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**SOUND STORM**<sup>®</sup>  
LABORATORIES



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*User's Manual*

**SMP3-90R**

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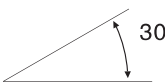
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INSTALLATION

Notes:

- Choose a mounting location where the unit will not interfere with the driver's ability to control the vehicle.
- Before final installation, temporarily connect the wiring. Make sure all connections are done correctly, and that the system operates properly.
- 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 the vehicle.
- If installation angle exceeds 30° from horizontal, the unit might not give its optimum performance.



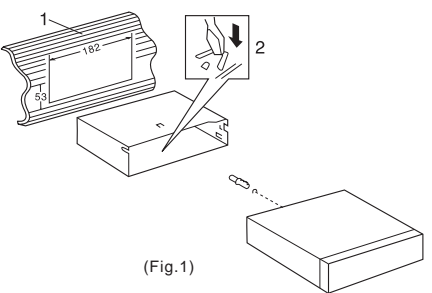
- Install the unit only where it is not subject to excessive temperature from heated air or direct sunlight, or where it is protected from dust, dirt and excessive vibration.

DIN FRONT/REAR-MOUNT

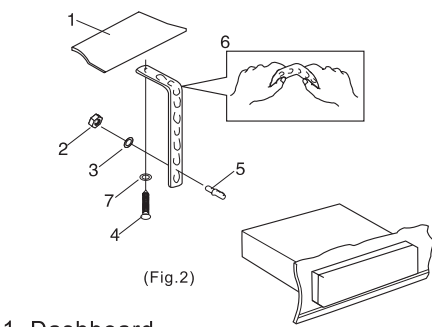
This unit can be properly installed either from "Front" (conventional DIN Front-mount) or "Rear" (DIN Rear-mount installation, utilizing threaded screw holes at the sides of the unit chassis). For details, refer to the following illustrated installation methods.

DIN FRONT-MOUNT (Method A)

Installing the unit



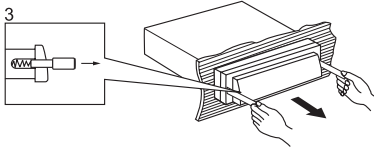
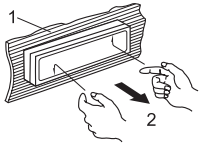
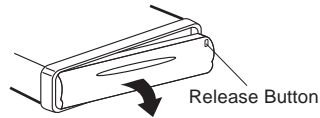
1. Dashboard
2. Mounting Bracket  
After inserting the holder into the dashboard, select the appropriate tabs according to the thickness of the dashboard material and bend them outward to secure the bracket in place.
3. Screw



1. Dashboard
2. Nut (5mm)
3. Spring washer
4. Screw (5 x 25mm)
5. Screw
6. Backstrap  
Be sure to use the back-strap to secure the back of the unit in place. The back-strap can be bent by hand to the desired angle.  
Note: The trim piece, backstrap, and mounting bracket are not used for REAR-MOUNT.
7. Plain washer

## INSTALLATION

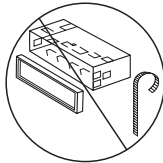
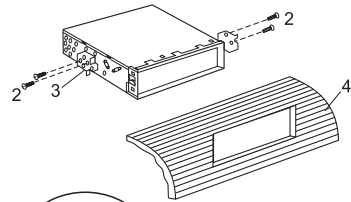
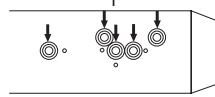
### Removing the unit



1. Before removing the bezel, press the **RELEASE** button to remove the front panel.
2. Insert fingers into the groove in the right side of the frame and pull out to remove the frame. (You can also remove the frame from the left side.)
3. Then insert the levers supplied with the unit into the grooves at both sides of the unit as shown in figure until they click. Pulling the levers makes it possible to remove the unit from the dashboard.

### DIN REAR-MOUNT (Method B)

Installation using the screw holes on the sides of the unit.



Fastening the unit to the factory radio mounting bracket.

1. Select a position where the screw holes of the bracket and the screw holes of the main unit become aligned (are fitted), and tighten the screws at 2 places on each side. Use either truss screw (5 x 5mm) or flush surface screw (4 x 5mm), depending on the shape of the screw holes in the bracket.
2. Screw
3. Factory radio mounting bracket
4. Dashboard or Console

**Note:** The trim piece, backstrap, and mounting bracket are not used for **REAR-MOUNT**.

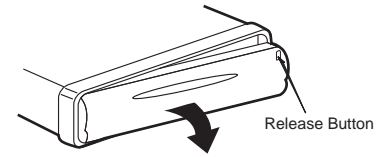
## USING THE DETACHABLE FRONT PANEL

### DETACHING THE FRONT PANEL

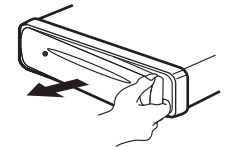
Press the **RELEASE** button to release the panel from right side of the head unit.

Grasp the right side of the panel and pull to remove it.

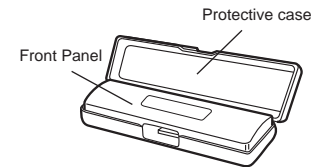
Immediately place the front panel in its protective case for safe and clean storage.



press **RELEASE** to release the front panel...



grasp the right side of the panel and pull to remove the panel...



place the front panel in its protective case...

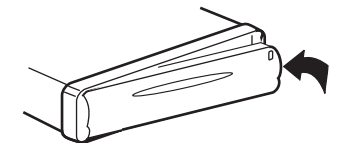
Be careful when handling the front panel!

1. Do not drop front panel.
2. When detaching or reinstalling, do not put pressure on the display
3. Do not touch the contacts on the panel or the main unit body - doing so may result in poor electrical contact.
4. Dirt or foreign substances can be removed with a clean, dry cloth.
5. Do not expose the panel to high temperatures or direct sunlight.
6. Do not permit volatile agents or solvents to contact the front panel.
7. Do not attempt to disassemble the front panel.

### REINSTALLING THE FRONT PANEL

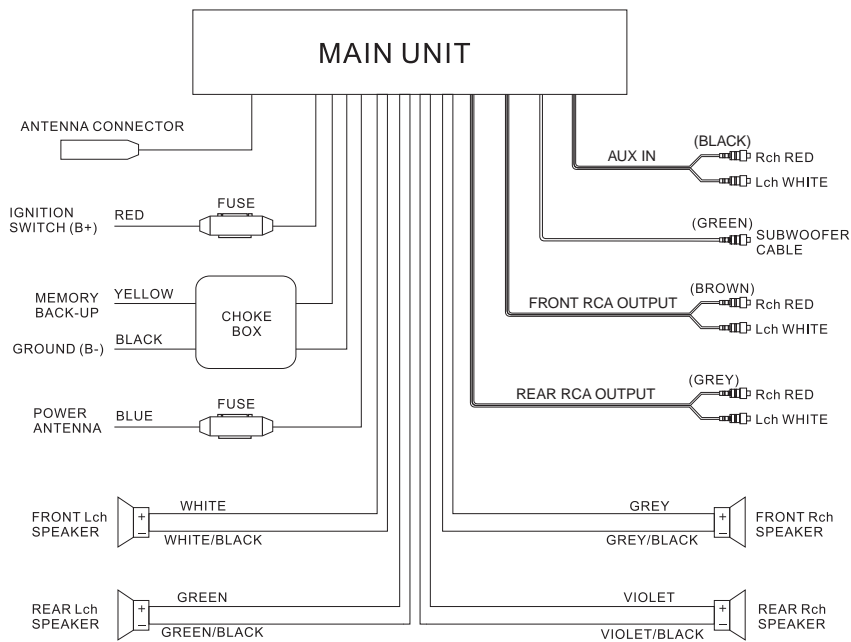
Push the front panel into the main body. You should hear a "click"

**NOTE:** If the panel fails to lock into position properly, the function of some controls may be impaired, and some segments of the display may not become illuminated. If this occurs, press **RELEASE** and reinstall the front panel.



push panel into main unit until you hear a "click".

## WIRING CONNECTION



### AUXILIARY INPUT FEATURE

This CD Receiver features an Auxiliary Input jack on the back side of the unit. An external audio source such as a portable audio player or a DVD player may be connected via this input jack.

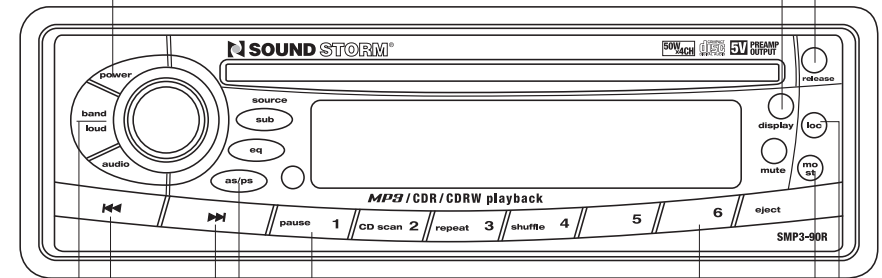
## OPERATION

### GENERAL CONTROLS

**POWER** Press any button to turn unit ON. To turn head unit off, press and hold POWER.

**RELEASE** Press to release and remove the front panel

**DISPLAY** To set clock, press and hold, then press the TUNE/TRACK ►► to change hours, ◀◀ for minutes.



### RADIO CONTROLS

**STATION PRESETS** Press any preset to select a station. To store a station in memory, tune to it, and press and hold your choice of preset button for several seconds.

**AS/PS** When pressed and held for several seconds, the tuner will search and store the first six strong stations as presets.

**MO/ST** Press if reception becomes noisy. Press again for normal stereo reception.

**LOC** Press to select between strong (LOC) and weak (DIST) stations.

**TUNE/TRACK BUTTONS** When pressed short, these keys are operated as MANUAL tuning mode.

When pressed longer than 1 sec., they are operated as SEEK tuning mode.

**BAND** Press repeatedly to change between three FM bands/one AM band

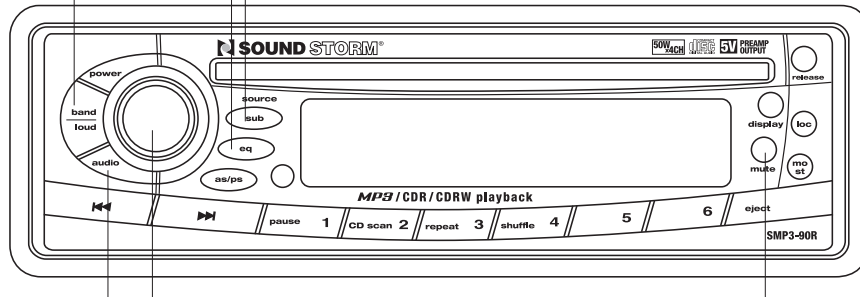
## OPERATION

### AUDIO CONTROLS

**LOUDNESS** Press and hold to increase the level of bass output.

**EQ** Press repeatedly to cycle through five modes: FLAT, CLASSICAL, POP M, JAZZ M or DSP OFF.

**SUB** Press and hold to engage subwoofer output ("SUBWOOFER" will appear in display).  
**SOURCE** Press repeatedly to choose desired audio source (Radio, CD or AUX in).



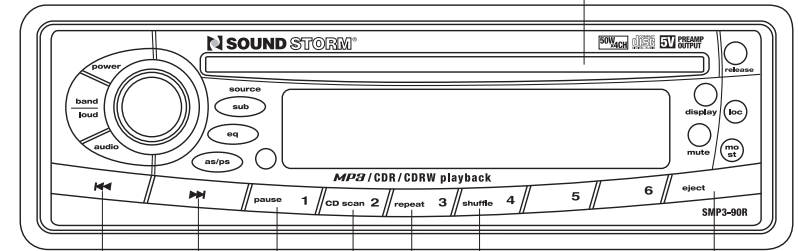
**MUTE** Press to silence the receiver. Press again to return to normal operation

**AUDIO BUTTON and ROTARY CONTROL** Press the button repeatedly to access Volume, Bass, Treble, Balance and Fader functions. Then use the knob control to adjust the select function.

## OPERATION

### CD PLAYBACK CONTROLS

CD Loading/unloading slot



**EJECT** Press to eject CD.

**SHUFFLE** Press to play ALL tracks on the CD in random order.

**REPEAT** Press and release to continuously repeat same track. Press again to stop repeat cycle.

**CD SCAN** Press to hear first several seconds of each track on current disc. Press again to stop intro and listen to intro last previewed.

**PAUSE** Press to pause CD playback. Press again to resume playback.

**TUNE/TRACK BUTTONS** Press and release to advance to next track or to return to the beginning of the current track (track number will be displayed). Press and hold to fast forward or reverse. Play will begin at the point when you release the button.

### CD OPERATION

To **PLAY** a CD gently insert a CD with the label side up into the disc slot. It will automatically load and begin playing the first track.

To **EJECT** a CD press EJECT to stop the CD playback and eject the CD from the slot. The receiver will automatically switch to radio mode.

To **PAUSE** a CD press PAUSE to stop playback temporarily. Press again to resume playback.

To **SKIP TRACKS** press the ◀◀ or ▶▶ key to choose the next or preceding track.

To **FAST FORWARD** or **REVERSE** press and hold the ◀◀ or ▶▶ key to the desired location on the disc. Releasing the button starts playback at the location.

To **REPEAT** a track press REPEAT to continuously repeat the current track. Press again to return to normal playback mode.

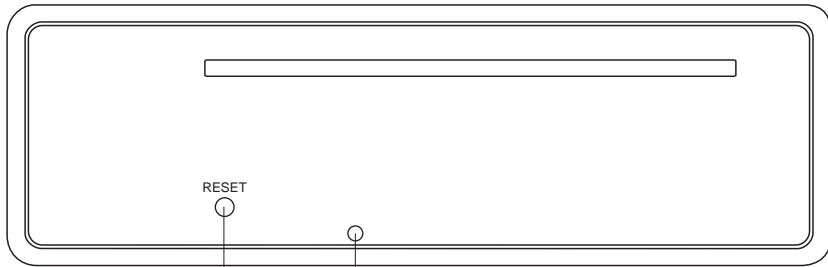
To **PREVIEW ALL TRACKS** press CD SCAN to play the first several seconds of each track. Press it again to stop and play the current track being previewed.

To **PLAY TRACKS IN RANDOM ORDER** press SHUF to play ALL tracks on the CD in random order. Press again to cancel this function.



## OPERATION

### CONTROLS BEHIND FACEPLATE



LED This LED flashes when the faceplate is removed.

**RESET BUTTON** Press this button with a ballpoint pen or other thin object. Use it:  
 . after initial installation of the unit, when all wiring is complete  
 . when the function buttons do not operate  
 . when the display is showing "ERROR"

**NOTE:** If the unit does not function properly after you have pressed the RESET button, clean the socket and the connector on the rear of the front panel with a cotton swab soaked in isopropyl alcohol and try again.

## OPERATION

### REMOTE CONTROL FUNCTIONS

**POWER** Use to turn the CD Receiver ON or OFF.

**AUDIO** Press the button repeatedly to access Volume, Bass, Treble, Balance and Fader functions. Then use the VOL + and VOL - buttons to adjust the selected function.

**VOLUME** Use to increase or decrease volume level.

**SOURCE** Press to choose desired audio source (Radio, CD or Aux in).

**TUNE/SEEK ◀◀ and ▶▶**  
 In Radio Mode: Press and release to activate automatic seek function ("Auto" will appear on display). Press and hold to engage manual tuning mode ("MANUL" will appear on display).

In CD Mode: Press and release to advance to next track or to return to the beginning of the current track (track number will be displayed). Press and hold to fast forward or reverse. Play will begin at the point when you release the button.

**DISPLAY** Use with the ◀◀ and ▶▶ buttons to reset time of day.

**AS/PS** Use to automatically scan and place six strong stations into memory.

**SHUFFLE** Press to play ALL tracks on the CD in random order.

**PAUSE** Press to pause CD playback. Press again to resume playback.

**SCAN** Press to hear first several seconds of each track on current disc. Press again to stop intro and listen to intro last previewed.

**REPEAT** Press and release to continuously repeat same track. Press again to stop repeat cycle.

**BAND** Press to change between three FM bands / AM band.

**MP3 Search key assignments**

power	CHARACTER SHIFT RIGHT	CHARACTER SHIFT UP	S T U 7
	V W X 8		Y Z SPACE 9
	ENTER	CHARACTER SHIFT DOWN	- + 0
A B C 1	D E F 2	G H I 3	SEARCH MODE SELECT
J K L 4	M N O 5	P Q R 6	

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## OPERATION

### MP3 PLAYBACK

Since MP3 files are named and accessed differently than CD files, it is necessary to employ some of the buttons for purposes of searching for and selecting audio files.

There are two different search modes. The AS/PS buttons is used to select the search mode by pressing it once or twice.

### SEARCH TRACK DIRECTORY MODE

Pressing the AS/PS button once enters the Searching Track Directory Mode. To enter a track number, use the buttons according to the chart below:

Front panel Control	Key assignment
Preset 1	1
Preset 2	2
Preset 3	3
Preset 4	4
Preset 5	5
Preset 6	6
Source	7
I<<	8
>>I	9
DISP	0

## OPERATION

### SEARCH FILE NAME MODE

Pressing the AS/PS button twice enters the Searching File Name mode. The unit searches for files whose names have the same characters inputted by the user. The unit displays these sorted files and directories. This system uses the buttons according to the chart below.

The selected file can be played by pushing the BAND/LOUD button.

Front panel control	Key assignment
Band/Loud	Enter
Preset 1	A, B, C, 1
Preset 2	D, E, F, 2
Preset 3	G, H, I, 3
Preset 4	J, K, L, 4
Preset 5	M, N, O, 5/DIRECTORY DOWN
Preset 6	P, Q, R, 6/DIRECTORY UP
Source	S, T, U, 7
I<<	V, W, X, 8
>>I	Y, Z, SPACE, 9
Audio	CHARACTER SHIFT RIGHT
DISP	_, -, +, 0
Audio Up / Down	CHARACTER SELECT(A-Z, 0-9)

#### NOTE:

When in Normal Play mode and when in Searching File or Directory Mode, preset buttons 5 and 6 are assigned as 10 TRACK.

## TROUBLESHOOTING

Before going through the check list, check wiring connection. If any of the problems persist after check list has been made, consult your nearest service dealer.

Symptom	Cause	Solution
No power.	The car ignition switch is not on.	If the power supply is properly connected to the car accessory circuits, but the engine is not moving, switch the ignition key to "ACC".
	The fuse is blown.	Replace with a new fuse of equal rating
Disc cannot be loaded or ejected.	A CD is in the player.	Remove the disc in the player, then put a new one.
	Disc is inserted upside down	Insert the CD with the label facing up.
	CD is very dirty or defective.	Clean the disc or try to play a new one.
	Temperature inside the car is too high.	Allow the ambient temperature to cool down to a normal level.
	Condensation is present in the CD player.	Leave the player off for an hour or so, then try again.
No sound.	Volume control is set to the minimum level.	Adjust volume to a desired level.
	Wiring is not properly connected.	Check wiring connection.
Sound skips.	The installation angle is more than 30 degrees.	Make sure the head unit is installed at an angle of less than 30 degrees from horizontal.
	The disc is extremely dirty or defective disc.	Clean the compact disc, then try to play a new one.
The operation keys do not work.	The built-in microcomputer is not operating properly due to noise.	Press the RESET button and try again.
	Front panel is not attached or seated properly.	Remove and reinsert the front panel according to the instructions in this manual and try again.
The radio does not work. The radio station automatic selection does not work.	The antenna cable is not connected.	Insert the antenna cable firmly.
	The signals are too weak.	Select a station manually.

## SPECIFICATIONS

### CD PLAYER

Signal to Noise Ratio	: More than 60 dB
Channel Separation	: More than 60 dB
Frequency Response	: 20 Hz- 20KHz

### RADIO

Frequency Coverage	: 87.5 to 107.9 MHz
IF	: 10.7 MHz
Sensitivity (S/N = 30dB)	: 3 $\mu$ V
Stereo Separation	: >30 dB

### FM

Frequency Coverage	: 530 to 1710KHz
IF	: 450KHz
Sensitivity (S/N=20dB)	: 32dBu

### AM

### GENERAL

Tone Controls	
- Bass (at 100 Hz)	: $\pm$ 10 dB
- Treble (at 10 KHz)	: $\pm$ 10 dB
Maximum Output Power	: 50 Watts x 4
Power Supply Requirements	: DC 12 Volts, Negative Ground
Current Consumption	: 7 Amperes (max.)
Dimensions	: 178 (W) x 180 (D) x 50 (H) mm 7"x 6.1"x 1.9"
Weight	: 2 kg 4.4 lb