Read This First!
Symphonic Instrument Version 1.1.2 Update Notes

This booklet provides important installation instructions and late-breaking information about version 1.1.2 features in the MOTU Symphonic Instrument that are not documented in the *MOTU Symphonic Instrument User Guide*.

INSTALL THE MSI.DAT FILE FROM THE SOUNDBANK DVD FIRST

The MOTU Symphonic Instrument ships with two discs: the *Soundbank DVD* and the plug-in *Installer CD*. For a smooth installation, follow these simple steps, in the order given below:

1 Insert the *Soundbank DVD* and drag the *MSI.dat* file anywhere to your hard drive. IMPORTANT: Do not rename it; leave the name unchanged.

2 After the copy is complete, eject the DVD.

3 Insert the MOTU Symphonic Instrument *Installer CD*.

4 Double-click the *Install MSI* icon.

5 Follow the directions the installer gives you.

6 Connect your MOTU Symphonic Instrument USB iLok SmartKey to any available USB port.

Figure 1: Additional features in the MOTU Symphonic Instrument.

PART LIST TABS

The MOTU Symphonic Instrument is *multitimbral*; this means that one instance of the plug-in can load different instruments (presets) simultaneously, and each instrument can play its own individual part via a separate MIDI channel.

Initially, version 1.0 provided 16 parts. Now, version 1.1.2 provides 64 parts, which can be accessed by clicking the part list tabs shown below:

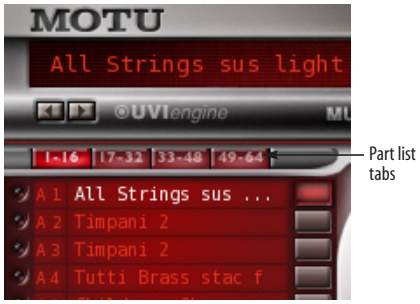


Figure 2: Part list tabs.

Each tab displays one bank of 16 parts in the part list (parts 1-16, 17-32, etc.) To access a part, simply click the tab that displays it. From there, you can assign a MIDI channel and choose the instrument (preset) for the part in the usual fashion, as described in the MOTU Symphonic Instrument manual, although you may also want to refer to the next section regarding MIDI channels.

FOUR BANKS OF MIDI CHANNELS

To support its 64 parts, the MOTU Symphonic Instrument also supports 64 separate MIDI channels, divided into four banks of 16 channels each: Bank A, B, C and D. MIDI channels in Bank A are designated as A1, A2, A3, A4, etc. up to A16. Similarly, channels in Bank B are designated as B1, B1, B2, B3, etc. and so on for banks C and D as well. When you choose MIDI channels for the MOTU Symphonic Instrument in your host software or in the part list (as shown in Figure 1 on page 1), you will always see them presented in this fashion (bank letter plus MIDI channel number). You can use any MIDI channel you wish for any of the Symphonic Instrument's 64 parts. Parts (as many as you wish) can also share any MIDI channel.

☛ This feature is supported by the stand-alone, MAS and RTAS/HTDM versions of the Symphonic Instrument. The VST, Audio Unit (AU) and DXi standards do not support multiple banks of MIDI channels. If you are using Symphonic Instrument in one of these plug-in formats, and you need more than 16 parts, open a second instance of the plug-in.

EXPERT MODE

Click the *Expert Mode* (Figure 1) button to access the Expert Mode settings, which can then be further accessed via three buttons at the top of the Expert Mode pane: *Keyswitch* (Figure 3), *Streaming* (Figure 4) and *Outputs* (Figure 5).

KEYSWITCHING

The Keyswitch settings (Figure 3) allows you to load multiple presets into two or more parts and then dynamically play and mute them from your MIDI controller using key switching, note range, velocity range or any combination of the three. This powerful feature gives you a great deal of real-time control over the instruments you are playing from your controller.

Setting up parts for keyswitching

Load the instruments you would like to include for use. Then assign them all to the transmit MIDI channel you will use to control them from your MIDI controller. They should all share this same transmit channel. For example, in Figure 3 all parts are assigned to MIDI channel 1, which is the transmit channel for the MIDI controller being used. Then click the Expert Mode button to program the Keyswitch settings for each part.

The Keyswitch settings

The Keyswitch settings are displayed in 16 rows, one for each part. For example, in Figure 3 the fourth row corresponds to Part 4, which is currently loaded with the *Celli sus* preset. Make the *Key*

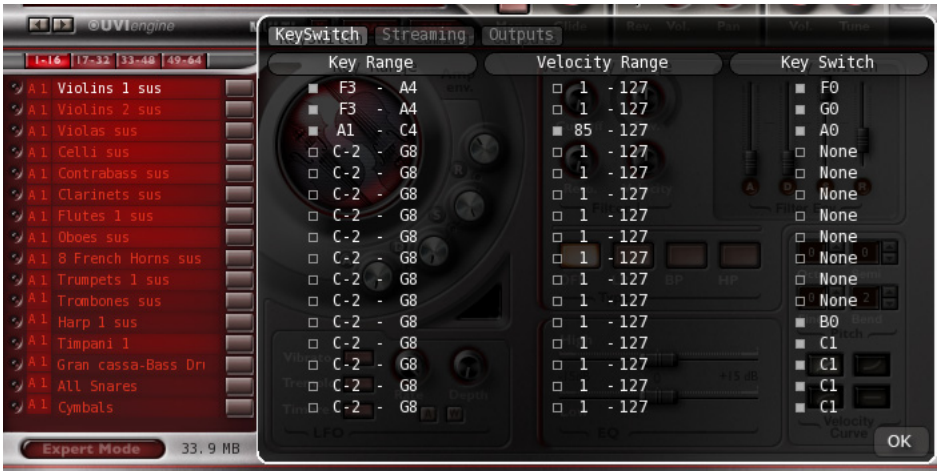


Figure 3: Expert Mode key switching.

Range, *Velocity Range* and/or *Key Switch* setting as desired for each part. You can use any combination of the three settings for each part.

To enable a setting, click the check box next to it, so that the check box is filled in. An empty box means that the setting is disabled (not used).

To change a note-on velocity number or pitch with the mouse, drag up or down. To change it from your MIDI controller, double-click it to make it turn red, and then play your MIDI controller to enter the desired velocity value or note pitch.

Key Range

The *Key Range* determines the note range over which the instrument will play.

Velocity Range

The *Velocity Range* determines the MIDI note-on velocity range that will trigger the instrument.

Key Switch

The Key Switch determines the MIDI note that can be played to toggle the instrument on and off. Note that multiple instruments can have key switches, allowing you turn them on and off either independently or in groups for instant stacks.

STREAMING

Disk streaming (Figure 4) allows you to load very large presets (that consist of a large amount of audio sample data) into the Symphonic Instrument, even if the samples are larger than the amount of free memory (RAM) available in your computer. Rather than loading the entire sample set into RAM, the Symphonic Instrument reads (streams) the sample from the hard drive as the preset is being played. This allows the Symphonic Instrument to play combinations of presets that add up to a gigabyte (GB) of sample data or more.

Memory requirements and recommendations

Disk streaming is not a "cure all" for running the Symphonic Instrument on a computer that has lower amounts of memory installed. The minimum RAM required to run the Symphonic Instrument is still 256MB, and it is still strongly recommended that you install at least 512MB. Optimum performance will be achieved with 1GB of RAM or more. The streaming feature allows you to play much larger samples, but it doesn't necessarily squeeze more samples into less RAM.

Disk performance

The disk streaming performance can be heavily affected by the speed of the hard drive on which the msi.dat file resides. For streaming, the faster the hard drive is, the better. You should use at least a 7200RPM drive.

If you are using the Symphonic Instrument in a host application such as Digital Performer, Pro Tools or Logic, and you are also recording and playing disk tracks in the host software, you should strongly consider placing the msi.dat file on its own, separate hard drive. If your host software is recording and playing audio files while the Symphonic Instrument is attempting to stream samples from the same hard drive, the hard drive can quickly be pushed beyond its performance limits. If the disk tracks are playing from one hard drive, and the Symphonic Instrument is streaming from another separate drive, you are much less likely to encounter disk performance issues.

Enabling streaming

Disk streaming can be enabled in the Symphonic Instrument on a part by part basis. For example, you could turn on streaming for Parts 1-16, but leave it turned off for parts 17 through 32. Streaming can be enabled on as many parts as you like, up to all 64 parts.

To enable streaming for a part in the Expert mode *Streaming* settings (Figure 4 on page 3), click the check box to the right of the part.

Figure 4: Streaming.

Streaming settings

There are two streaming preferences that allow you to optimize steaming performance for your computer.

Preload Time

The *Preload Time* (Figure 4 on page 3) is the amount of each sample preloaded into RAM when the preset is first loaded.

Lower values require less RAM overall, but increase the load on the host computer processor and the hard drive. Don't use very small values because this causes many small samples to be streamed unnecessarily. The result is unnecessary strain on your computer.

If you would like to place a limit on the minimum size of the samples to be streamed, use this setting. Samples that are smaller than the *Sample preload size* will not be streamed.

In situations where a preset consists of a large number of very large samples, and you have lots of extra RAM installed in your computer, a higher sample preload size can actually allow you to play more parts because the processor and hard drive strain will be lower.

Ring Buffer Size

The *Ring Buffer Size* (Figure 4 on page 3) is the number of samples reserved for each voice after streaming has begun and the sample is being played. Lower values can sometimes help eliminate dropouts and similar artifacts, but lower values also increase the load on the host computer processor and the hard drive. Higher values reduce processor strain, but require more memory.

OUTPUTS

The *Output* settings (Figure 5) let you assign each part to one of 17 possible stereo output pairs (main outs plus 16 stereo aux outputs). Each output pair can be assigned to (or routed by your host audio software to) a pair of physical outputs on your audio hardware. This provides you with a great deal of flexibility in sub-mixing the Symphonic Instrument's 64 parts. For example, in Figure 5 the strings and harp (parts 1-5, plus part 12) are being sub-mixed to the main outs; the woodwinds (parts 6-8) are being submixed to MSi output 2; the brass (parts 9-11) are being sub-mixed to MSi output 6 and the percussion (parts 13-16) are being sub-mixed to MSi output 10.

The list of stereo pairs that you see in each *Outputs* menu depends on the situation in which you are running the Symphonic Instrument.

Multiple outputs and stand-alone operation

If you are running the Symphonic Instrument as a stand-alone application, the output menu displays a main out pair, plus 16 additional separate output pairs, numbered 2 through 17. To learn how to map these output pairs to the physical outputs on your audio hardware, see "Stand-alone operation" on page 4 and "Outputs" on page 4.

Multiple outputs and plug-in operation

If you are running the Symphonic Instrument as a plug-in, the output menu displays whatever outputs are made available to the plug-in by your host software. For example, in Digital Performer, you will see pairs of busses, as supplied by Digital Performer's current studio configuration (Setup menu). Your host software allows you to map the busses to the physical outputs on your audio hardware.

STAND-ALONE OPERATION

The MOTU Symphonic Instrument can now run as a stand-alone instrument application, independent of a plug-in host, turning your Mac or PC into a streamlined orchestra instrument powerhouse with 64 parts, disk streaming, 16 independent audio outputs and 8GB of orchestra sounds. Stand-alone operation also allows you to use the Symphonic Instrument with Make Music Finale 2006 and other music software applications that do not host 3rd-party instrument plug-ins.

Figure 5: Outputs.

Running the stand-alone version

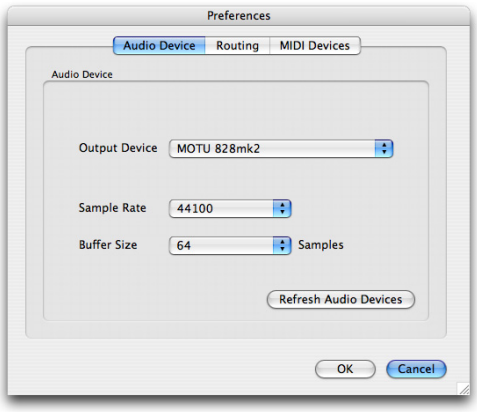
The stand-alone version of the Symphonic Instrument can be found in your Applications folder. Just double-click it to launch it. On Windows, it can also be found under the Start menu> Programs> MOTU.

Stand-alone operation is identical to plug-in operation as described in the Symphonic Instrument manual (and these update notes), with the exception of the additional stand-alone settings described in the following sections.

Preferences

The stand-alone version of the Symphonic Instrument has a few basic settings that can be found in the File menu> Preferences:

Preferences (Mac OS X)



Preferences (Windows XP)

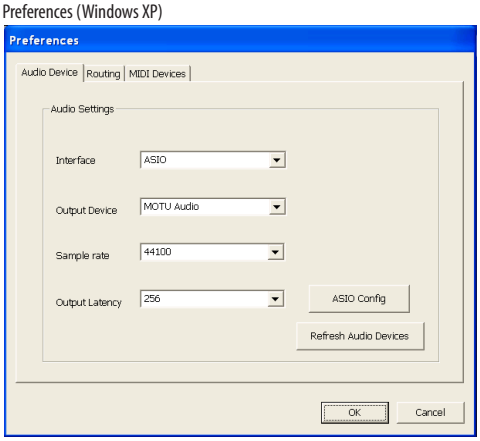


Figure 6: The stand-alone version preferences.

Audio device tab

The *Audio Device* tab preferences (Figure 6) let you make several audio hardware device settings.

Interface (Windows only)

Choose the desired Windows audio driver for the audio interface you are using for the Symphonic Instrument. If your audio device provides both MME and ASIO driver support, you are free to choose either driver for the MOTU Symphonic Instrument, as there will be little, if any, difference in regards to either operation or performance.

Output device

Choose the desired audio hardware from the *Output Device* menu (Figure 6). If you do not see the desired hardware device in the menu, be sure that you have correctly installed its driver and that it is otherwise functioning properly, independently of the Symphonic Instrument. For example, can you access the hardware from the system software (Mac OS X or Windows XP) and other audio applications?

Sample Rate

Choose the desired Sample Rate (Figure 6) for playback. The choices in this menu are provided by your audio hardware driver, and the setting you choose here is the sample rate your hardware will be set to. 44.1 kHz is the standard rate for audio compact discs. The Symphonic Instrument samples are all provided in 16-bit resolution at 44.1kHz, but if you choose to operate at a different sample rate, they are sample-rate converted on the fly to match the rate you've chosen.

Buffer size (Mac)
Output Latency (Windows)

This setting is crucial for managing your computer's processing resources. In general, settings of 256, 128 or 64 samples produce better latency performance. But lower settings place higher demand on your computer's processor.

ASIO Config (Windows only)

Click the ASIO config button to open the ASIO driver configuration window. Consult your audio hardware documentation for details about the settings in this window for configuring your hardware's ASIO driver.

Refresh Audio Devices

If you make changes to your audio device configuration (outside of the Symphonic Instrument), click the *Refresh Audio Devices* button (Figure 6) to see those changes reflected in the Symphonic Instrument Audio Devices tab.

Routing tab

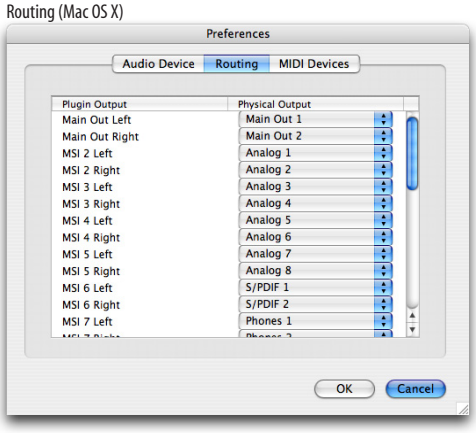
The stand-alone version of Symphonic Instrument provides 17 independent stereo outputs (a main out pair, plus 16 additional separate output pairs numbered 2 through 17) to which you can freely assign each part (instrument), as explained in "Outputs" on page 4.

The *Routings* tab (Figure 7) provides a way for you to map each Symphonic Instrument output to a physical output connector on your audio hardware. For example, you might map the Symphonic Instrument's "Main Out Left/Right" output pair to the headphone output of your MOTU 828mkII audio interface, as demonstrated below in Figure 7.

The connectors you see in the *Physical Output* menus (Figure 7) are provided by your hardware and its software driver. If you do not see the desired hardware device outputs in the menus, be sure that you have correctly installed its driver and that it is otherwise functioning properly, independently of the Symphonic

Instrument. For example, can you access the hardware from the system software (Mac OS X or Windows XP) and other audio applications?

Routing (Mac OS X)



Routing (Windows XP)

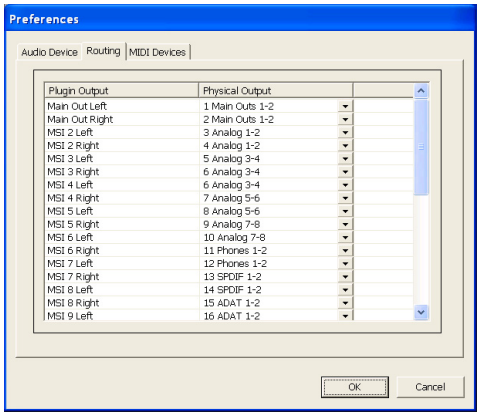
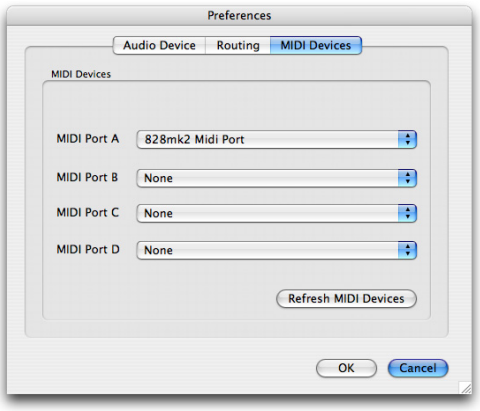


Figure 7: Mapping stand-alone version outputs to the physical connectors on your audio hardware.

MIDI Devices tab

The *MIDI Devices* tab (Figure 8) lets you configure how external MIDI sources are mapped to the Symphonic Instrument's 64 MIDI channels (four banks of 16 channels each).

MIDI Devices (Mac OS X)



MIDI Devices (Windows XP)

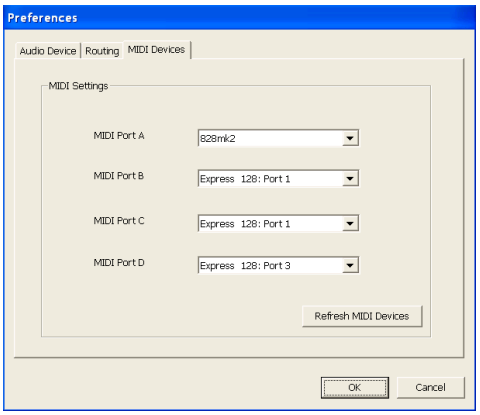


Figure 8: MIDI devices.

As defined by the MIDI specification, MIDI channels are supplied in banks of 16 channels. For example, one MIDI cable carries 16 MIDI channels. On multiport MIDI interfaces, such as the MOTU MIDI Express XT, each MIDI port also carries its own set of 16 MIDI channels.

This means that there is no such thing as MIDI channel 17, 18, 19, etc. So how does the Symphonic Instrument provide 64 MIDI channels? The answer is: by dividing them into four banks of 16 channels each: Bank A, Bank B, Bank C and Bank D. Each bank represents one MIDI cable — or MIDI port on a MIDI interface. The *MIDI Devices* tab (Figure 8) lets you map external MIDI sources to each bank. These sources could be any of the following:

- A MIDI IN port on a MIDI interface that is connected to the computer
- A "virtual" MIDI cable from MIDI software running concurrently with the Symphonic Instrument (such as Digital Performer or Finale)
- A USB MIDI controller (a keyboard controller that is connected directly to the computer via a USB cable)
- An audio interface that also supplies one or more MIDI IN ports (such as the MOTU 828mkII or Traveler)

When any of these devices are "on line" (that is, they are connected to your computer with their drivers properly installed — or in the case of MIDI software programs, they are running simultaneously with the Symphonic Instrument), they will display their available MIDI ports in the four MIDI port menus shown in Figure 8.

You can choose any source you wish for each bank. If you choose the same source for two or more banks, just be aware that you will trigger the same MIDI channel on both banks. For example, if you assign your controller to both Port A and Port B, and it transmits on MIDI channel 1, you will trigger any Symphonic Instrument parts that are assigned to either channel A1 or B1. To make channel A1 and B1 independent from one another, assign them to different sources in the MIDI Devices tab.

Refresh MIDI Devices

If you make changes to your MIDI device configuration (outside of the Symphonic Instrument), click the *Refresh MIDI Devices* button (Figure 8 on page 6) to see those changes reflected in the Symphonic Instrument MIDI Devices tab.

File menu

The File menu for the stand-alone version of the Symphonic Instrument provides *Load* and *Save* commands. These are the same as clicking the Load Multi and Save Multi buttons above the part list in the Symphonic Instrument window.

MIDI MODULATION

The MOTU Symphonic Instrument offers *MIDI Modulation*, an extension of its MIDI automation (MIDI control) capabilities. MIDI Modulation works as a real time control that modulates a parameter's value without changing the preset setting itself. It can either add to or subtract from the parameter's current value, while at the same time preserving the preset's original value for the parameter.

This feature is available for non-voice-specific parameters, such as volume, pan and filter cutoff frequency. Option/alt-right click (or option-control-click with a single-button Mac mouse) to bring up the MIDI Modulation window.

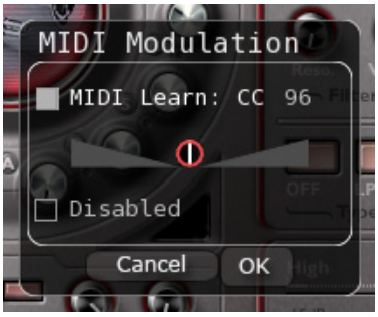


Figure 9: MIDI Modulation.

The MIDI Modulation window (Figure 9) looks very much like the MIDI Control window, except this window also has a slider. For a negative modulation value, drag the slider to the left; for a positive value, drag the slider to the right. Now send the desired controller for your keyboard, and the window is dismissed.

This is useful to provide an extra degree of control and variance over the details of your Symphonic Instrument sounds. For example, try using MIDI Modulation to modify the filter cut-off frequency. You can also use it to create crossfades between different controls. For example, you could assign two parts to respond to the same MIDI channel: modulate volume on one part with

Expression (CC 11) and drag the slider to the right, and modulate volume on the other part with Expression and drag the slider to the left. The result is that you could crossfade between the two parts by moving your expression controller.

DEFAULT MIDI CONTROLLERS

By default, MIDI controller numbers 7, 10 and 11 are assigned to part volume, pan and expression.

CLEAR MULTI

The *Clear Multi* button (Figure 1) quickly clears all of the currently loaded presets (sounds) from the part list. It also clears the current reverb setting and turns off the reverb altogether. This feature is meant to provide you with a convenient way to "start from scratch" with one click.

VIEWING THE CURRENT MULTI NAME

Click the word *Multi* to view the currently loaded multi, if any, in the Preset/Multi Display (Figure 1). Click again to return to the current preset name.

RAM USAGE

The RAM Usage display (Figure 1) shows how much RAM is being used by the currently selected part in the Part List. To view the total memory currently used by all parts (and the Symphonic Instrument altogether), click the word *Multi* next to the Clear Multi button (Figure 1). This helps you keep track of how much memory in your computer is being used for the sounds loaded into the MOTU Symphonic Instrument. It is important to never use more RAM than your computer has available, as this means that the instruments won't be able to play properly.

SOLOING SHORTCUT

You can solo a part by option/alt-clicking on its mute button. To unmute all parts, option- or alt-click again.

SETTING THE FLAT VELOCITY VALUE

The Flat velocity curve can be set to any value from 1-127. All notes played by the part will then be played at the note-on velocity that you specify. To edit this value, double-click the Flat velocity button. You can then type in a velocity from your computer keyboard, or you can play a note on your MIDI controller. Click anywhere outside of this text box, or press Enter, to confirm the value.

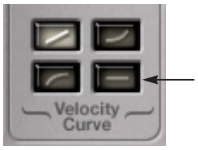


Figure 10: The flat velocity curve.