
2. Touch the "F.AUX" (front AUX) or "R.AUX" (rear AUX) button to select front or rear auxiliary input.

```
┌─────────────────────────────────┐
│ ✎  Rear Aux        12:42 PM      │
│                                  │
│                  ┌──────┐┌─────┐ │
│                  │AM/FM ││ WB  │ │
│                  └──────┘└─────┘ │
│                  ┌──────┐┌─────┐ │
│                  │ SAT  ││ CD  │ │
│                  └──────┘└─────┘ │
│                  ┌──────┐┌─────┐ │
│                  │ USB  ││iPOD │ │
│                  └──────┘└─────┘ │
│                  ┌──────┐┌─────┐ │
│                  │F.AUX ││R.AUX│ │
│                  └──────┘└─────┘ │
└─────────────────────────────────┘
```

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.
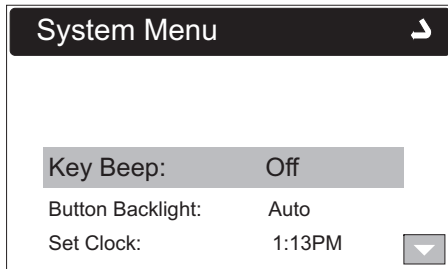
Day/Night Backlight

Pressing the ✸ 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 ✸ button (10) to enter the "Display Setup" menu.
2. Adjust display backlight intensity using the "Dimming Day" and "Dimming Night" level settings on the Display Setup menu.

8

SYSTEM MENU

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

```
┌─────────────────────────────────────────┐
│  System Menu                         ↵   │
│                                          │
│                                          │
│   Key Beep:            Off               │
│                                          │
│   Button Backlight:    Auto              │
│                                          │
│   Set Clock:           1:13PM        ▼   │
└─────────────────────────────────────────┘
```

Menus containing submenus are indicated by a folder icon ▪ to the left of the menu option.

System Menu

The following "System Menu" options can be adjusted:

Table 3: System Menu Options

Setting	Options	Function
Key Beep	Off (default)	Select "On" to hear audible confirmation when pushing front panel buttons.
	Click	
	Beep	
Button Backlight	Auto	
	Off	
	1/10 - 10/10	
Set Clock	See "Adjusting the Clock" on page 8.	
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
Power-Off Clock	Off	
	1/10-10/10	
Tuning Region	USA (default)	Select the appropriate setting based on the country in which you reside.
	Europe	
iPod Auto-Select	On (default)	Turn the iPod auto detect function On/Off.
	Off	

Table 3: System Menu Options

Setting	Options	Function
▪ Sirius Satellite Radio (only appears when SIRIUS tuner is connected)		See "SIRIUS Satellite Radio" on page 9.
▪ Weather Alert Configuration		See "Weather Alert Configuration" on page 10.
▪ Camera Configuration		See "Camera Configuration" on page 10.
Reset to Defaults	OK	Select "OK" to restore factory default settings for the System Menu options.
	CANCEL	
Update Firmware	OK	Select "OK" to apply recent software updates.
	CANCEL	

SIRIUS Satellite Radio

Touch the Sirius Satellite Radio option under the System Menu to adjust the following options.

Table 4: SIRIUS Satellite Radio

Setting	Options	Function
Sirius Firmware	OK	Select "OK" to apply recent software updates.
	CANCEL	
Clock Autoset	On	Select "On" to allow auto set of clock time.
	Off	
Timezone	Atlantic	Select your time zone.
	Eastern	
	Central	
	Mountain	
	Pacific	
	Alaska	
DST Enable	Yes	Select "Yes" to observe daylight savings time.
	No	
Clear Skipped	OK	Select "OK" to clear the list of skipped channels.
	CANCEL	
Skipped Channels	List	View list of skipped channels and choose "V" to make visible or "H" to hide. Touch to change status.
Set Lock Code	_ _ _ _	Enter 4 digit code.

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Table 4: SIRIUS Satellite Radio

Setting	Options	Function
Locked Channels	List	View list of locked channels.Enter lock code, then touch to lock/unlock.
Enable Song Seek	Yes	Select "Yes" to receive song seek alerts
	No	
Remove Favorites	List	Touch to Enable / Disable / Delete.
Remove All Favorites	OK	Select "OK" to remove all titles from your favorites list.
	CANCEL	

Weather Alert Configuration

Touch the Weather Alert Configuration option under the System Menu to adjust the following weather alert options.

Table 5: Weather Alert Configuration

Setting	Options	Function
Min Alert Levels	All	
	None	
	Warnings	
	Watches	
Auto-On Enable	Yes	Select "Yes" to have the radio automatically turn on when a weather alert is received.
	No	
Alert Volume	0/40 - 40/40	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.
Clear SAME Codes	OK	Clear SAME Codes.
	CANCEL	Cancel and return to menu.
SAME Code 1-7	See "SAME Decoding and Filtering" on page 13.	

Camera Configuration

Touch the Camera Configuration option under the System Menu to adjust the following camera options. *Press and hold* the **CAM** button (5) on the front panel to directly access the System Menu Camera Configuration options.

The following Camera Configuration options can be adjusted:

Table 6: Camera Configuration

Setting	Options	Function
Camera 1 Mode	Skip	The output of Camera 1 image is skipped.
	Normal (default)	The output of Camera 1 image is in normal mode.
	Mirror	The output of Camera 1 image is in mirror mode.
Camera 2 Mode	Skip	The output of Camera 2 image is skipped.
	Normal (default)	The output of Camera 2 image is in normal mode.
	Mirror	The output of Camera 2 image is in mirror mode.
Camera 3 Mode	Skip	The output of Camera 3 image is skipped.
	Normal (default)	The output of Camera 3 image is in normal mode.
	Mirror	The output of Camera 3 image is in mirror mode.
Priority Order	1-2-3	Continue pressing to select the desired camera trigger priority from 1 (highest) to 3 (lowest).
	1-3-2	
	2-1-3	
	2-3-1	
	3-1-2	
	3-2-1	
Trigger Delay	1/6	Set delay time for displaying camera image after trigger signal is removed.
	2/6	
	3/6	
	4/6	
	5/6	
	6/6	
Auto Mic Enable	Yes	Select "Yes" to automatically turn on the microphone and mute other audio when the vehicle is in reverse gear.
	No	

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AM/FM/RBDS CONTROLS
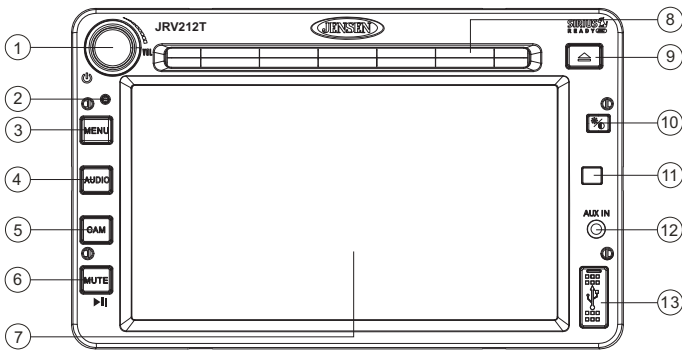
Enter FM/AM Mode

- 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.
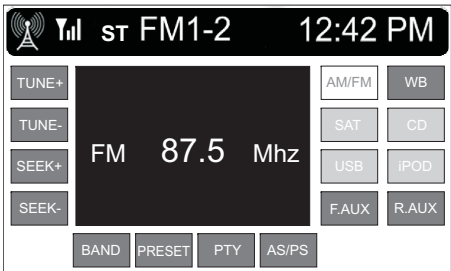
Information Bar

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 at the bottom of the screen to change between FM1, FM2, FM3, AM1 and AM2 bands.

Tuning

- Touch the on-screen "TUNE+" or "TUNE-" button 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

Touch the on-screen "PRESET" button to view the list of preset stations. Six numbered preset stations for the current band are listed on the touch screen and can be selected when touched. The selected station is displayed with a highlighted frame.
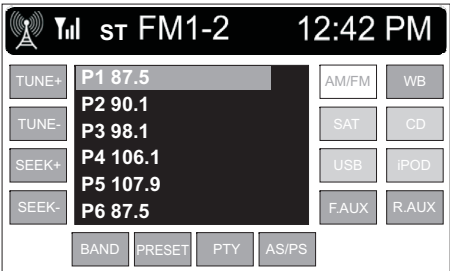
To store a station:

1. Tune radio to desired station (large display mode is shown when tuning).
2. Touch the "PRESET" button to view to the interface showing the preset list.
3. *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. Change to another band to view the preset stations stored for that band.

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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 6 strong stations and store them in the current band. New stations replace any stations already stored in that band.

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 "SEARCH" 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.

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.

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WEATHER BAND OPERATION

What is the NOAA Weather Radio/Weatheradio Canada?

NOAA (National Oceanic and Atmospheric Administration) is a nationwide system that broadcasts local weather emergency information 24 hours a day via the National Weather Service (NWS) network. The U.S. network has more than 530 stations covering the 50 states as well as the adjacent costal waters, Puerto Rico, the U.S. Virgin Islands and the U.S. Pacific Territories. Each local area has its own transmitting station and there are a total of seven broadcasting frequencies used. A similar system is available in Canada under the Weatheradio Canada service administered by Environment Canada.

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).
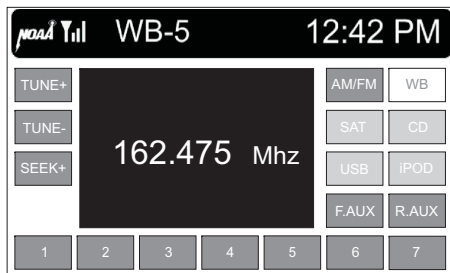
The indication "WB" will appear on the display panel, along with the current number and channel indication: "WB-1", "WB-2", "WB-3", "WB-4", "WB-5", "WB-6" or "WB-7".

3. Touch the "TUNE+" or "TUNE-" button to tune to a weatherband station or touch the a button labeled 1-7 to access one of the seven weatherband channels directly. The seven frequencies are shown in the following table:

Frequency (MHz)	Preset
162.400	2
162.425	4
162.450	5
162.475	3
162.500	6
162.525	7
162.550	1

This table also shows which preset button will access the frequency. Note that one frequency cannot be accessed using a preset button. The frequency can only be reached using the tuning controls.

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

NOAA Weather Alert

The Weather Alert function adds an additional level of user safety by automatically switching from any of the available function modes to weather band for a minimum of 60 seconds if a NOAA warning tone (1050 Hz) is received/detected. If no additional warning tone is received for 60 seconds, the unit will switch back to the last known function mode.

The JRV212T is equipped with a weather alert level (Min Alert Level) and weather alert power (Auto-On Enable) feature that will cause the radio to turn on automatically when a weather alert is detected, adding an additional level of user safety. When the weather alert level is set to "All", "Warnings" or "Watches" the weather alert function automatically switches from any of the available function modes (Tuner, SIRIUS, CD, iPod, AUX) to Weather Band when the selected NOAA warning type is received/detected.

See "System Menu" on page 9 to learn how to turn the Min Alert Level and Auto-On Enable features on.

SAME Decoding and Filtering

Specific Area Message Encoding (SAME) data is also broadcast prior to alert broadcasts. SAME data contains information about the geographic region affected by the alert, the type of alert, and its effective time. The geographic region included in the SAME data is called the Geographical Area code and has the form PSSCCC where "P" represents a portion of the county, "SS" is a two-digit state, territory, or offshore marine area identifier and "CCC" identifies the county, province, or major metropolitan area within the state. This unit can be configured through the system setting menu with up to seven Geographical Area codes to limit the automatic tuning or power on functions described above.

SAME data also includes the type of alert being broadcast. This unit can be configured through the System Setting Menu to limit the automatic tuning or power on functions based on the type of alert.

SAME is activated by programming a 6 digit code - called a FIPS code - into your radio. The FIPS code or Federal Information Processing System code is a six digit code that identifies the states and counties (or parishes) in the United States. The first digit identifies the county subdivision. The next two digits identify the state or territory, and the last three identify the county. The FIPS code for your area can be found by calling the NWS toll free number or visiting the web site.

The phone number is 1-888-NWS-SAME (1-888-697-7263) Upon calling, an automated system will prompt you to enter your state and county. When you confirm the information, the system will provide your six digit FIPS code.

The web site is: www.nws.noaa.gov/nwr/indexnw.htm. Upon selecting your state from the chart, you will see a listing of all the counties in that state. For each county there is a listing of the SAME# (FIPS code), the location of the transmitter, the WB frequency, the call sign, the transmitter power and miscellaneous remarks.

NOTE: Because broadcast areas overlap you may want to set more than one S.A.M.E. location. If you live near the border between counties, you may want to receive alerts from more than one tower.

Your radio is capable of being programmed with up to 7 different FIPS location codes. The default code has been programmed at the factory - 000000 - to respond to all messages within your area.
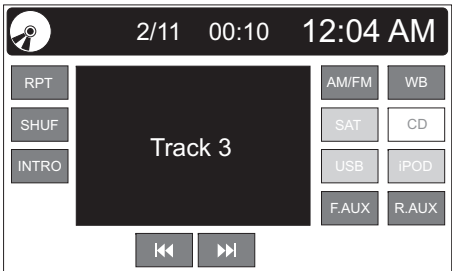
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CD/MP3/WMA OPERATION
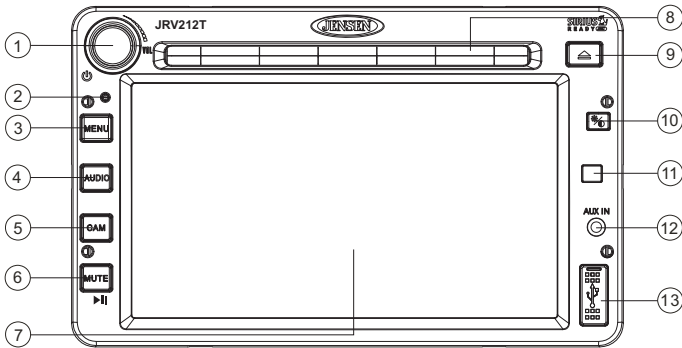
Inserting and Removing a Disc

Inserting 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. After the disc is ejected, the unit automatically returns to AM/FM mode.

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 (4) on the front control panel to access AV mode (if needed). The unit will automatically detect the USB device and display "Loading USB" while loading.
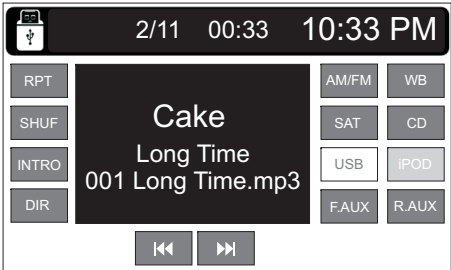
Elapsed playback time and track number of current track are displayed on the information bar at the top of the screen.

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.

Removing a USB Device

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

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

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

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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 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.

MP3 Directory

- For an MP3/WMA disc, touch the "DIR" button to view the folders/files in the current directory. The "DIR" button is only available for MP3/WMA files.
- Use the on-screen arrow buttons to navigate the list of files.
- Items with a folder icon ▇ to the left of the text are folders (directories). Touch to view the contents of the folder.
- Use the ◥ button to move up a folder level.

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

Pause Playback (MUTE)

- Press the **MUTE** button (6) to suspend playback. Playback controls are disabled when paused.
- Press the **MUTE** button again to resume playback.

Repeat Play

- Touch the "RPT" button during to repeat play the current track/file.
- Touch "RPT" again to stop repeat play.

Shuffle Play

- Touch the "SHUF" button on the touch screen to play all tracks/files in random, shuffled order.
- 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.

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SIRIUS RADIO OPERATION
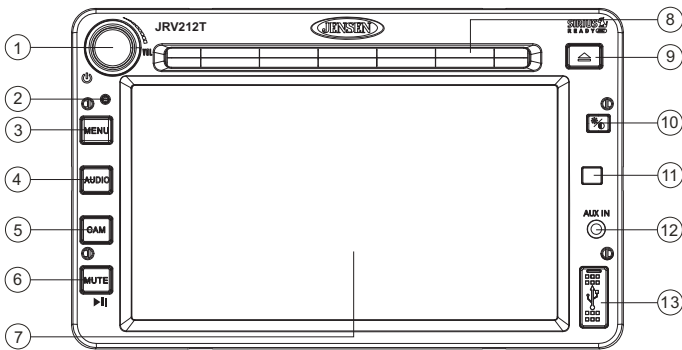
Switching to SIRIUS Mode

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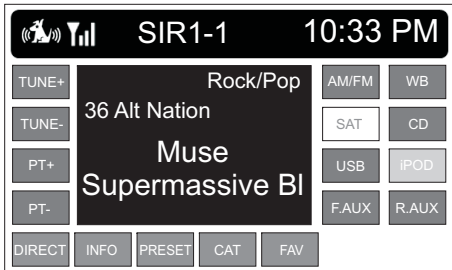
Activating Sirius Satellite Radio

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.

SIRIUS Tuning Options

Channel Tuning

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

Preset Tuning

- Touch the "PT+" button to view the next preset channel.
- Touch the "PT-" button to view the previous preset channel.

Category Tuning

- Touch the "CAT" button to view the category screen.
- Touch the left/right arrows at the top of the information box to change between categories.
- Touch the up/down arrows to the right of the channel list to move up/down the channel list.
- Touch a channel name to tune to that channel.

Direct Channel Access

1. Touch the "DIRECT" button to access the direct entry screen.
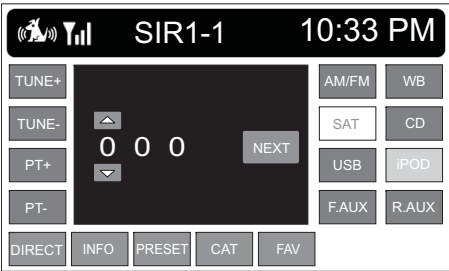
2. Use the up/down arrows to select the first digit in the channel number and then touch the "ENTER" button to move to the second digit. Repeat for the third digit.
3. Touch the "OK" button to tune to the entered channel number.

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

Preset Channels

The preset buttons can be used to store 6 channels per band (SIR1, SIR2 and SIR3), allowing convenient access to your favorite channels. The selected preset station is displayed in highlighted font with a blue frame. Access SIR1, SIR2 and SIR3 bands by using the on-screen arrows to show additional preset channels.

Storing a Channel

1. Tune radio to the desired channel

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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.
4. Repeat steps 1-3 to program additional channels.

NOTE: When listening to a preset channel, the preset number is indicated after the SIRIUS band in the top bar (i.e. SIR1-1).

Recalling a Stored Channel

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

Favorites

This feature lets you store and search for up to 15 Artist/Song combinations on SIRIUS Satellite Radio.
1. While the current song is playing, press the "FAV" button.
2. Touch the "ARTIST" button to save the Artist or touch the "SONG" button to save the Song to your favorites list.

Next time the stored artist or song is played on SIRIUS Satellite Radio, you will be notified with an alert and can then choose to tune to the channel playing the Song or Artist by touching the song or artist name in the list. The list of stored Artists/Songs can be managed through the System Menu. See "SIRIUS Satellite Radio" on page 9.

Channel Lock

Access Channel Lock through the System Menu under the "SIRIUS Satellite Radio" menu. See "SIRIUS Satellite Radio" on page 9.
1. Select "Set Lock Code."
2. No channels can be locked with the default 0000 code. To set the lock code, you must first enter the default code (0000):
   a. Use the up/down arrows to select the first digit in the channel number.
   b. Touch the "ENTER" button to move to the second digit.
   c. Repeat above steps to enter all 4 digits of the default code.
   d. Use the up/down arrows to select the first digit in the channel number.
   e. Touch the "ENTER" button to move to the second digit.
   f. Repeat above steps to enter all 4 digits.
   g. Repeat above steps to confirm the new code.
3. After setting a new four digit code, you can lock channels using the "Locked Channels" option on the System Menu.
4. Upon entering the Locked Channels list, you will be prompted to enter your four digit code.
   a. Use the up/down arrows to select the first digit in the channel number.
   b. Touch the "ENTER" button to move to the second digit.
   c. Repeat above steps to enter all 4 digits.
5. After entering the code, you can navigate the list using the up/down to highlight the channels.
6. Touch the channel name to Lock (indicated by a 🔒 icon) or Unlock (🔓) the selected channel.

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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 control buttons. The following iPod versions are supported:

- iPod Nano (1G, 2G, 3G, 4G, 5G and 6G)
- iPod 5G
- iPod Classic
- iPhone, iPhone 3G, iPhone 3GS, 4G
- iPod Touch 1G, 2G, 3G and 4G
- iPod Touch 2G

NOTE: iPod and iPod Cable sold separately.

Accessing iPod Mode

If iPod Auto-Select is turned "On" in the system menu, your iPod will play automatically when connected to the unit. "iPod" will appear in the upper left corner of the display.

If iPod Auto-Select is "Off" in the system menu, your iPod will not play automatically when connected. In this case, touch the on-screen "iPOD" button to change to IPOD mode. If you do not see the "iPOD" button, press the **AUDIO** button (4) to view the audio playback screen.

Turning the iPod On/Off

The iPod power turns on automatically when an iPod is connected to 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 (does not apply to iPhone).

NOTE: The iPod will continuously recharge when connected to the unit, as long as the vehicle ignition is turned on.

Selecting a Playlist

1. When an iPod is playing, touch the "DIR" button to display the playlists on the LCD.
2. Use the onscreen up/down (left/right) arrows to change the playlist between Artist / Album / Genre / Song / Audiobook / Podcast.
3. Press the up/down arrows to navigate the selected playlist.
4. Touch to select a file to play.
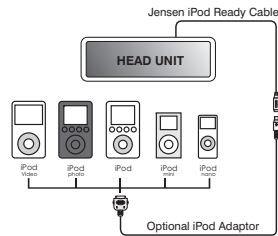
Controlling Playback
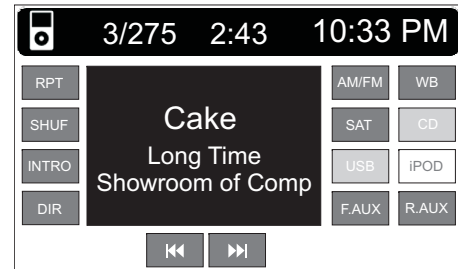
Selecting Songs

- Touch the ▶▶ or ◀◀ button to go to the next or previous file. 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.

Pause Playback (MUTE)

- Press the **MUTE** button (6) to suspend playback. Playback controls are disabled when paused.
- Press the **MUTE** button again to resume playback.

Repeat Play

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

Shuffle Play

- Touch the "SHUF" button on the touch screen to play all files in random, shuffled order.
- 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 track.
- Touch "INTRO" again to stop intro play and play the current file in full.

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CAMERA OPERATION

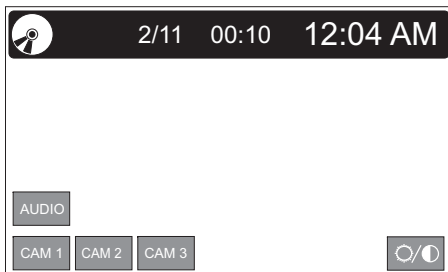## Enter Camera Mode

Connect the cameras to the unit using the CAMERA 1-3 connection cables at the back of the unit. Press the **CAM** button (5) on the front control panel to access camera mode.

2/11   00:10   12:04 AM
AUDIO
CAM 1 CAM 2 CAM 3   ☼/◐

Camera Connection and Camera Trigger

This unit can connect 3 cameras: CAM 1, CAM 2, and CAM 3. 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 CAM 1 has audio input.

Auto Mic Enable

When the Auto Mic Enable feature is set to "Yes," 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. See "Camera Configuration" on page 10.

Audio Output and Volume Adjustment

In camera mode, if Camera 1 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 Camera 1 is triggered and the Auto Mic Enable feature is on, the Camera 1 video appears on the entire screen and the audio input from the camera is played. In this case, rotate the **VOL** control (1) to adjust the volume of the Camera 1 audio input. If the Auto Mic Enable option is off, no audio is available when Camera 1 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 Options

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

- Touch the "CAM 1" button to view the Camera 1 video in full screen.
- Touch the "CAM 2" button to view the Camera 2 video in full screen.
- Touch the "CAM 3" button to view the Camera 3 video in full screen.
- Touch the "AUDIO" button 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. Use the +/- buttons to adjust each setting from 0-10.

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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 received at great distances. This is because broadcasting signals follow the curvature of the earth and are reflected back by the upper atmosphere.

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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.

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SPECIFICATIONS

CD

Signal to Noise Ratio.. $\geq$ 60dB
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) 4µV
Image Rejection ....>45 dB
Stereo Separation...>25dB

AM/MW

Frequency Range (USA).. 520-1710KHz
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).. ±10dB
    Treble (at 10 kHz)... ±10dB
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

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