Roland



SOUND SPACE PROCESSOR

255 - 10

RSS-STAGE Owner's Manual For Macintosh



RSS-STAGE For Macintosh

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FILES CONTAINED IN THE SYSTEM DISK

The system disk contains the following files:

RSS-Stage



This application was designed to be used in the Stationary Mode. It allows you to localize up to sixteen sound sources (a total of 32 channels) in three-dimensional space.

RSS-FX



This application was designed to be used in the Flying Mode. It allows you to localize up to four sound sources (a total of 4 channels) within three-dimensional space, and move them in real time.

MIDI Manager

Apple MIDI Driver

PatchBay

This is used to make settings for, or to check the MIDI port.

PatchBay Help

This explains how to use PatchBay.

TeachText

This application is provided so you can read the "Read Me First" file.

* The "Read Me first" file contains information that could not be included in the owner's manual. Before installation, open the file by double-clicking it, and read through it.

SYSTEM REQUIREMENTS

To use RSS-Stage or RSS-FX, the following hardware configuration is required:

HARDWARE

Macintosh with a 68020 or faster CPU (68030 recommended)

Recommended available application memory: 4M byte or more

MIDI Interface for the serial port

SOFTWARE

System Software: System 7 or higher

MIDI Manager 2.0.1 (Included on the system disk)

If using a Macintosh IIfx or Quadra 900/950, install "Serial Switch" (a Control Panel file) to ensure that the serial ports are compatible. If the "Serial Switch" is not installed, MIDI software may crash. Put "Serial Switch" into the "Control Panels" folder. After you have set "Serial Switch" to "Compatible," restart the computer.

INSTALLATION

* If you are uncertain about basic operations with the Macintosh, please read the owner's manual that came with your Macintosh.

Before Installation

Make a backup disk of the Control Software disk. The backup disk should be used for installing onto your hard disk. Be sure to preserve the original disk in a safe place.

Installation Procedure

- 1. Copy the "RSS-10" folder.
- 2. Open the RSS-10 folder and drag MIDI Manager to the "System Folder."

 A dialog box asking you to confirm you want to copy the file will appear. Click "OK," and "MIDI Manager" will be copied to the "Extensions" folder.
- **3.** Install the "Apple MIDI Driver," "PatchBay" and "PatchBay Help" files by dragging them to the System Folder as well.
- **4.** Restart the Macintosh.

 If MIDI Manager has been correctly installed, the MIDI Manager icon will appear on the screen during startup.

SETUP

Launch PatchBay (in the System Folder), and make the settings for the MIDI Port. Select either the "Printer Port" or the "Modem Port."

^{*} If you are going to use the Printer Port as the MIDI Port, be sure to set AppleTalk to "Inactive" in the Chooser.

USING THE APPLICATION

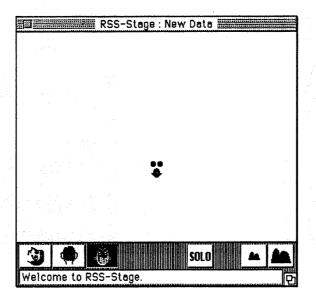
The Macintosh version Control Software includes the RSS-Stage and RSS-FX applications, which you can select depending on your purpose. This document explains how to use RSS-Stage. For detailed instructions on the use of RSS-FX, read the owner's manual for RSS-FX (Macintosh version Control Software).

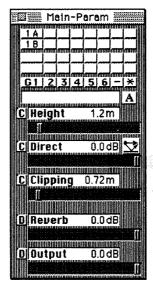
STARTING THE APPLICATION

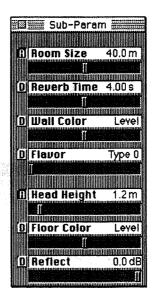


To start RSS-Stage, double-click the RSS-Stage icon. When you use RSS-Stage for the first time, select [New] (Command+N) from the File Menu. Then, the following three Windows will open.

If you already have an RSS-Stage file, RSS-Stage will start and the windows will open simply by double-clicking the file.



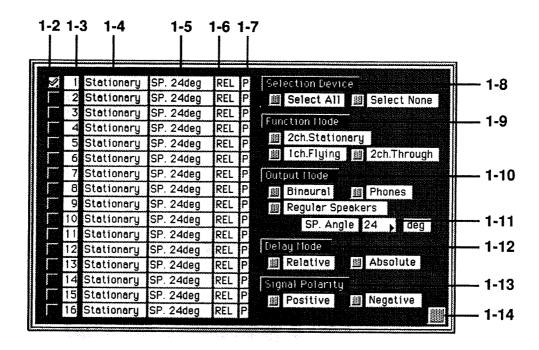




1. SETTING THE ENVIRONMENT

Select [Configuration] from the File Menu, and the following Configuration Window will open, allowing you to set the system configuration of the RSS System. Open this window to make new layouts or change the system configuration.

1-1 Configuration Window



1-2 Check Boxes

This system can work with only the devices that have this selection box checked. Check the boxes for all RSS-10s you wish to control.

1-3 Device ID

A Device ID is a number that distinguishes one RSS-10 from others. Set the Device ID with the check mark to each RSS-10.

- * You cannot change the Device ID.
- * For details or how to set the Device ID on the RSS-10, read the RSS-10 owner's manual.

1-4 Function Mode



Set the Function Mode for each device. The window shows the Function Mode currently selected. To change the Function Mode, click the Function Mode of the relevant device. The Menu will appear, allowing you to choose one of the three modes.

2ch. Stationary: One RSS-10 uses fixed 3D sound localization of 2 channels.

1ch. Flying: One RSS-10 can move the 3D sound localization of 1 channel in real-time.

2ch. Through: Passed through without being processed by the Binaural Filter.

* For a detailed explanation about the Function Modes, refer to the RSS-10 owner's manual.

1-5 Output Mode



The Output Mode for each device can be set here. The display shows the Output Mode currently selected.

To change the Output Mode, click the Output Mode of the relevant device. The Menu will appear, allowing you to choose one of the three modes.

Speakers: This mode allows you to change to the sound that is suitable for playing through speakers.

Phones: This mode allows you to change to the sound that is suitable for playing through headphones.

Binaural: This mode outputs the Binaural signal produced in the Function Mode (1-4) without processing.

* For details on the Output Mode, refer to the Owner's Manual for the RSS-10.

1-6 Delay Mode



Sets the Delay Mode for each device. The current Delay Mode is shown here.

To change the settings, click the Delay Mode of the relevant device. The Menu appears, allowing you to select one of the two modes.

Relative: The Doppler effect cannot be created even by moving the sound source. Delay effect will not be applied to the direct sound.

Absolute: The Doppler effect is created when the sound source is moved. Delay effect will be applied depending on the distance to the sound source.

* For a detailed explanation about the Delay Modes, refer to the RSS-10 owner's manual.

1-7 Polarity



You can set the polarity for each device. What is shown here is the polarity currently set. To change the polarities, click this, then select P or N from the Menu.

P: The signal will be output in the same polarity as input.

N: The signal will be output in the polarity different from the input.

1-8 Selection Device

Selection All: Click this to select all the devices at the same time.

Selection None: Click this to cancel all the devices at the same time.

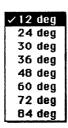
1-9 Function Mode

This allows you to change the Function Mode of all the checked devices.

1-10 Output Mode

This allows you to change the Output Mode of all the checked devices.

1-11 S.P Angle (Speaker Angle)



This allows you to set the angle from the listener's position to the center position and the speakers. The value shown is the Speaker Angle currently selected. If you wish to select a different value, click the value currently selected, then select the value you want from the Menu.

* When the speaker angle is changed, all checked devices will have their output mode switched to the Speaker mode.

1-12 Delay Mode

This allows you to change the Delay Mode of all the checked devices.

1-13 Signal Polarity

This allows you to change the Polarity of all the checked devices.

1-14 Exit

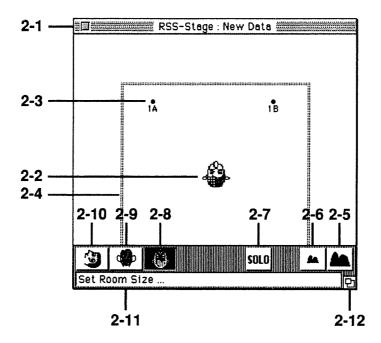
Click this button to close the Configuration Window.

* Each time you change the settings on each device, the new data will be written.

MEMO

2. LOCALIZATION IN 3D SPACE

This allows you to localize the sound source on each channel on the three-dimensional sound field. Use the three different positions for the actual localization.



2-1 Position Window

The Position Window can be used to check the current sound location or change it. The head shape shown slightly below the center is the Head Position. The sound can be observed from three directions (up, back, left). When it is observed from the back or left, the floor surface can also be seen.

2-2 Head Position

The Head Position shows the position of the head, and also the direction from which the sound is observed. That is, if it is the shape of the head viewed from the top, the sound location is observed from the top. If it is the shape of the head viewed from the back, the sound location is observed from the back. If it is the shape of the head viewed from the left, the sound is observed from the left. The RSS System simulates the sound audible at the Head Position in the three-dimensional space.

2-3 Sound Position

These dots show the positions of each sound source. Click the Sound Position using the mouse, and "handles" will appear around the Sound Position, showing that sound source is selected. If you click the Sound Position while holding the [SHIFT] key down, several Sound Positions can be simultaneously selected. By enclosing those Sound Positions by dragging the mouse, you can simultaneously select that many Sound Positions.

By dragging the Sound Position using the mouse, you can move the sound source. If you press the [SHIFT] key while you are moving the sound source, the sound source will move on straight lines or 45 degree angles.

You can put the number or name of the sound source at each Sound Position. For details on how to set the Name (Label), see (3-4).

2-4 Room Size

This square frame shows the room size that could be expected according to the reverberation to be added. The lines should not be taken as the exact location of walls, however. The Room Size can be selected with Room Size (4-2).

2-5 Zoom In

Click this to enlarge a certain part in the display.

2-6 Zoom Out

Click this button to reduce the middle part of the display.

2-7 Solo

Clicking this button highlights the button, and switches you to the Solo Mode. In the Solo Mode, you can play only the sound of the selected Sound Position. To leave this mode, click the button again.

2-8 Top View

Click the Top View button and highlight it to watch the Position Window from the upper direction. If you move the point in this mode, the right, left, front and back positions of the sound can be simultaneously set.

2-9 Back View

Click the Back View button and highlight it to watch the Position Window from the rear. The horizontal line shown in the display represents the floor surface. If you move the point in this mode, the height, right, and left positions of the sound can be simultaneously set.

2-10 Left View

Click the Left View button and highlight it to watch the Position Window from the left. The vertical line shown in the display represents the floor surface. If you move the point in this mode, the height, front, and back positions of the sound can be simultaneously set.

2-11 Status Window

The Status Window shows the messages that describe the current status.

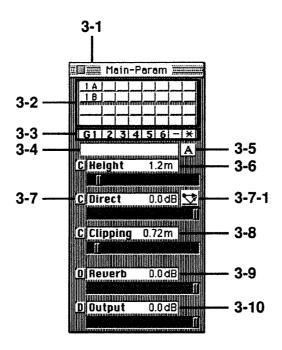
2-12 Window Size

To change the size of the Position Window (2-1), drag the Window Size button and adjust it.

3. SOUND SELECTION AND PARAMETER SETTINGS

You can set the following parameters of the sound source localized in the Position Window (2-1).

3-1 Main-Parameter



This window shows the Main Parameters. It allows you to select the sound source, and set the values of the main parameters. To change the values, drag the slider and keep moving it until the desired value appears. "C" or "D" is shown at the left of the parameter name. "C (Channel)" indicates that the parameter can be set for each channel and "D (Device)" means that it can be set for each device.

3-2 Channel Select Buttons

These buttons are for selecting a channel applied to each sound source. The button of the selected channel is highlighted. Click it to select, and click it again to cancel. When you click the Sound Position in the Position Window (2-1), the corresponding select button here will be highlighted. The number of channels shown here is set at the Check (1-1) in the Configuration.

3-3 Group Select Buttons

These buttons are used for selecting the settings of a Group. You can register the Group as a combination of some channels, then call it later. Click "-" to set all the channels as unselected, and "*" to select all the channels.

<How to Call a Group>

Click the button that corresponds to the Group in "G1-G6." The relevant Group is called, and the settings written in that Group will be displayed in the Position Window (2-1) and Channel Select Button (3-2).

<How to Register a Group>

Select the channels to be written in the Group using the Position Window (2-1) or Channel Select Buttons (3-2). Then, hold down the button that corresponds to the Group you wish to register for about five seconds. The settings of the channels currently selected will be written in the Group.

* You can register the same channels into more than one Group.

3-4 Object Label

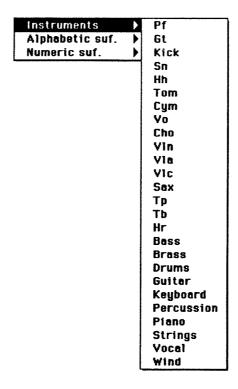
This shows the Name that distinguishes one channel from another. After clicking this area, you can change the name by entering a name from the keyboard.

3-5 Easy Name

Click this area, and the menu appears. Simply select a name from those available to name the channel.

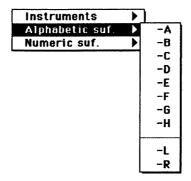
3-5-1 Instruments (Musical Instrument)

The menu provides a list of Musical Instrument names.



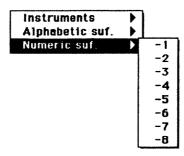
3-5-2 Alphabetic Suffix

Provides a list of letter suffixes.



3-5-3 Numeric Suffix

Provides a list of numeric suffixes.



3-6 Height (Height of the Sound Source)

This area shows the height of the sound. You can change the height by dragging the slider below. The height can also be changed by moving the point in the Position Window (2-1).

3-7 Direct

This area shows the volume of the sound that arrives directly from the sound source (including the first reflection from the floor). Normally, set it to 0.0 dB, but change it depending on your taste. You can change the volume of the channel currently selected, by dragging the slider below.

3-7-1 Mute Button

Clicking this button will highlight the indication and mute the selected channel, cutting the direct sound, including the first reflection from the floor. This can, therefore, be effectively used for expressing the situation that the sound source is hidden behind something or checking only the reverb sound.

3-8 Clipping Area

This shows the radius of the Clipping Area. To change the value, drag the slider below.

< What is the Clipping Area?>

As a sound source is moved closer to your ears, it theoretically should keep on increasing in volume. In reality, though, this is impossible. So, it is set so the volume will not increase after reaching a certain distance. The value shown here is that distance. Normally, you should set all the channels to the closest distance of all the channels. It is only the output level that is affected by altering the value of the Clipping Area.

<How to use the Clipping Area>

When the sound is placed in the distance, the volume of the sound will be low. If, however, it is placed too far away, the S/N ratio will be lowered at a later mixing. If this happens, you may have to widen the Clipping Area to suppress the volume reduction. For example, when the sound source is placed at the position 3 meters away from your ears, and the Clipping Area is set to 0.24 meters, the volume of the sound will be 1/10. To increase the volume, widen the Clipping Area. When several sounds are placed at different positions, adjust the Clipping Area, taking into consideration the distance of each sound source.

3-9 Reverb Level

The basic Reverb Level is shown in this area. The rate of the direct and reverb sounds vary depending on the position of the sound source.

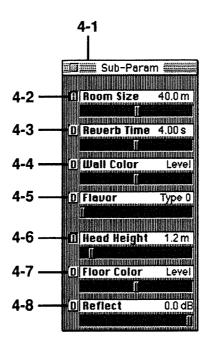
Reverb Level is the parameter that is set for each device (RSS-10) separately, therefore, both channels A and B change at the same time. If you wish to set this independently for each channel, you must change the ratio of the direct and reverb sounds by moving the positions of the sound source. You can change the values in the device that includes the selected channel by dragging the slider below.

3-10 Output Level

This shows the output level of the selected device. Normally, set it to 0.0 dB. To change the value of the device that includes the selected channel, drag the slider below.

4. SETTING THE OTHER PARAMETERS

4-1 Sub-Parameter



This window shows the Sub Parameters. The Sub Parameter window allows you to set the depth of the Reverb and the conditions of the floor. To change values, drag the slider located below and keep moving it until the desired value appears.

"D" or "A" is shown at the left of a parameter name. "D (Device)" means that the value can be changed for each device, while "A (All)" means that the value can be changed for all the devices.

4-2 Room Size

This area shows the Room Size value. Room Size represents the space where the sound will reverberate. Adjust it as you actually listen to the sound, by dragging the slider below. The values for all devices will be changed no matter what value may be selected.

* The Room Size appears in the display only when the check mark is shown next to the Room Size (7-3) in the Display Menu.

<NOTE>

The variable range of the Reverb Time will be restricted depending on the Room Size. If the Reverb Time exceeds the range by changing the Room Size, the Reverb Time will be automatically changed. The Room Size is the parameter that is common for all the devices, therefore, the Reverb Time of all the devices will be changed within the range. For example, if the Room Size is 100 meters, the Reverb Time will be restricted to more than 1.0 second, and if the Room Size is 1 meter, the Reverb Time will be restricted to less than 4.0 seconds.

4-3 Reverb Time

This area shows the Reverb Time. Reverb Time is the time from when a sound starts reverberating until it stops. Adjust the time as you actually listen to the sound. Drag the slider below and change the value of the device that includes the channel currently selected.

<NOTE>

The variable range of the Reverb Time will be restricted depending on the Room Size. If the Reverb Time exceeds the range, the Room Size will be automatically changed.

The Room Size is the parameter that is common for all the devices, therefore, the Reverb Time of all the devices will be changed within the range.

4-4 Wall Color

This controls the Wall Color. Wall Color simulates the tone change of the reverb sound reflecting from the walls. Adjust it as you actually listen to the sound. Drag the slider below and change the value of the device that includes the channel currently selected.

4-5 Flavor Type

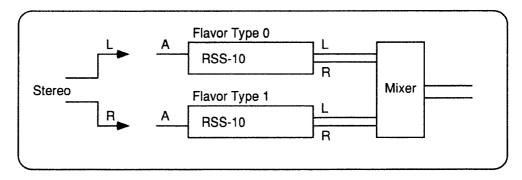
This area shows the Flavor Type. Drag the slider below to change the value of the device that includes the channel currently selected.

<What is Flavor Type>

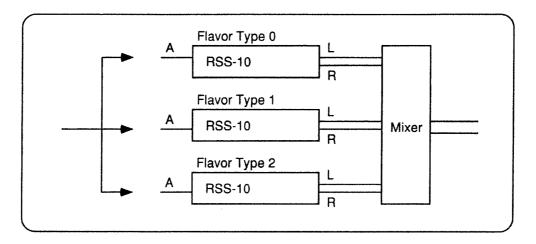
Flavor Type is the parameter that is related with the tone of reverb sound. If you input several sounds created from the same source into several RSS-10s and mix them, reverb sounds will interfere with each other, which can produce an odd orientation. Should this occur, try setting the Flavor Type of each RSS-10 to a different setting. The Flavor Type alters the tone only subtly, and therefore will have no effect in any condition other than the above.

<How to use the Flavor Type>

When you wish to add spaciousness to performances recorded in stereo using the RSS-10, connect two RSS-10s to the right and left to separately mix the sounds. Set the Reverb to the same setting for the right and left, but set the Flavor Type to different settings. If the Flavor Type is set to the same value, the reverb sound will be located at the center of the speakers, and the produced sound will not be as spacious as you expect.



If you wish to increase the density of the reverb sound, connect several RSS-10s as shown below. Set the Reverb to the same value, but set the Flavor Type to different values. If the Flavor Type is set to the same value, no effect will be created (the density of the reverb sound will not be increased).



4-6 Head Height

This indicates the height of your head from the floor. By changing the height of the head position, the direction of the reflection from the floor will change. By simulating the reflection sound from the floor, the presence of the sound will be expressed even more clearly. Drag the slider below to change the settings of all the devices no matter what values may be selected.

4-7 Floor Color

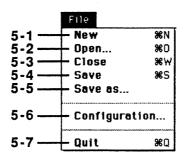
This area shows the Floor Color. The sound reflected from the floor will have a different tonal color depending on the type of floor. That is, by simulating the tonal changes in the sound that reflects from the floor, the impression of the sound will change. Drag the slider below, and you can change the values for the device that includes the selected channel.

4-8 Reflect

This area shows the degree to which sound reflects from the floor. If it is set to 0.0 dB, the sound will completely reflect from the floor. Drag the slider below, and you can change the values for the device that includes the selected channel.

5. FILE MENU

The File Menu contains the commands related to the opening of files or basic settings.



5-1 New

Selecting this will open a new file to use one RSS-10. Use "Configuration" (1-1) if you want to change the number of RSS-10s being used, or make mode settings.

5-2 Open

Selecting [Open] will open the window that can open the file. Select the file you want.

* You cannot open more than one file at the same time.

5-3 Close

To close the file, select [Close]. If the latest data has not been saved yet, the window will open.

5-4 Save

To save the settings of the file currently open, select [Save]. This cannot be selected if the file has already been updated. If you have opened a new file but not yet saved it, selecting [Save] will open the same window as [Save as] (5-5). Select the folder and enter the file name.

5-5 Save as

Selecting [Save as] will give you the file saving dialog. Select a folder or change the file name, then save it.

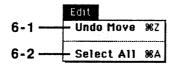
5-6 Configuration

Selecting [Configuration] will open the Configuration Window (1-1), which allows you to set the environment. For details, refer to Configuration (1-1).

5-7 Quit

This exits the application. If you have changed the contents, a dialog box will appear, asking you if you wish to save the new data. Click the relevant button.

6. EDIT MENU



6-1 Undo Move

Selecting [Undo Move] will cancel the latest movement made on the sound, and return it to the position it was in before being moved.

* [Undo Move] can only be carried out when the sound has been previously moved.

Redo Mode

Selecting [Redo Move] will cancel an "Undo Move," and locate the sound to the position where it had been moved previously.

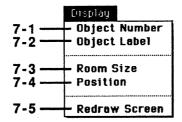
* [Redo Move] can only be carried out after an [Undo Move] has been done.

6-2 Select All

This command selects all the channels at the same time.

7. DISPLAY MENU

This is the menu related with Display.



7-1 Object Number

When you select [Object Number] and it is checked, Channel Number (1A, 1B, 2A ...) is shown below each Sound Position (2-3). Each number represents the Device ID and A and B represent channels. If you reselect [Object Number] or select [Object Label], the Object Number will disappear.

7-2 Object Label

When you select [Object Label] and it is checked, a part of the Object Label (3-4) is shown below each Sound Position (2-3). If you reselect [Object Label] or select [Object Number], the Object Label will disappear.

* The Object Number and Object Label cannot be displayed at the same time.

7-3 Room Size

When you select [Room Size] and it is checked, the square frame will appear in the Position Window (2-1) depending on the Room Size (4-2).

* The square frame of the Room Size does not mean the actual wall, but indicates only the relative extent of the room.

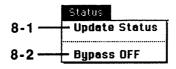
7-4 Position

If you select [Position] and it is checked, the place of the clicked Sound Position (2-3) will be shown in the Status Window (2-11). If you reselect [Position], the Position will disappear.

7-5 Redraw Screen

If you select [Redraw Screen], the Position Window (2-1) will be drawn again.

8. STATUS MENU



8-1 Update Status

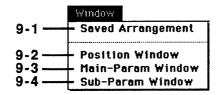
If you select [Update Status], the data currently set will be sent to all the devices. This mode can be used when the data shown in the screen differs from the RSS-10s, because the RSS-10s happen to be disconnected, etc.

8-2 Bypass OFF

Use this to turn off the Bypass you have turned on with the Bypass Button on the RSS-10.

9. WINDOW MENU

RSS-Stage's Window Menu provides a Position Window (2-1), Main Parameter Window (3-1) and Sub Parameter Window (4-1), which can be spontaneously opened or closed. The following explains how to open each window, and show windows that have been covered by other windows.



9-1 Saved Arrangement

Use this command to retrieve the same positioning and size for the windows as those in effect when you previously saved the file.

9-2 Position Window

To open the Position Window, select [Position Window]. If it has already been open, it will be located at the top of the screen.

9-3 Main-Parameter Window

To open the Main Parameter Window, select [Main-Parameter Window]. If the Main Parameter Window is already open, selecting this will locate the Main Parameter Window to the top position in the screen.

9-4 Sub-Parameter Window

To open the Sub Parameter Window, select [Sub- Parameter Window]. If the Sub Parameter Window is already open, selecting this will locate the Sub Parameter Window to the top position in the screen.

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