



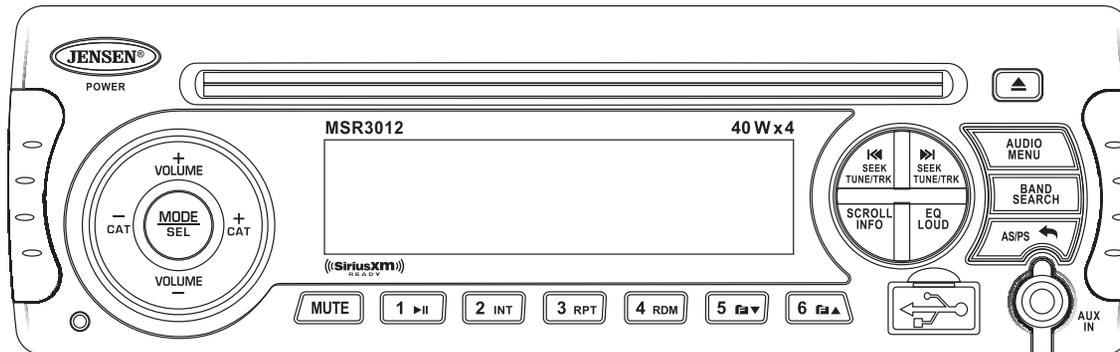
M A R I N E

MSR3012

MARINE AUDIO SYSTEM

Installation and Operation Manual

Manual de la Instalación y Operación / Guide d'installation et d'opération



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Important Legal Notice About Installation

Installation instructions are provided for your convenience. You must determine if you have the knowledge, skills, and ability required to properly perform installation. Professional installation is recommended. SiriusXM shall have no liability for damage/injury resulting from the installation/use of any SiriusXM or other products. You must ensure that all products are installed in adherence with local laws and regulations and in such a manner as to allow a vehicle to be operated safely and without distraction. SiriusXM product warranties do not cover the installation, removal, or reinstallation of any product.

INTRODUCTION

System Features

Features of the Jensen MSR3012 mobile audio system include:

- Full Dot Matrix LCD
- AM/FM US/EURO Tuner with 30 Presets (12 AM, 18 FM)
- SiriusXM Radio Ready
- Single In-Dash CD Player with MP3/WMA Playback Capability
- USB Playback of MP3 and WMA files
- CD ESP (Electronic Skip Protection) 30 Sec.
- iPod Ready (USB interface)
- Mute
- Pre-set Equalizer - 5 settings (USER > FLAT > POP > CLASSIC > ROCK)
- Electronic Bass, Treble, Balance and Fader Controls
- Output Power 40W x 4
- Wired Remote Control Ready (MWR100 sold separately)
- 2-Channel Pre-amp Line Level Outputs
- Auxiliary Audio Input (Front 3.5mm Stereo Jack, Rear RCA)

Content List

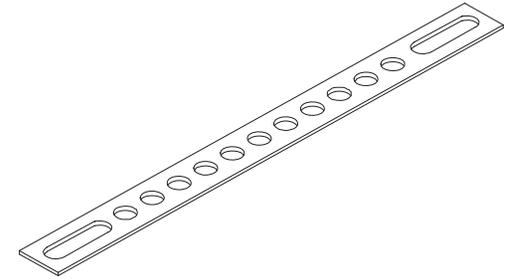
- Jensen MSR3012 Radio
- Wire Harness
- Hardware Kit
- Owner's Manual

HARDWARE KIT CONTENTS

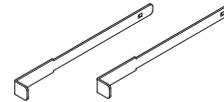
FLANGE NUT



MOUNTING STRAP



DIN SLEEVE
REMOVAL TOOL



SAFETY INFORMATION

When Boating

Keep the volume level low enough to be aware of your surroundings.

Protect from Water

Do not expose the product directly 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 vessel. 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 DIRECTLY 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

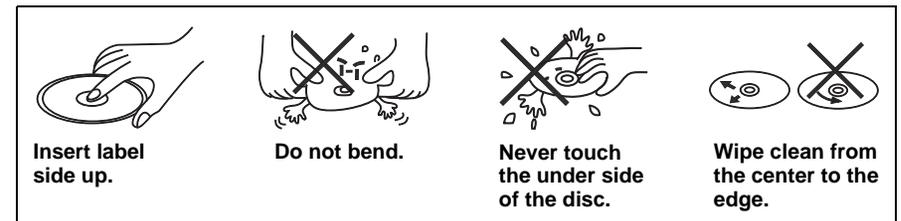
Table 1: General Disc Information

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.

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

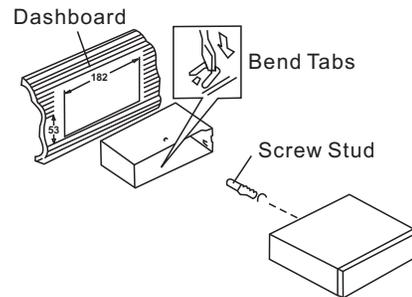
1. **Disconnect Battery**
Before you begin, always disconnect the battery negative terminal.
2. **Remove Transport Screws**

Important Notes

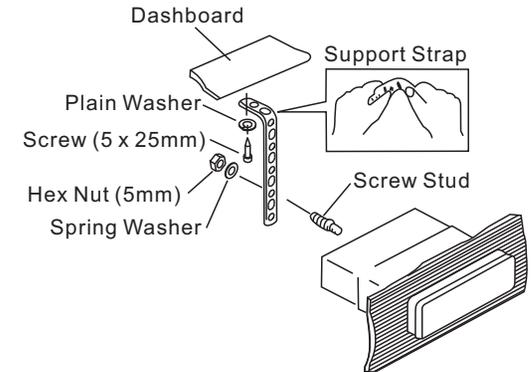
- Before final installation, test the wiring connections to make sure the unit is connected properly and the system works.
- Use only the parts included with the unit to ensure proper installation. The use of unauthorized parts can cause malfunctions.
- Consult with your nearest dealer if installation requires the drilling of holes or other modifications to your vessel.
- 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.
- This unit is **not waterproof** and is intended for interior mounting applications only. Exterior mounting of the unit requires use of an ASA approved marine housing.
- 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.

DIN Front Mount

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. The removal keys are depicted in "Removing the Unit" on page 3.
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, turn the unit on to confirm operation (vessel accessory 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 accessory switch off and proceed with final mounting of the chassis.

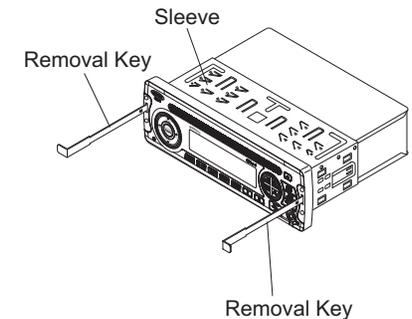


7. Carefully slide the radio into the mounting sleeve, making sure it is right-side-up, until it is fully seated and the spring clips lock it into place.
8. Attach one end of the perforated support strap (supplied) to the screw stud on the rear of the chassis using the hex nut and spring washer provided. Fasten the other end of the perforated strap to a secure part of the dashboard either above or below the radio using the screw and plain washer provided. Bend the strap, as necessary, to position it. **CAUTION:** The rear of the radio must be supported with the strap to prevent damage to the dashboard from the weight of the radio or improper operation due to vibration.
9. Test radio operation by referring to the operating instructions for the unit.



Removing the Unit

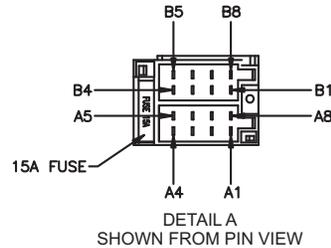
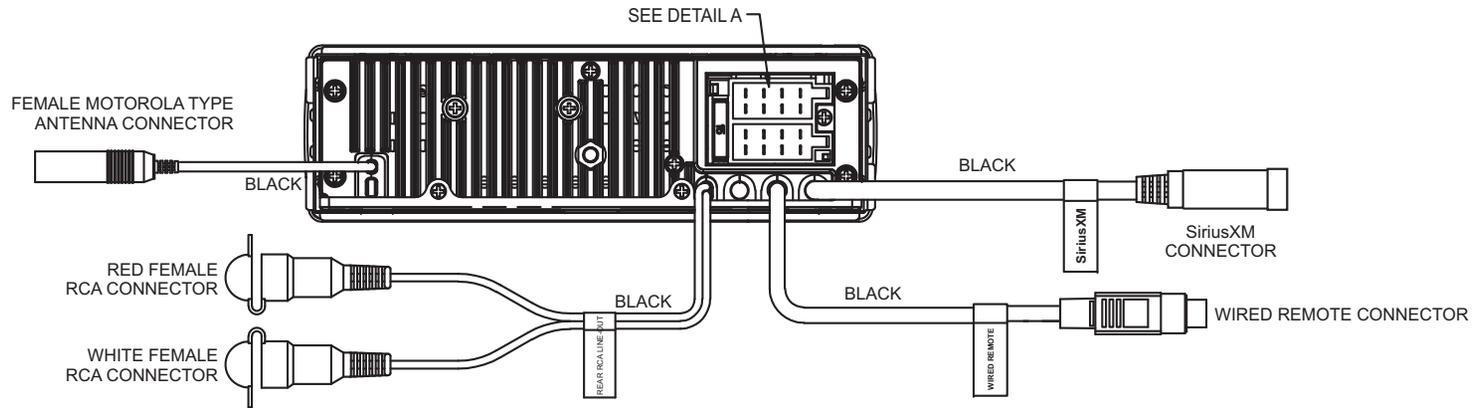
To remove the radio after installation, pull back the rubber covers, insert the removal keys straight back until they click, and then pull the radio out. If removal keys are inserted at an angle, they will not lock properly to release the unit.



Reconnect Battery

When wiring is complete, reconnect the battery negative terminal.

WIRING



Power Antenna

Connect to power antenna or amplifier.
If not used, tape bare end of wire.

12V TURN ON

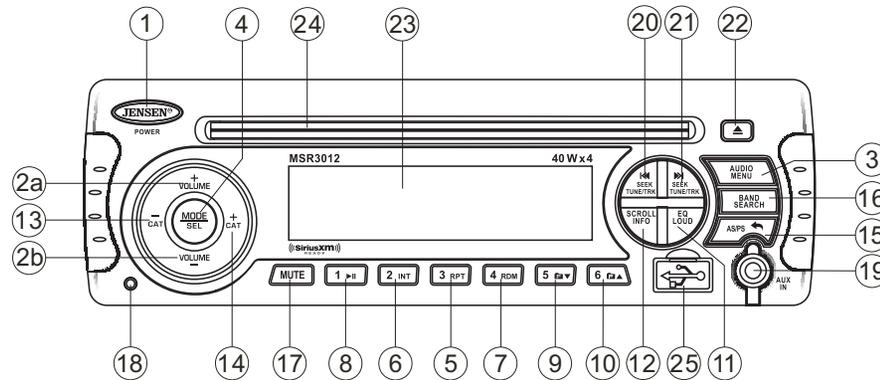
Connect to existing radio wire/fuse.

Chassis Ground

Connect to ground terminal or clean unpainted metal part of chassis.

PIN NO.	DESCRIPTION	WIRE COLOR
A1	RIGHT REAR SPEAKER (+)	VIOLET
A2	RIGHT FRONT SPEAKER (+)	GRAY
A3	LEFT FRONT SPEAKER (+)	WHITE
A4	LEFT REAR SPEAKER (+)	GREEN
A5	LEFT REAR SPEAKER (-)	GREEN/BLACK
A6	LEFT FRONT SPEAKER (-)	WHITE/BLACK
A7	RIGHT FRONT SPEAKER (-)	GRAY/BLACK
A8	RIGHT REAR SPEAKER (-)	VIOLET/BLACK
B1	NO CONNECTION	EMPTY
B2	NO CONNECTION	EMPTY
B3	POWER ANTENNA	BLUE
B4	NO CONNECTION	EMPTY
B5	GROUND	BLACK
B6	NO CONNECTION	EMPTY
B7	+12V SWITCHED	RED
B8	NO CONNECTION	EMPTY

BASIC OPERATION



Power On/Off

Press any button on the front panel to turn the unit on. Press the **POWER** button (1) to turn the unit off.

- If a disc is being inserted when the radio power is off and the ACC (accessory switch) is on, the unit will automatically power up and playback will start.
- If a CD is present, playback resumes at the last position in memory before the ignition was turned off or the **POWER** button was pressed.
- If no CD is present, the unit will resume at the last mode selected (Tuner, Aux, etc.). The **POWER** button is illuminated whenever the IGN lead (red wire) is powered, regardless of whether the unit is on or off.

Volume Control

To increase the volume, press the **VOLUME +** button (2a). To decrease the volume, press the **VOLUME -** button (2b).

Mute

Press the **MUTE** button (17) on the control panel to mute the audio output. Press **MUTE** again to restore the audio output to the previous level.

Mode

Press the **MODE/SEL** button (4) on the control panel to select a different mode of operation, as indicated on the display panel. Available modes include Tuner, SiriusXM, CD, iPod and AUX In (optional Auxiliary Input).

NOTE: CD, IPOD, AUX or SIRIUSXM mode will be skipped if the module is not installed.

Reset

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

Use a ball point pen or similar object to press the **RESET** button (18). This may be necessary should the unit display an error code.

You can recover factory default settings using the **RESUME** function located on the system menu. With “YES” flashing, press the **MODE/SEL** button (4) to activate.

Audio Menu

Press the **AUDIO/MENU** button (3) on the control panel to access the audio menu. You can navigate through the audio menu items by pressing the **AUDIO/MENU** button repeatedly. Once the desired menu item appears on the display, adjust that option by pressing the **VOLUME +/-** buttons (2) within 5 seconds. The unit will automatically exit the audio menu after five seconds of inactivity. The following menu items can be adjusted.

Bass Level

Use the **VOLUME** buttons to adjust the Bass level range from “-6” to “+6”.

Treble Level

Use the **VOLUME** buttons to adjust the Treble level range from “-6” to “+6”.

Balance

Use the **VOLUME** buttons to adjust the Balance between the left and right speakers from “L12” (full left) to “R12” (full right).

Fader

Use the **VOLUME** buttons to adjust the Fader between the rear and front speakers from “R12” (full rear) to “F12” (full front).

Volume Level

Use the **VOLUME** buttons to adjust the Volume level.

System Menu

1. Press and hold the **AUDIO/MENU** button (3) for more than 3 seconds to enter the system menu. “MENU” will appear on the display, followed by the first menu item, “CONTRAST.”
2. Press the **TUNE/TRK >>|** or **|<<** button (21, 20) or press the **AUDIO/MENU** button repeatedly to navigate the system menu and select the desired item.
3. Press the **VOLUME +/-** buttons (2) to adjust the selected menu item.
4. Press the **AS/PS** button (15) to return to the previous operation immediately or wait for 5 seconds to return automatically.

The following items can be adjusted:

- **CONTRAST** (0 – 10): Set LCD contrast.
- **LOW BATT (ON/OFF)**: Monitor voltage on ACC line.
- **Local/Distant**: “Local” mode favors access to local stations whose signals are much stronger, thereby improving reception. Select “Distant” to terminate local receive mode and resume normal mode.
- **AREA (U.S.A./LATIN/EUROPE)**: Set frequency spacing for various regions.
- **VOL PGM** (0 – 46): Select an automatic turn-on volume.
- **BEEPTONE (ON/OFF)**: Turn the audible beep ON/OFF (heard when functions/buttons are selected). *NOTE: Beep tone off will not affect LOW BATT audible tone.*
- **SXM CH LOCK** (when SiriusXM tuner is present): Set and manage a 4-digit parental lock code to restrict mature content. Press the **MODE/SEL** button (4) to view “P-LOCK”. Use

the **VOLUME +/-** buttons (2) to choose digits from 0 to 9. Press the **MODE/SEL** button to enter and move to the next digit. The default code is "0000".

- **RESET:** Return the EEPROM to factory default set up values. "Yes" will blink on the LCD to confirm. Press **MODE** to select.

LOW BATTERY Operation

If LOW BATT is set to "ON", an alarm will sound (8 beeps every 30 sec) when the voltage drops to 10.8V (+/- 0.03V). A visual warning (LOBA) will appear flashing (8 flashes every 30 sec) in the lower left corner of the LCD display.

NOTE: "OFF" is the default setting for LOW BATT. If the audio is muted or the volume is set to 0, the audible beep will not be heard.

Equalizer

Press the **EQ/LOUD** button (11) to turn on the equalization function and select between five pre-defined bass and treble curves: USER > FLAT > POP > CLASSIC > ROCK.

Loudness

Press and hold the **EQ/LOUD** button (11) to toggle true loudness on/off. When listening to music at low volumes, this feature will boost the bass and treble ranges to compensate for the characteristics of human hearing.

Auxiliary Input

To access an auxiliary device:

1. Connect the portable audio player to the AUX IN on the front panel (19).
2. Press the **MODE** button (4) to select Aux In mode.
3. Press **MODE** again to cancel Aux In mode and go to the next mode.

Liquid Crystal Display (LCD)

The current frequency and activated functions are shown on the LCD panel (23).

NOTE: LCD panels may take longer to respond when subjected to cold temperatures for an extended period of time. In addition, the visibility of the numbers on the LCD may decrease slightly. The LCD display will return to normal when the temperature increases to a normal range.

Scroll

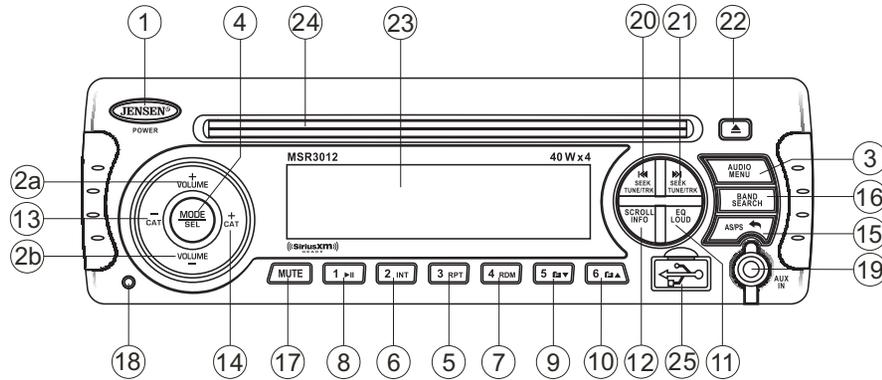
When the information is too long to be displayed on the LCD, press and hold the **SCROLL/INFO** button (12) to view the entire title. The information will scroll twice and then return to abbreviated text.

Quick Exit Hot Key

In the following modes and conditions, press the **AS/PS** button (15) < 3 seconds to quickly exit the current operation without waiting for the system default time out:

- System menu operation
- Searching mode
- Audio menu operation

TUNER OPERATION



Preset Scan

Select a band (if needed). Press the **AS/PS** button (15) to scan stations stored in the current band. The unit will pause for ten seconds at each preset station. Press **AS/PS** again to stop scanning when the desired station is reached.

Select a Band

Press the **BAND/SEARCH** button (16) to change between three FM bands and two AM (MW) bands.

Manual Tuning

Press the **SEEK/TUNE/TRK** << or >>| buttons (20, 21) to seek stations up/down step by step.

Auto Seek Tuning

Press and hold the **SEEK/TUNE/TRK** << or >>| buttons (20, 21) to automatically seek the next or previous strong station.

Preset Stations

Six numbered preset buttons store and recall stations for each band.

Store a Station

Select a band (if needed), then select a station. Press and hold a preset button (5-10) for two seconds. The preset number will appear in the display.

Recall a Station

Select a band (if needed). Press a preset button (5-10) to select the corresponding stored station.

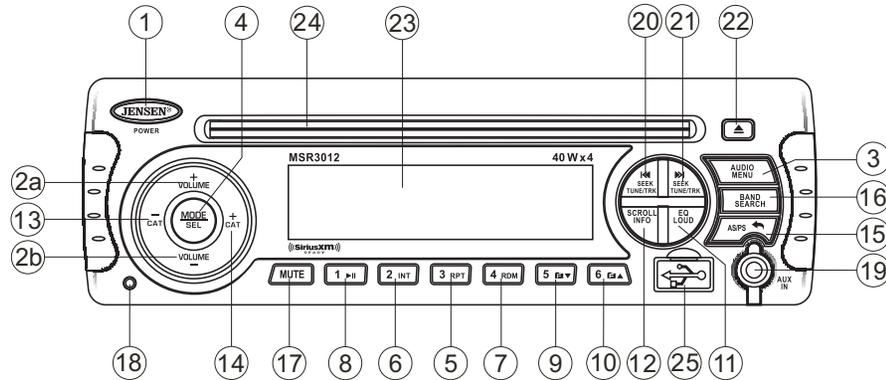
Automatically Store / Preset Scan (AS/PS)

Automatically Store

Select a band (if needed). Press and hold the **AS/PS** button (15) for more than three seconds to automatically select six strong stations and store them in the current band. The new stations replace any stations already stored in that band.

NOTE: During Auto Store (AS), the tuner will default to "Local" mode while scanning the band initially. After scanning the entire band once, the unit will switch to "Distant" mode for all subsequent Auto Store tuning.

CD PLAYER OPERATION



Inserting and Ejecting a Disc

Insert a disc, label-side up, into the disc slot (24) with the unit turned on. The unit will automatically draw the disc in and play the first track on the disc.

Press the eject ▲ button (22) to stop disc play and eject the disc. The unit does not have to be turned on to eject the disc.

Controlling Disc Playback

Selecting Tracks

Press the **SEEK/TUNE/TRK >>** (21) or **SEEK/TUNE/TRK <<** button (20) to advance to the next track on the CD. The selected track number will appear on the display. *Press and hold* the **SEEK/TUNE/TRK >>** or **<<** button to fast forward or fast reverse through the disc. CD play starts when the button is released.

Play/Pause Disc Playback

Press the **1/>||** button (8) to suspend disc play. Press the **1/>||** button again to resume disc Play.

Previewing Tracks

Press the **2/INT** button (6) to play the first 10 seconds of each track sequentially. Press **2/INT** again to stop Intro Scan and resume normal play at the current track.

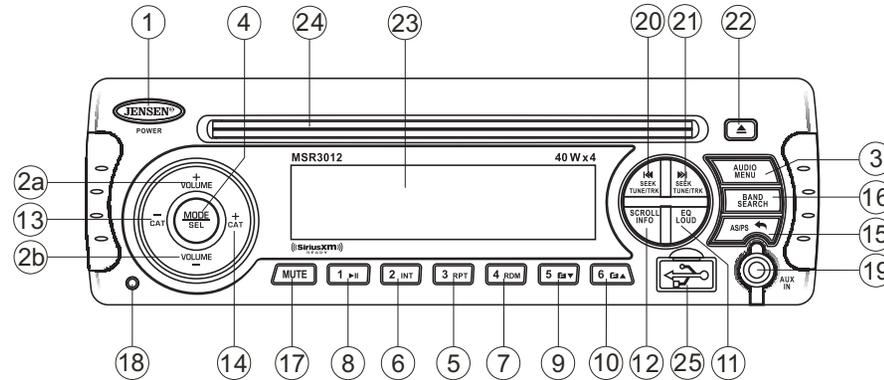
Repeat Play

Press the **3/RPT** button (5) during disc play to repeat play the current track. Press **3/RPT** again to stop repeat play.

Random Play

Press the **4/RDM** button (7) during disc play to play all tracks on a CD in random, shuffled order. Press **4/RDM** again to stop random play.

MP3/WMA OPERATION



MP3/WMA File Requirements

The MP3/WMA recording media acceptable to this unit are CD-ROM, CD-R and CD-RW. When using CD-RW, use full format rather than quick format to prevent malfunction. Discs written by Packet Write (UDF) are not supported.

This unit can play MP3 (MPEG1, 2, 2.5 Audio Layer 2/3) and WMA (version 7/8/9).

Media Requirements

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

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

The media reproducible on this unit has the following limitations:

- Maximum number of nested folders: 8
- Maximum number of files per disc: 999
- Maximum number of folders per disc: 99

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

- Transfer bit rate: 32 - 320 kbps
- Sampling frequency
 - MPEG1: 32/44.1/48 KHz
 - MPEG2: 16/22.05/24 KHz
 - MPEG2.5: 8/11.025/12KHz
 - WMA: 22/32/44/48KHz

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

- Maximum length of file name: 28 characters
- Maximum length of directory: 16 characters

- Maximum file/directory name: 64 bytes

ID3 Support

This unit supports ID3 tag versions 1.0, 1.1, 2.0 and 2.3 (Max 32 bytes).

Insert and Eject Disc

Insert a disc, label-side up, with the unit turned on. After the disc scan is complete, the unit will play the first track on the disc. The MP3 icon is illuminated during MP3 playback. Press the eject ▲ button (22) to stop disc play and eject the disc. The unit does not have to be turned on to eject the disc.

Installing a USB Device

Insert your USB thumb drive into the USB slot (25) on the front of the radio. The unit will automatically search for MP3 and WMA files on the device and begin playback. You can access USB mode from any other mode by pressing the **MODE/SEL** button (4).

WARNING: Do not remove the device when USB PLAY mode is active. Press MODE/SEL (4) to change to another mode before removing the device.

Controlling Playback

Pause

Press the 1 >|| button (8) to suspend disc play. Press the 1 >|| button again to resume play.

Track Select

Press the **SEEK/TUNE/TRK >>|** (21) or **|<<** (20) button for less than one second to advance to the next file, or *press and hold* to fast forward or fast reverse. Playback begins when the button is released.

Intro Scan (INT)

Press the **2 INT** button (6) once to play the first 10 seconds of each file in the current folder. Press **2 INT** again to play the first 10 seconds of each file on the current disc. When the desired file is reached, press **2 INT** a third time to end the scan and play the selected file.

Repeat (RPT)

Press the **3 RPT** button (5) to repeatedly play the current file. Press **3 RPT** again to repeat all songs in the current folder. Press **3 RPT** a third time to resume normal playback.

Random (RDM)

Press the **4 RDM** button (7) to randomly play all files in the current folder. Press **4 RDM** again to randomly play all files on the disc. Press **4 RDM** a third time to resume normal playback.

Navigating Folders

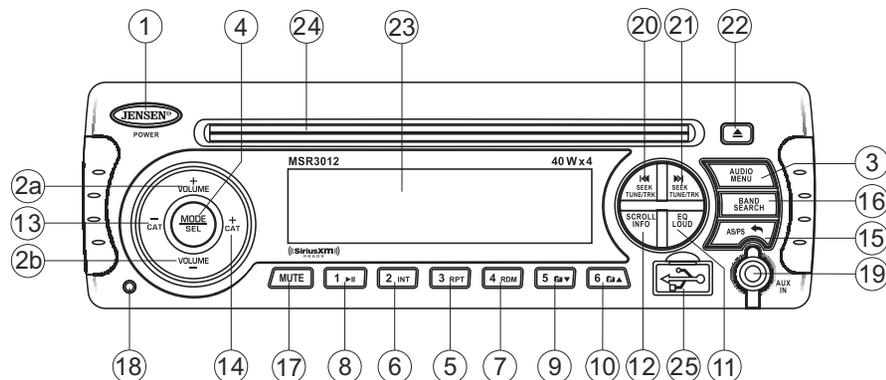
Press the **5** button (9) to move to the previous folder.

Press the **6** button (10) to advance to the next folder.

MP3/WMA Directory Search

1. Press **BAND/SEARCH** button (16) to enter directory search mode.
2. Press the **MODE/SEL** button (4) to confirm search mode. The LCD will display the folder list.
3. Navigate the folder list by pressing the **VOLUME +/-** buttons (2).
4. Press the **MODE/SEL** button to select a folder. The LCD will display the list of files within that folder.
5. Navigate the file list by pressing the **VOLUME +/-** buttons.
6. Press the **MODE/SEL** button to select a file.

SiriusXM RADIO OPERATION



About SiriusXM

Everything worth listening to is on SiriusXM. Get over 130 channels, including the most commercial-free music, plus the best sports, news, talk and entertainment. A SiriusXM Tuner and Subscription are required. For more information, visit www.siriusxm.com.

NOTE: The SiriusXM Satellite Radio controls on this unit are available only when a SiriusXM Tuner is connected.

Switching to SiriusXM Mode

Press the **MODE/SEL** button (4) to change the mode to SiriusXM radio mode.

Accessing your SiriusXM ID

To subscribe to the SiriusXM Satellite Radio service, it is necessary to locate and identify the Radio ID of your SiriusXM Tuner.

1. In SiriusXM mode, *press and hold* the **BAND/SEARCH** button (16) to select DIRECT mode.
2. Press the **MODE/SEL** button (4) to activate Direct mode.
3. Press the **MODE/SEL** button for each digit to enter "000".
4. Press **MODE/SEL** again to confirm. This will display the SiriusXM ID number for your tuner.
5. The SiriusXM ID number will scroll twice and then freeze with the first 11 digits on the display. Press the **SCROLL/INFO** button (12) to display the remaining digit.
6. Write down the number for reference.

Radio ID: _____

NOTE: The SiriusXM Radio ID does not include the letters I, O, S or F.

Activating Your Service

1. With the radio still turned on, tune to the SiriusXM preview channel on Channel 1. You should be able to hear the SiriusXM preview channel even if your service is not activated. If you cannot hear the preview channel, please check the installation instructions to make sure your tuner is properly installed.
2. Visit www.siriusxm.com/activate or call SiriusXM Listener Care at 1-866-635-2349 to activate your service.

NOTE: As part of the activation process, the SiriusXM satellites will send an activation message to your tuner (see "Advisory Messages Reported by the SiriusXM Vehicle Tuner" on page 13). When your radio detects that the tuner has received the activation message, your radio will display: "Subscription Updated". Once subscribed, you can tune to channels in your subscription plan. Note, the activation process usually takes 10 to 15 minutes, but may take up to an hour. Your radio will need to be powered on and receiving the SiriusXM signal to receive the activation message.

Selecting a Band

In SiriusXM mode, press the **BAND/SEARCH** button (16) to access the SiriusXM user-preset channel groups in the following order: SAT-1, SAT-2, SAT-3.

Category Tuning

1. Press the **CAT -/+** buttons (13/14) to change the category. Each category title will be displayed in increments.
2. While in the category mode, press the **CAT -/+** buttons again to view category names. (The lowest channel number within the chosen category will always be the default first channel tuned.)
3. Press the **MODE/SEL** button (4) to select the current channel or the **SEEK/TUNE/TRK** |<< / >>| buttons (20/21) to choose channels in that category.
4. Press the **SEEK/TUNE/TRK** buttons to select a channel within the chosen category.
5. Press **MODE/SEL** to confirm channel selection.

Channel Up/Down Tuning

Press the **SEEK/TUNE/TRK** |<< / >>| buttons (20/21) to search for a channel. *Press and hold* the **SEEK/TUNE/TRK** buttons to rapid search.

Storing Preset Channels

The preset buttons (5-10) can be used to store 6 channels, allowing convenient access to your favorite channels.

Programming Channels

1. Select the channel you want to store in preset memory.
2. *Press and hold* a preset button (5-10) until the corresponding preset button number appears.
3. Repeat steps 1 and 2 to program additional channels.

Recalling Preset Channels

Press one of the six preset buttons (5-10) to select a preset channel directly.

Channel Direct Access Searching

1. Press and hold the **BAND/SEARCH** button (16) to access Direct Tune mode. "DIRECT-T" appears on the display for a few seconds.
2. Press the **MODE/SEL** button (4) to confirm.
3. Use the **VOLUME +/-** buttons (2) to select a number for each position and move to the next digit.
4. Press the **MODE/SEL** button to confirm each digit.
5. Press the **MODE/SEL** button again to tune to the selected file.

Parental Lock

Set and manage a 4-digit parental lock code to restrict mature content.

1. Press and hold the **AUDIO/MENU** button (3) for more than 3 seconds to enter the system menu.
2. Press the **TUNE/TRK >>|** or **|<<** button (21, 20) navigate to the "SXM SETUP MENU" feature.
3. Press the **MODE/SEL** button (4) to view "P-LOCK".
4. Use the **VOLUME +/-** buttons (2) to choose digits from 0 to 9. The default code is "0000".
5. Press the **MODE/SEL** button to enter and move to the next digit.

Alternate Display Information

Press **SCROLL/INFO** button (12) to change the display information in the following order:
 ARTIST NAME > SONG TITLE > CONTENT (if available) > CATEGORY > CHANNEL NAME.

Satellite Signal Strength

The display will indicate satellite reception strength as shown below.

Signal Strength	Strength Display
No Signal	☐☐☐☐
Weak	☐■☐☐
Good	☐■■☐
Excellent	☐■■■

Advisory Messages Reported by the SiriusXM Vehicle Tuner

Table 1: SiriusXM Advisory Messages

On-Screen Display	Advisory Message	Cause	Explanation/Solution
Chk Antena	Check Antenna	The radio has detected a fault with the SiriusXM antenna. The antenna cable is either disconnected or damaged.	<ul style="list-style-type: none"> Verify that the antenna cable is connected to the SiriusXM Connect Vehicle Tuner. Inspect the antenna cable for damage and kinks. Replace the antenna if the cable is damaged.
Check Tuner	Check Tuner	<ul style="list-style-type: none"> The radio is having difficulty communicating with the SiriusXM Connect Vehicle Tuner. The tuner may be disconnected or damaged. 	<ul style="list-style-type: none"> Verify that the SiriusXM Connect Vehicle Tuner cable is securely connected to the radio SiriusXM mating connector/cable. If the problem persists, disconnect and reconnect the tuner and then contact your dealer.
No Signal	No Signal	The SiriusXM Connect Vehicle Tuner is having difficulty receiving the SiriusXM satellite signal.	<ul style="list-style-type: none"> Verify that your vehicle is outdoors with a clear view of the southern sky. Verify that the SiriusXM magnetic mount antenna is mounted on a metal surface on the outside the vehicle. Move the SiriusXM antenna away from any obstructions. Inspect the antenna cable for damage and kinks. Replace the antenna if the cable is damaged. If the problem persists, disconnect and reconnect the tuner and then contact your dealer.
Scrolling "Subscriptn Updated" - press any key to continue"	Subscription Updated	The radio has detected a change in your SiriusXM subscription status.	<ul style="list-style-type: none"> Press Enter to clear the message. No further action is required. Visit www.siriusxm.com or call 1-866-635-2349 if you have questions about your subscription.
Ch Unavail	Channel Not Available	The channel that you have requested is not a valid SiriusXM channel or the channel that you were listening to is no longer available. You may also see this message briefly when first connecting a new SiriusXM Connect Vehicle tuner. Visit www.siriusxm.com for more information about the SiriusXM channel lineup.	
Chan Unsub	Channel Not Subscribed	The channel that you have requested is not included in your SiriusXM subscription package or the channel that you were listening to is no longer included in your SiriusXM subscription package.	Visit www.siriusxm.com or call 1-866-635-2349 if you have questions about your subscription package or would like to subscribe to this channel.
Channel Locked	Channel Locked	The channel that you have requested is Locked by the radio Parental Control feature.	See the section on Parental Control, page 45 for more information on the Parental Control feature and how to access locked channels.
"Paging Lock Code?" followed by ****	Enter Lock Code	User prompted to enter the lock/ unlock code.	Enter the four digit code to play the audio.

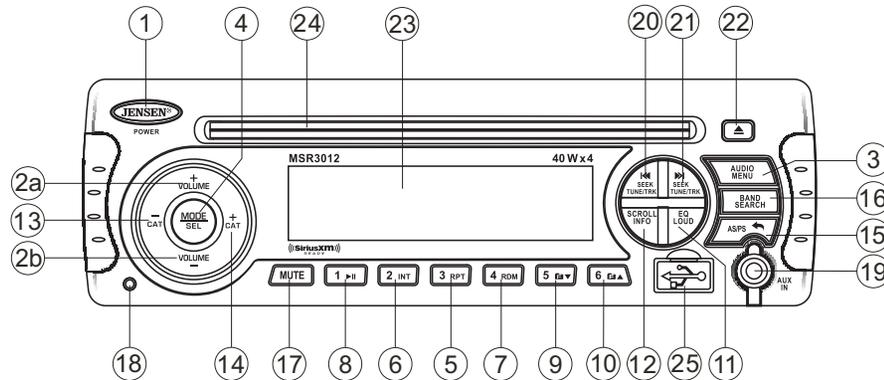
iPod OPERATION

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

NOTE: Earlier model iPods are not supported because they do not implement the USB control protocol. Also, the iPod Shuffle is not supported because it does not utilize the 30-pin Apple iPod Connector. These unsupported iPod models may be connected to the radio using one of the Auxiliary Inputs.

Accessing iPod Mode



Connect a supported iPod or iPhone to the front panel USB connector. The iPod icon illuminates in the bottom right corner of the LCD whenever an iPod or iPhone is attached to the USB connector. Music playback begins automatically.

To enter iPod mode from any other source, press the **MODE/SEL** button (4) until "USB" appears on the display. **If the user connects an iPod containing no songs, the radio will display a message stating "No Songs" when it enters iPod mode.**

Turning the iPod On/Off

The iPod power turns on automatically when an iPod is connected to the front panel USB connector, as long as the vehicle ignition is turned on. You can turn the iPod off by disconnecting it 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.

Controlling Playback

Selecting Tracks

During playback, press the **SEEK/TUNE/TRK << / >>** button (20/21) to play the previous or next track in the current category. Press the **SEEK/TUNE/TRK <<<** button (20) once to play the song from the start position or press **SEEK/TUNE/TRK <<<** twice to play the previous track.

Press and hold the **SEEK/TUNE/TRK << / >>** button (20/21) to fast reverse/forward the song.

Pausing Playback

During playback, press the **1/2** button (8) to pause the iPod player. "PAUSE" will appear on the LCD. Press **1/2** again to resume playback.

Repeat Play

During playback, press the **3/RPT** button (5) to repeat the current song. "REPEA" will appear on the LCD. Press **3/RPT** again to stop repeat playback.

Random Play

During playback, press the **4/RDM** button (7) to play all songs in the current category in random order. Random play will begin once the current song has finished playing. "SHUFF" will appear on the LCD. Press **4/RDM** again to stop random playback.

NOTE: If you press and hold the SEEK/TUNE/TRK << / >> button to change the current song to the previous/next song, you will exit fast reverse/forward mode.

Alternate Display Information

Press the **SCROLL/INFO** button (12) to change the display information in the following order: ARTIST NAME > SONG TITLE > FOLDER NAME.

Search Mode

Press the **BAND/SEARCH** button (16) repeatedly to enter iPod search mode and choose from the following search criteria: Playlist, Artist, Album, Song, Genre or Composer (consecutively). When search mode is selected, press the **MODE/SEL** button (4) to confirm selection. Use the **VOLUME +/-** buttons (2) to navigate through various list selections. Press **MODE/SEL** (4) to make your final selection.

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 a result of the radio being placed 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 vessels 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 is very different from reception in a stationary environment (home). It is very important to understand the difference.

AM reception will deteriorate when passing under a bridge or when passing under high voltage lines. Although AM is subject to environmental noise, it has the ability to be received at great distance. 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 vessel's accessory switch is not on	If the power supply is properly connected to the vessel's accessory terminal, switch the ignition key to "ACC".
	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 upside down	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.
	Condensation	Leave the player off for an hour or so, then try again.
No sound	Volume is too low	Adjust volume to audible level.
	Wiring is not properly connected	Check wiring connections.
The operation keys do not work	Control panel is not properly installed	Reinstall control panel.
	Built-in microcomputer is not operating properly due to noise	Press the RESET button.
Sound skips	Installation angle is more than 30 degrees	Adjust the installation angle to less than 30 degrees.
	Disc is dirty or defective	Clean the disc and try to play again or use a new disc.
Cannot tune to radio station, auto-seek does not work	Antenna cable is not connected	Insert the antenna cable firmly.
	Signals are too weak	Select a station manually.
ERROR-01 on LCD	Database or decoder error	Change to another mode.
ERROR-02 on LCD	Disc not supported	Remove disc and insert supported CDDA or CD-ROM disc.
ERROR-03 on LCD	No songs on device	Remove device and add songs.
ERROR-04 on LCD	Abnormal current to USB device	Change mode or unplug and reconnect USB device.
ERROR-05 on LCD	iPod/iPhone is not verified	Unplug and reconnect iPod/iPhone.

SPECIFICATIONS

CD

Signal to Noise Ratio ≥ 75 dB
 Channel Separation : More than 50 dB
 Frequency Response 20 Hz - 20 kHz

FM Radio

Frequency Coverage (USA) 87.5 to 107.9 MHz
 Frequency Coverage (Europe) 87.5 to 108 MHz
 Sensitivity (S/N=30dB) $4\mu V$
 Image Rejection > 45 dB
 Stereo Separation > 25 dB

AM/MW

Frequency Range (USA) 530-1710 kHz
 Frequency Range (Europe) 522-1620 kHz
 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 40W x 4
 Current Drain 15 Ampere (max.)
 Chassis Dimensions 182(L) x 52.2(W) x 173(H)
 Front Panel Dimensions 188(L) x 58(W) x 21(H)