



PLAY

The EastWest PLAY 4 System

Users' Manual



THE EASTWEST PLAY 4 SYSTEM

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PLAY

1. Welcome

- 2 How to Use This and the Other Manuals
- 4 Online Documentation and Other Resources

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Welcome

Whether this is your first experience with the PLAY Advanced Sample System, or an upgrade to the new software of Version 4, we recommend that you take the time to read both this manual and the documentation that describes your PLAY 4 library or libraries. There's a lot of information here that can help you get the most from your purchase, and to get you up to speed on the many features of the product.

How to Use This and the Other Manuals

All documentation for the EastWest PLAY Advanced Sample System and its libraries is provided as a collection of Adobe Acrobat files, also called PDFs. They can be viewed on the computer screen or printed to paper.

One advantage of reading this material on a computer screen is the availability of hyperlinks within the document. These links provide the ability to jump directly to a referenced page elsewhere in the same or a companion document with the click of the mouse. When the mouse cursor moves over such a link, it changes appearance. Such hyperlinks are available in the list of sections in each chapter title page, as well as for certain individual words and phrases within the chapters.

By opening the Bookmarks pane along the left edge of the Adobe Acrobat Reader, the user can jump directly to a topic from the section names, or to a specific page by clicking on one of the page thumbnails (small images of each page). Note that some older versions of Acrobat Reader might not support all these features. The latest Acrobat Reader can be downloaded and installed at no cost from the Adobe web site. (As an example of a hyperlink, click on the last words of the previous sentence to be taken directly to the Adobe site.)

When reading this and other manuals on the computer screen, you can zoom in to see more detail in the images or zoom out to see more of the page at once. If an included picture of the user interface, or a diagram, seems fuzzy or illegible, then zoom in using one of several means provided in the Acrobat Reader software.

A Note on the Included Images

Every library that's part of the EastWest PLAY System has a somewhat different look onscreen from the others. The backgrounds vary; the controls are in different places; controls present in one library do not exist in some of the others. As a consequence, the picture of the user interface (UI) in this manual may not be exactly the same as what you see on your screen. The images here were captured from the various libraries available when this manual was written.

For images from a specific library, read the manuals for the individual libraries, as described in the next section.

Manuals for the Specific Libraries

Each library in the collection of EastWest and Quantum Leap instruments has its own manual. These are separate PDF documents that are copied to your computer's hard drive when each library is installed. Look in the following directories to find the documentation files.

- **On a Windows PC:** \Program Files\EastWest\Documentation
- **On a Macintosh:** \Applications\EastWest\Documentation

Library-specific information, such as

- the controls in the user interface
- the modifiable parameters for the articulations
- the list of available articulations, and their intended uses
- and so on

is described in the library PDFs. A description of how to use the PLAY system, the PLAY software, and any information common to all libraries (for example, how to install them) is contained in this manual.

The Master Navigation Document

Because the EastWest PLAY System is a collection of components, each with its own User's Manual, a Master Navigation Document (MND) is provided to allow users to jump quickly between these PDFs when being read on the computer screen. This MND is a one-page file with hyperlinks to the PLAY System documentation and to all the library manuals. Hyperlinks to this Master Navigation Document are found in the lower-right corner of the title page of each chapter in each document. From there, you can open any other document in the collection.

For example, if you're reading something in the documentation for the Quantum Leap Pianos library, and need to open the manual for the PLAY System as well, go to any chapter title page and click on the link that says, "Master Navigation Document." It will open in a new window on the computer screen. In that document, click on the icon for the PLAY System and its manual will open in the same window (hiding the MND). You now have both the Pianos library manual and the PLAY System manual open in separate windows so you can refer to them both.

Online Documentation and Other Resources

For the most up to date information, visit the support pages at EastWest's web site. There you can find:

- information made available after these manuals were written
- FAQ pages that may already list answers to questions you have
- suggestions from EastWest and other users of the EastWest PLAY System
- news about upcoming releases

The address is:

<http://support.soundsonline.com>

You can also visit the EastWest online forums. There you can read comments and questions from others who use EastWest products and post your own. The many forum participants are a good source of helpful information about both the technical and musical aspects of this software.

The address of the forums is:

<http://www.soundsonline-forums.com>

Current PLAY Libraries

As EastWest and Quantum Leap add new libraries to the PLAY System, they all work with the same PLAY Advanced Sample Engine you're running right now. To see a list of all the currently available virtual instruments and/or to purchase them online, click on one of the following links to an online page.

For the world except Europe:

<http://www.soundsonline.com/Support>

For Europe:

<http://www.soundsonline-europe.com/Support>



2. The EastWest PLAY System, An Overview

- 6 The Architecture
- 6 The PLAY Engine
- 7 The PLAY System Libraries

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The EastWest PLAY System, an Overview

The Architecture

The **EastWest PLAY System** is a collection of components that work together to create music in an electronic environment. The heart of the system is the **PLAY Advanced Sample Engine**, a software sample player designed to work with any of the libraries created especially for it. The PLAY Sample Engine can run on a Macintosh computer or a Windows PC, and on both 32-bit and 64-bit platforms.

The PLAY Advanced Sample Engine can generate no sound unless it is loaded with samples from one or more of the **PLAY System Libraries**. The engine takes samples—short recordings of live instruments—from one or more libraries plus MIDI data and molds them into a musical expression: a single note, an entire piece, or anything in between.

When you buy the license for any of the EastWest or Quantum Leap libraries, the license for the PLAY Sample Engine is included. As you install more libraries on the same computer, they can all use the same PLAY Sample Engine.

The PLAY Engine

The **PLAY Advanced Sample Engine** is an EastWest software program that knows how to open and play samples in the associated libraries. It contains the best sounding and most powerful effects engine available, built from the ground up for superior quality.

One of the primary initial design points for the engine was playability. Instead of forcing the user to focus on technical issues, the PLAY System provides the musician intuitive control of each instrument.



The look of the PLAY Engine on the screen depends on what library is currently selected. The images on this page show two examples (with a red line between them) of how the PLAY Engine changes when displaying instruments from different libraries. The two li-

libraries in these examples are Fab Four and Hollywood Brass. Some aspects of the user interface, such as the selection controls at the top and the keyboard at the bottom (not shown here), remain relatively constant through all libraries. The controls in the central section are library-specific and can have very different layouts to accommodate the varying needs of each library.

The PLAY Engine can be run in either of two modes, as needed:

- In **Standalone Mode** the PLAY Engine runs as its own program. MIDI and audio connections are usually made directly with the sound card's driver.
- In **Plug-in Mode** the PLAY Engine runs as part of a host program, usually a sequencer. The host handles all MIDI and audio connections.

When in Plug-in mode only, it is possible to open more than one instance of the PLAY Engine at a time. One consideration in deciding how many instances to open simultaneously is the question of how many instruments you want to be able to manipulate at once through its library's user interface. (There are other considerations, as well, some of which may be determined by your choice of host and/or working environment.)

Only one instance of the standalone PLAY Engine can be running at a time. It's possible to open as many instruments within that instance as your computer's resources allow. The number of unique MIDI channels for playing instruments within a standalone PLAY Engine is limited by the number of MIDI ports defined; for example, if 10 MIDI ports are available then 160 instruments can create 160 unique channels. (That's 10 ports times 16 MIDI channels per port.)

The EastWest PLAY Advanced Sample Engine uses 64-bit processing to take full advantage of the benefits of 64-bit processors and operating systems that are now widely available. That means accessibility to significantly larger amounts of RAM and, therefore, the ability to load many times the number of instruments. (The EastWest software also supports 32-bit processing for full backwards compatibility with older computers and operating systems.)

For documentation on a specific library and its instruments, go to the separate documentation for each library. Or open the PLAY System's Master Navigation Document, described on page 3.

The PLAY System Libraries

In simplest terms, each library can be thought of as comprising:

- a user interface (UI), the display on the screen and its visible controls
- its instruments
- its samples

(A more in-depth description is provided in the library-specific manuals.)

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All libraries use the same PLAY Advanced Sample Engine to load and play their instruments. That approach has two consequences worth mentioning here:

- The first time you install one of these libraries, the PLAY Engine is installed. On subsequent installations on the same computer, the setup program installs the new library and then determines whether the already installed PLAY Engine requires an update.
- In any given instance of the PLAY Engine, you can load instruments from any library installed and authorized on that computer. For example, let's say you open an instance of PLAY and load a Fab Four guitar. You can then load a drum from the Stormdrum 2 library in the same instance. When loading instruments, you can think of all instruments in all the PLAY System libraries you have licensed as a single collection.

Libraries and Instruments in the Browser View

The Browser view is your access to all instruments within all installed libraries. See Chapter 8 for a more complete description and instructions on how to use the Browser view for managing which instruments are open.



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Instruments in the Mixer View

The Mixer view allows you to see the instruments currently open in this instance of PLAY side by side. Each instrument appears in its own strip with meters and controls that allow you to mix the most important parameters of the output from this one display. And, when multiple mic positions are available for an instrument, you can also choose to see each mic position in its own strip (the lighter gray strips in the image).

(This image shows the Mixer page as it appears when PLAY is opened in standalone mode.)

See Chapter 9 for more instructions on how to use this View.





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Hardware and Software Requirements

You can run the EastWest PLAY System on any Windows or Apple Macintosh system that complies with the specifications listed below. Each retail package includes all the files necessary to function on either the Windows or Macintosh platform. The requirements listed in this chapter provide a minimum standard required to operate and hardware recommendations for optimal functioning. Using a more powerful computer system than the recommendations—a faster processor, more memory (RAM), a hard drive with more space and/or faster rotation, and so on—is encouraged for larger projects. See the suggestions for improving performance in the online FAQ (Frequently Asked Questions) page at <http://support.soundsonline.com>.

System Requirements

The table below and on the next page lists the computer hardware required to install the PLAY Advanced Sample Engine and to run a small project. These are guidelines only; the amount of concurrent processing (including the sequencer, audio and effects processors, other plug-ins, and so on) can affect the power of the computer resources needed to accomplish any specific task.

SYSTEM REQUIREMENTS		
Computer Type	Operating System	Hardware
Windows PC (Required)	<ul style="list-style-type: none"> • XP SP2 or • VISTA • Windows 7 • Windows 8 	<ul style="list-style-type: none"> • Intel Core 2 Duo or AMD Dual Core, 2.1 GHz or faster • 4 GB of RAM or more • DVD drive • sound card with ASIO drivers • 7200 RPM or faster (non-energy-saving) hard drive for sample streaming • enough free hard drive space for the libraries* • Internet connection required for one-time product activation
Windows PC (Recommendations)	<ul style="list-style-type: none"> • Windows 7 64-bit or • Windows 8 64-bit 	<ul style="list-style-type: none"> • Intel Core 2 Quad or AMD Quad Core, 2.66 GHz or faster • 16 GB of RAM or more • sound card with ASIO drivers • SSD (Solid State Drive) for sample streaming
<i>continued</i>		

SYSTEM REQUIREMENTS

Computer Type	Operating System	Hardware
Macintosh (Required)	<ul style="list-style-type: none"> OSX 10.5 or higher 	<ul style="list-style-type: none"> Intel Core 2 Duo, 2.1 GHz or faster 4 GB of RAM DVD drive 7200 RPM or faster (non-energy-saving) hard drive for sample streaming enough free hard drive space for the libraries* Internet connection required for one-time product activation
Macintosh (Recommendations)	<ul style="list-style-type: none"> OSX 10.5 or higher 	<ul style="list-style-type: none"> Mac Pro Quad Core Intel Xeon 2.66 GHz or faster 16 GB of RAM SSD (Solid State Drive) for sample streaming

* See the library-specific manuals to learn how much free hard disk space is required for each library. If installing more than one library, the hard drive must have enough free space to accommodate the sum of all the individual libraries.

The retail copy of the library does not include an iLok security key in the box. If you do not already own one from another software product, you can buy one at your EastWest dealer or online at:

<http://www.soundsonline.com/iLok2>

See the section starting on page 26 for more information on the iLok security key.

Some Notes on Hard Drives

When deciding where to install the instruments and sample data for your PLAY libraries, you need to make sure to have a fast drive with a fast connection to the computer. Most recent models can support the kinds of speeds needed to move large quantities of sample data from the drive to the CPU. However, you do need to avoid drives with rotation speeds under 7200 rpm. And an external drive connected via USB 1.2 or 2.0, or a drive with a Firewire 400 connection is also not recommended.

Internal drives offer the best options for fast data transfer to the CPU, but if you need to use an external drive, consider eSATA, Firewire 800, or USB 3.0. Even these best connection speeds to external drives may not be fast enough for some of the instruments that load many voices simultaneously.

Solid-State Drives offer exceptionally high speeds, but generally come with smaller capacity. They are currently more expensive, though prices are dropping year to year.

Experience shows that it's best not to install library files on the system drive. That's the drive from which the operating system and most programs run. You will get better performance when the programs and the audio samples are not sharing a connection. And try

to keep at least 30% of each library drive empty. Tests at EastWest have shown that the speed at which data can be read from a drive decreases when it is more than 70% filled and can drop by half when the drive is 90% filled.



4. Installation and Authorization

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Installation and Authorization

Whether you are installing your first PLAY System library on this computer, or another library is already installed, the process is the same. An Installation Wizard takes you step-by-step through the process of copying files and setting up parameters in the operating system. Then an Authorization Wizard authenticates your unique license authorization code online. This chapter and the next one walk you through all the steps with the goal of setting up a system that's ready to use.

Installation, an Overview

This manual refers to the process of installing a PLAY System library, which includes not only the instruments and samples but also the EastWest PLAY Advanced Sample Engine. Each time you install a new library, the Wizard checks the versions and will upgrade the PLAY Engine if appropriate, but will not downgrade the Engine software just because what's in the new installation happens to have an older version.

Although you may be eager to install and use your new PLAY System library, it's important to take a few minutes to plan for what resources the PLAY System requires. The next section guides you through the questions that need answering before you start the installation.

Preparing to Install a PLAY System Library

You first need to make sure you have enough free space on the hard drive where you intend to install this library. Sample libraries can have large requirements to hold the many samples and other files. Look in the library-specific manual on the DVD. It will be in the same directory as the Acrobat file (PDF) you are currently reading.

Find the section called Hardware Requirements to determine how many gigabytes (GBs) of free hard disk you need. If you are planning to install more than one PLAY System library, look in all such manuals and get a total value. If you do not have enough free space, consider another drive, if available. If you need to buy a new drive, it is very important with sample libraries that the access and data-transmissions rates are fast; internal drives are often better than external drives in this regard, but not always. You may need to do some research, either online or at your computer store.

Installing Larger Libraries

The larger libraries (for example, Quantum Leap Pianos and EWQL Symphonic Orchestra, Platinum Edition) allow you to install the DVDs in multiple sessions, not all at once. If you want to break up the installation in that way, read details on how to do that at the end of the separate Windows and Mac installation instructions before starting.

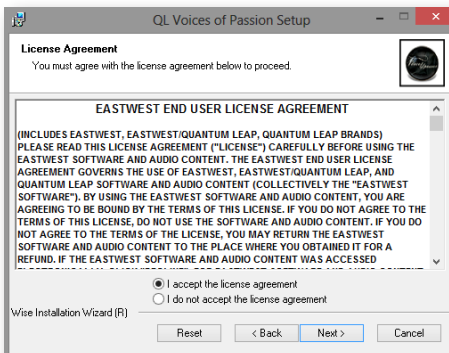
Installation Instructions on a Windows Computer

Running the Library Installer in Windows

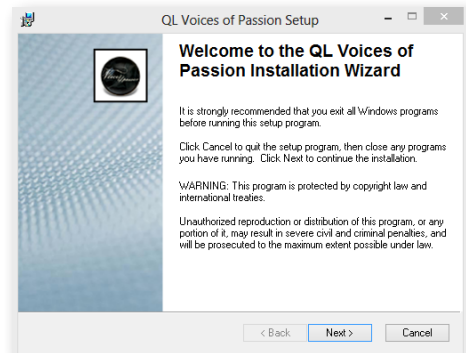
You might have received the installation files on a hard drive or on a set of DVDs, or as a download. Whatever the case, the procedures are the same. Use the Windows Explorer to open the drive where the files currently sit. Run the installation file, which steps you through the process. And be sure to select the version for your type of operating system: 32-bit or 64-bit. It asks a few questions and then copies the needed files to the appropriate folders on the computer's hard drive.

What follows are the screens that the installer presents. If you need to go back to change an earlier answer, you can always click on the Back button. Or click on Cancel to stop the installation process without installing the library. Nothing is installed until you click the Next button on the page where it says it's ready to install the application.

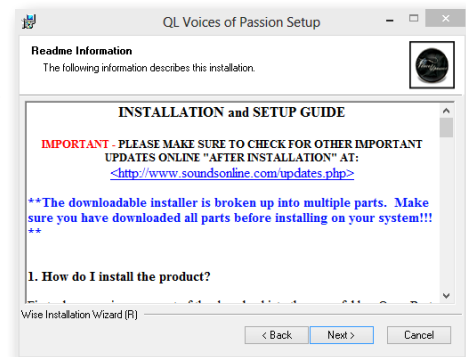
Welcome and License Screens. A first screen recommends that you close all other programs and it presents legal information about copyrights for the product. Click on the Next button to continue to the following step.

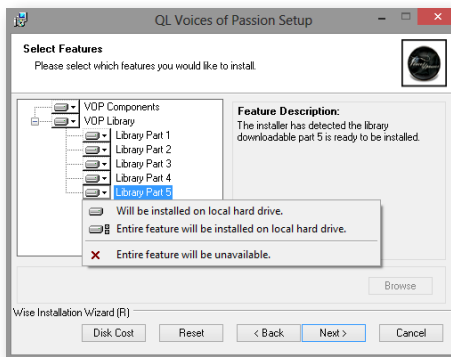


License Screen. The screen that follows displays the text of the license. Read through the text by scrolling down and, if you agree with the terms, select the upper radio button. If you do not accept what's written there, all you can do is cancel the installation. The Next button moves you past this screen.



"Read Me" Screen. The window on the right displays the text from the Read Me file. This is important information about the current release of the software and/or the installation process. Scroll through the text and read anything you need to know before starting to install.

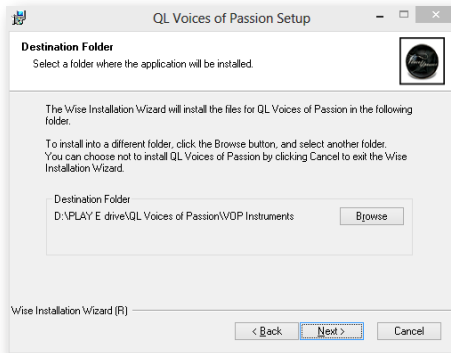




Select Features Screen. The image at the left displays a possible set of data, but the list of components during your installation may be very different. In this screen you specify what to install. By clicking on one of the small icons before the component name, a list of 3 options is opened. If you do not plan to install any given component (at this time), select the red X. If you do want it installed, leave the image of the disc drive. If you're not sure, it's best to install the feature. Once you have everything marked as you prefer, click the Next button.

The button at the bottom labeled **Disk Cost** opens a dialog box listing the available space on each drive in the system, and how much of that will be used to install this product. If you're concerned about how much free space will be left, this display can give you the information needed to help with the question of where to install the files. Note that the numbers in this dialog assume the default location for the files. In the next screen you can select a different folder to hold the files, perhaps based on what you read here.

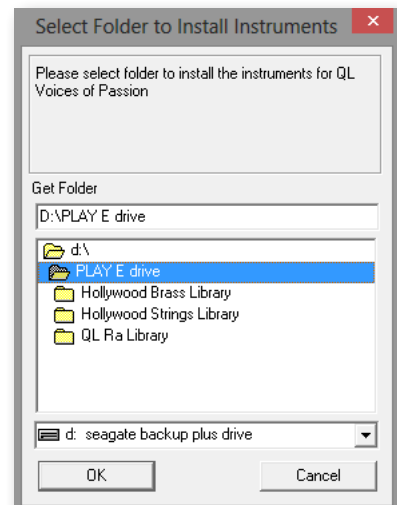
Volume	Disk Size	Available	Required	Difference
C:	110GB	34GB	10MB	34GB
D:	3726GB	2299GB	0KB	2299GB
E:	698GB	439GB	0KB	439GB



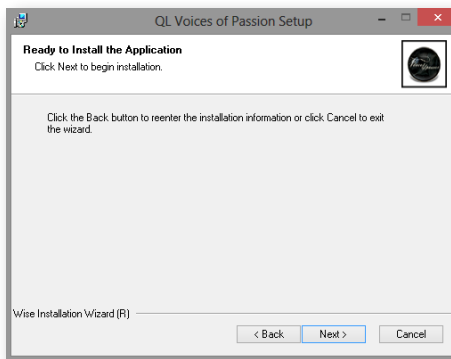
Library Folder Screen. You are asked where the instrument files and sample files should be stored. Select the drive and folder you picked when planning the installation (above). If the folder listed in the screen is not what you want, click on the Browse button to change to a different folder.

The image at the right shows the screen that appears when you click on the **Browse** button. Select the drive in the drop-down

list at the bottom. Then navigate through the folders in the larger window above it to find the correct folder. The full path of the folder you select appears in the upper text box. When the folder you want is selected, click on OK. If you decide to make no change, click on the Cancel button.

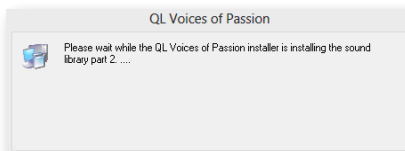
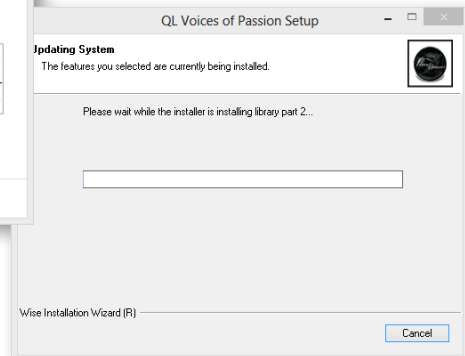
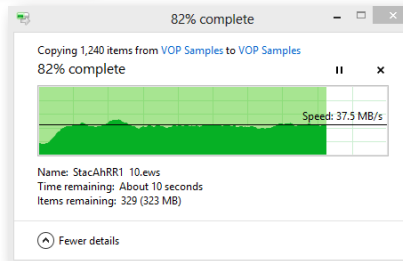


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Ready To Install Screen. At this point, all questions have been answered. Click on the Next button and all the indicated files will be copied to the file system.

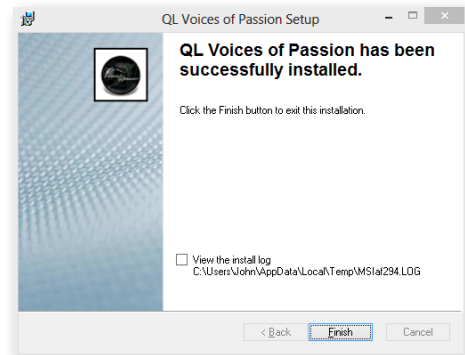
Next you may see several of these **Installation Progress** screens that tell you how many files have been copied so far. The exact look of the windows depends on the operating system.



Screens, like the one at the left, may appear in order to keep you informed of which components, or parts of the installation, are currently in progress.

Success Screen. If all went as it should, you are notified of a successful installation. If an error occurs, see whether you can resolve the problem. Or contact technical support at EastWest for assistance. Click the Finish button to end the installation program.

This completes the installation of the library files, but you still need to install the PLAY System files. In some cases, a browser window might automatically open on the page where you can install the latest version of the PLAY software. If it doesn't, direct your browser to this page:
<http://www.soundsonline.com/support>



Look for the link on that page where you can download and install the most recent version of PLAY. Once you've downloaded the installation file from the web site, read the instructions for installing the PLAY software that begin on page 19. But first here's a brief section on how to install a library in multiple sessions.

Installing Larger Libraries on a Windows Computer

If you want to install only a part of a large library (such as only the Yamaha piano from Quantum Leap Pianos) at this time, follow these steps:

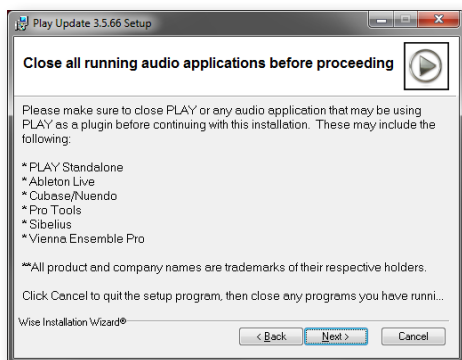
A few pages back, the Select Features window was described. That window includes a list of features. The image at the right lists the 4 pianos as “features” of the QL Pianos library. Click on the icon for any part you do not want to install at this time and select the red X icon. When configured the way it is in this image, only the Yamaha piano is copied to the hard drive for the library files.



When you’re ready to install another part of the library, restart the installation program. When you see the same “Select Features” screen, select only the part of the library you want to add to your hard drive. Do not re-select the part of the library already installed. For example, if you wanted to install only the Bechstein this time, remove the red X from the Bechstein part of the library and choose the red X next to the Yamaha.

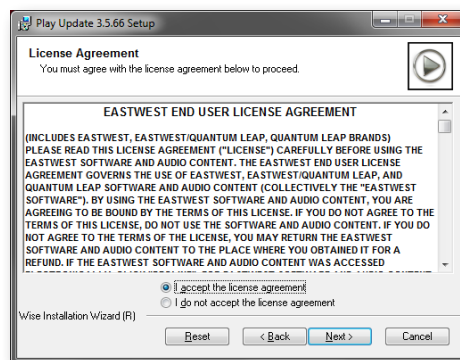
Running the PLAY Software Installer in Windows

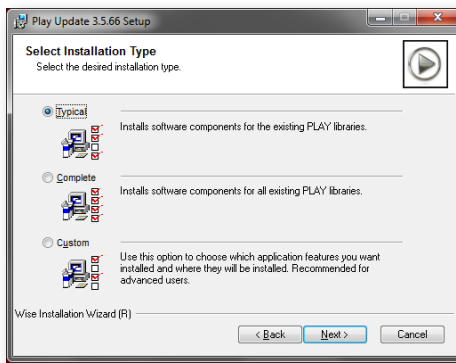
After you’ve downloaded the PLAY software installation files from the soundsonline.com/Support web page, open the installer. The first screen to appear is similar to the one at the right. This image shows the first screen for *updating* PLAY, but all the screens shown here are otherwise the same as what you’ll see when installing PLAY for the first time. Click on the Next button to move to the next screen.



In this screen, you’re reminded to close other programs currently open. It is especially important that you close any programs that use the audio resources of your computer, such as sequencers, music notation programs, as well as any already installed instances of PLAY or other music libraries.

In the **License Agreement** screen, you’re asked to agree to the terms of the EastWest End User License Agreement. If you do agree, first click on the upper radio button and then click on Next. If you do not agree, then you will not be able to install the PLAY software, which means you need to cancel the installation.





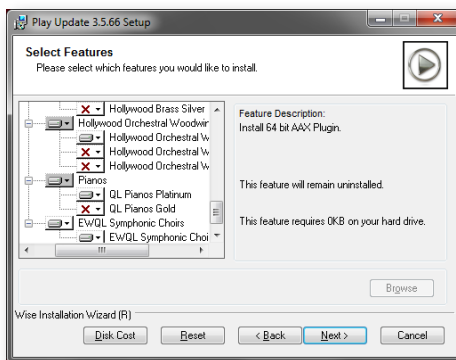
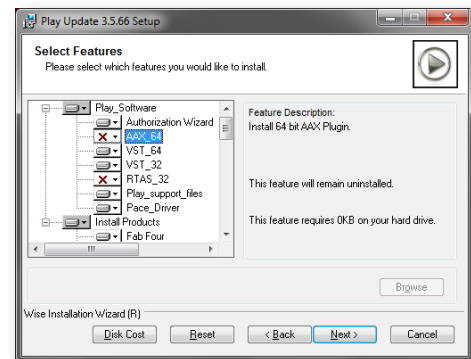
The next screen asks you to select the **Installation Type**. The options when installing a PLAY version for the first time are: Typical, Complete, and Custom. (If you rerun the installer after a successful installation, you will likely see different options having to do with repairing or modifying the installation.)

The **Typical** option selects those options that are most commonly needed. This is a good choice unless you know that a different option is required for your setup.

The **Complete** option installs all the available components, including those some people may not need.

The **Custom** option opens an extra screen (shown below) to allow you to select exactly which components to write to the hard disk.

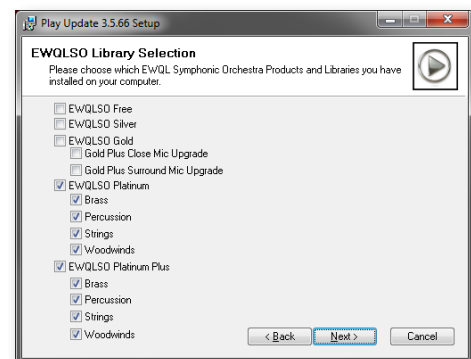
The image at the right shows the page that opens next if you select the Custom option above. As you did when selecting library component, you can here select software component by click on the icon to the left of any component name and choosing the red X to mean “do not install” or the drive symbol to mean “do install.”



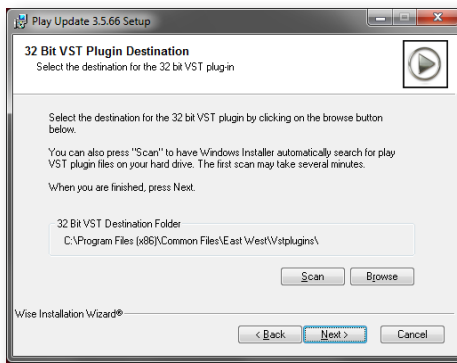
A second image at the left displays the same dialog scrolled down in the case where other libraries have already been installed on this computer. By choosing to install any of these components, you’re updating those other libraries (with features such as the library-specific UI), so it’s recommended you install any components of other PLAY libraries you’re using on this computer.

If you own any library with multiple Editions (Gold, Silver, etc) then you’ll see one or more screens like this one on the right to continue your Custom setup. Check any libraries and/or components that you want updated.

This finishes the description of the extra screens that appear when you select the Custom option.



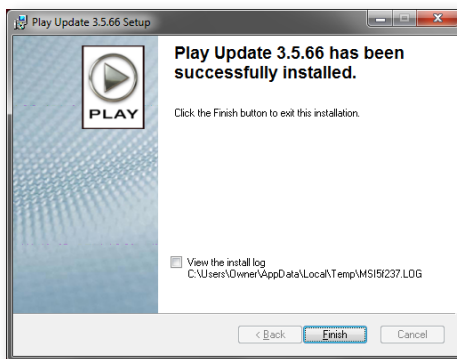
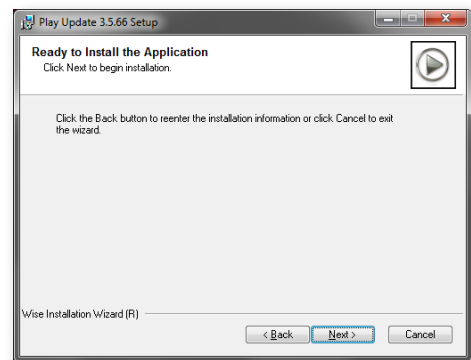
THE EASTWEST PLAY 4 SYSTEM



The screen at the left asks where you want the VST file installed. (It only appears if a VST is being installed.) This is a file that many sequencers use to open PLAY inside that host. You can specify in the host where it should look for all the VST files of all its plug-ins, so you may want to install the VSTs for all your plug-ins in the same folder. If the listed folder is not where you want to save the file, then click on Browse to select the folder yourself. Or click on Scan to have the software search for a folder you may have already set up.

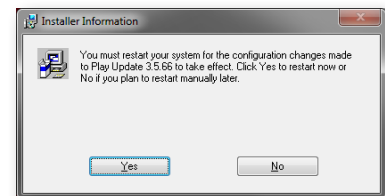
If you're installing a 64-bit version of the software, then you see two of these screens, allowing you to specify folders for both the 32-bit and the 64-bit plug-in.

Once all selections have been made, the screen at the right appears. It means that the software will be installed once you click on the Next button. Or you can click on the Back button one or more times to return to earlier screens and change your mind.



When the screen on the left appears, it means that the software has been installed successfully based on the options you selected. Click on the Finish button to close the installer.

One last step is required. You need to reboot Windows before you can use your PLAY software. The screen at the right provides an easy way to start that reboot. Click on the Yes button to do the restart now. Or you can wait and do the reboot at a later time on your own.



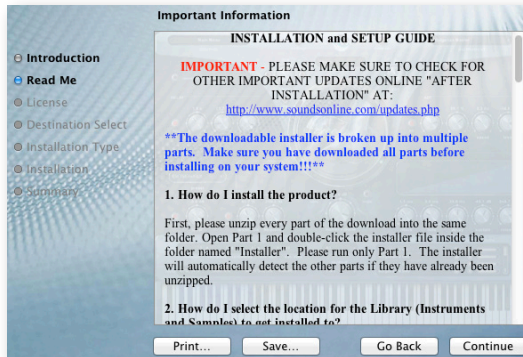
If this is your first time installing a PLAY library, then be sure to read Chapter 5 "Getting Started," beginning on page 30. Or if you're already familiar with the PLAY software, you're ready to open PLAY again.

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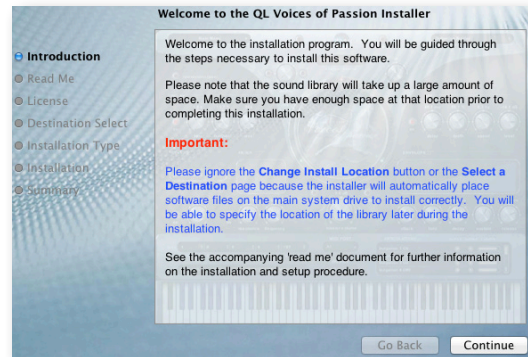
Installation Instructions on a Macintosh Computer

Running the Library Installer on a Macintosh

Introduction Screen. This screen describes briefly what's about to happen and what you need to consider. Click on Continue to proceed to the next screen.

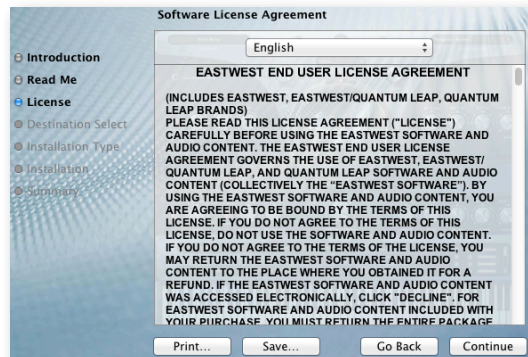
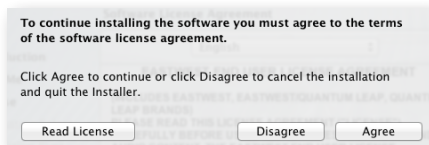


“Read Me” Screen. This window display the text with-in the Read Me file. This is important information about the current release of the software and/or the installation process. Scroll through the text and read anything you need to know before starting to install.

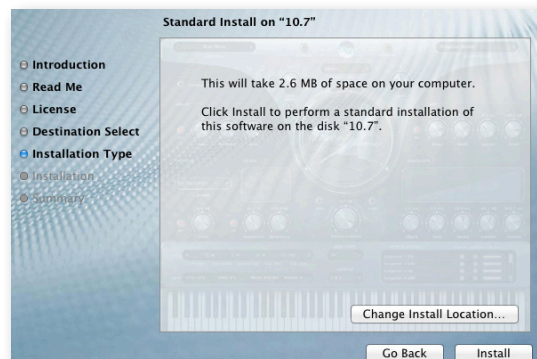
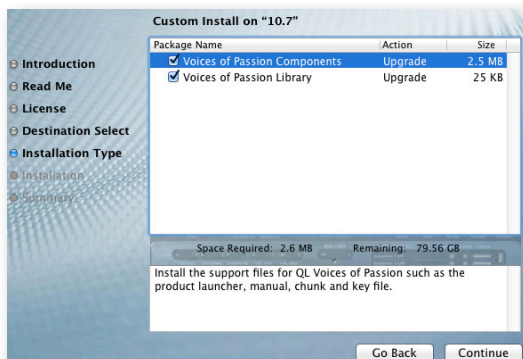


Click on Continue when you're ready to see the next screen.

License Agreement Screen. Read through the license text by scrolling down. When you've finished reading, click on the Continue button to open the smaller windows below. If you agree with the terms, click on the Agree button. If you do not accept the terms of the agreement, all you can do is cancel the installation by clicking on the Disagree button.



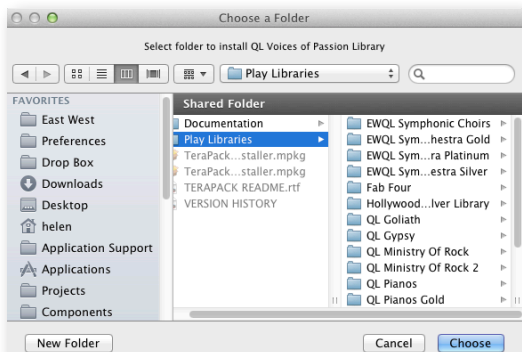
The **Custom Install** and **Standard Install** screens allow you to select which components to install and show you how much disk space will be used.



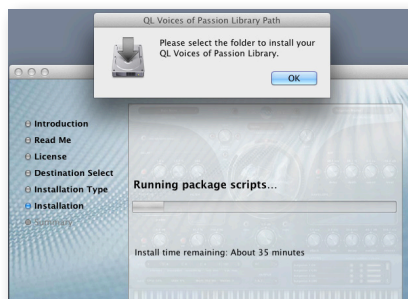
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Click on the Install button to proceed with the installation process.

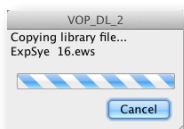
With the next screen you can select the folder where you want the library files to reside on your hard drive.



The screen at the left, allows you to make the choice of the installation folder.



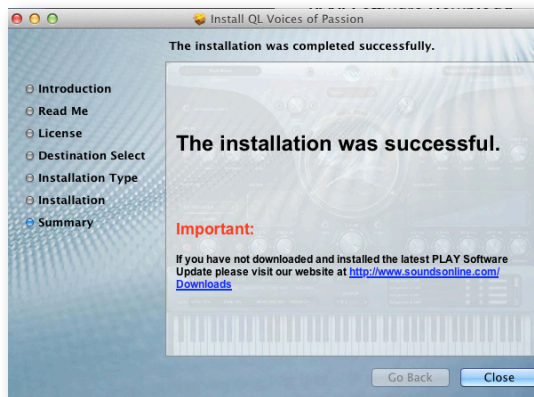
When the library consists of multiple parts, a screen like the one at the right lists the parts and lets you uncheck anything you do not want to install. The files are then ready to be installed in the folder where you directed them.



A progress bar, like the one at the left, indicates how much of the total library has been installed. You can also see the name of the current file being copied. Libraries can contain tens of thousands, or even hundreds of thousands, of sample file, so this process may take from minutes to hours, depending on the speed of your computer and hard drive as well as the size of the library.



The final screen should report a successful installation of the library files. Press the Close button to end the program. But note that so far you have installed only the library content, not the PLAY software. The next section describes how to perform that step.

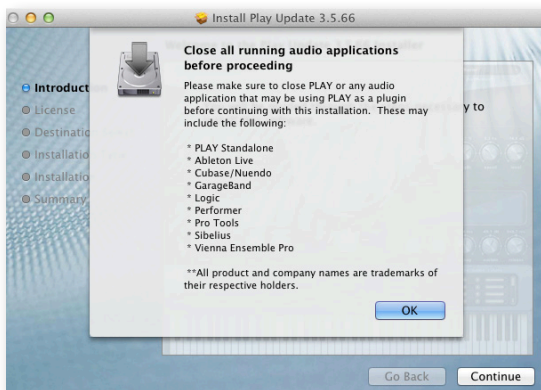


Running the PLAY Software Installer on a Macintosh

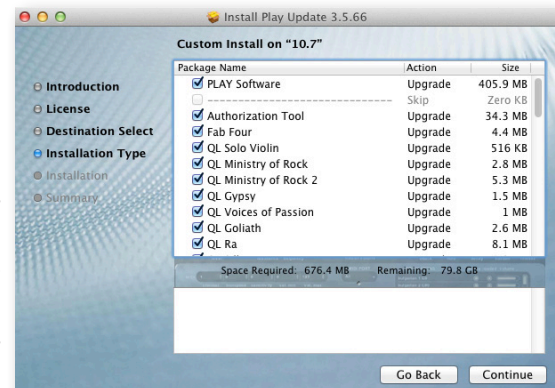
Download the PLAY installer for the latest version of the software from this web page:
<http://www.soundsonline.com/Support>

It is a compressed file, so you need to save it to a folder on your computer where you can unzip it. Once the download has finished, extract the installation files from the zip file.

When you run the installation program, the screen at the right opens. Click the Continue button to proceed.



The screen to the left is a reminder that you need to close any open programs. It is especially important that you close any programs that use the audio resources of your computer, such as sequencers, music notation programs, as well as any already installed instances of PLAY or other music libraries.

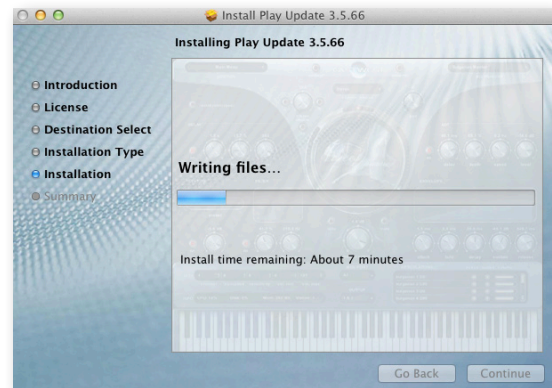
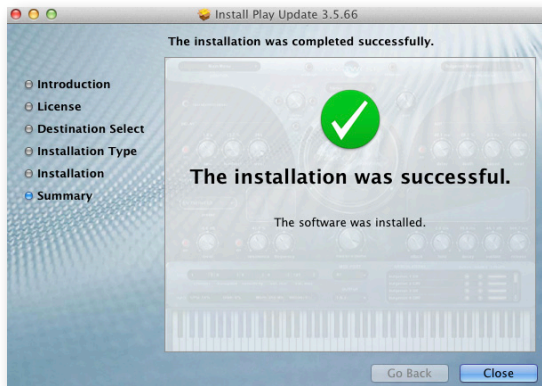


After clicking on the Continue button, the **Custom Install Screen** to the right opens. It allows the selection of components to install. Some of the listed components are PLAY libraries already installed; you're being asked whether to update the files for those libraries at the same time. You will normally want to leave all the components selected, except see about partial installation of larger libraries on page 25. When done, click Continue.



Standard Install Screen. This screen lists the total size of all the files in this installation. If you're ready to begin the copying of files to the hard drive, then click on the Install button.

While the files are being copied, the screen on the right appears. The progress bar indicates approximately what fraction of the files have been copied.



Success Screen. If all went as it should, you are notified of a successful installation. If an error occurs, see whether you can resolve the problem. Or contact technical support at EastWest for assistance. Click the Close button to end the installation program.

Installing Larger Libraries on a Mac Computer

If you want to install only a part of a large library (such as only The Steinway D piano from Quantum Leap Pianos, but not the other pianos), follow these steps:

- When initially installing the PLAY software, the Custom Install Screen (see earlier in this section) lists the various components that can be installed. Uncheck any components you do not wish to install at this time.
- If, at a later time, you want to install any other part(s) of the library, reopen the same installer. When you get to the page “Custom Install,” select only the part of the library that you want to install in this new session. You do not have to reinstall any software components.

Authorization, an Overview

When you buy a license to an EastWest PLAY System library, it includes an authorization code. This is a unique string of characters that identifies the license. You need to convey this to an online database that can verify no one else has used this code. If it passes verification, you are granted the license which is placed in a physical security key (see below).

When you run the Authorization Wizard, it asks you to log in. If you have already created a Username and Password at www.soundsonline.com, you can use it. Otherwise, create a new account using the link in the Authorization Wizard. See below for instructions

When an instrument from a library is opened in the PLAY Engine, the program verifies that there's a security key attached to the computer. Only if there's a valid license for that library in the key will the PLAY Engine generate sounds for that instrument.

See instructions below for how to perform the authorization step.

The iLok Security Key

An iLok key is a hardware device made available by PACE Anti-Piracy, Inc., that can hold licenses for software installations. A PLAY System library will not function unless the iLok key holding the appropriate license is inserted into a USB port on the computer running the library. It does not matter which USB port is used: back, front, or on a hub.



At the left, is a picture of the original iLok (at the top) and the newer iLok2. You can use either one to store PLAY licenses.

If you own two or more PLAY System libraries and intend to run them from the same computer, all the licenses can reside in the same iLok key. If you use other software products protected by the iLok system, the licenses for the PLAY System libraries can reside in the same key as the licenses of those other software products, up to one hundred per physical key. If you plan to run different PLAY System libraries concurrently on separate computers, then you need a separate security key for each computer. If you need to run the same PLAY System library concurrently on multiple computers, you need a separate license for each computer.

If you have installed a single PLAY System library on two separate computers—for example, a laptop and a desktop computer—and you intend to use only one at a time, then you can move the iLok between the two computers. At any given time, the library will be functional only on the computer with the iLok key attached.

If you are running the PLAY System on a network and a library's files are on a different computer than the PLAY Advanced Sample Engine accessing those files, then the iLok key needs to be in a USB port of the computer where the PLAY Engine is running.

The license for PLAY System libraries can be moved from one physical key to another at any time, and moved as often as you need to. The moving of licenses between keys, as well as other maintenance, can be done using a License Manager program created by PACE Anti-Piracy, Inc. You can download this program at no cost from the PACE web site: www.iLok.com.

Authorization Instructions

The authorization process requires that an iLok security key be attached to the computer. Insert the iLok you are planning to use for this library in a USB port. The computer must be connected to the Internet. (If the computer on which you will be running this library is not connected to the Internet, see the instructions below.)

Once a library has been successfully installed, an application called the Authorization Wizard appears in your EastWest programs. When you start this program, a window opens that looks like the image below. Enter the e-mail address you have provided either EastWest or PACE, as well as the Password that goes with it. If you plan to authorize more

THE EASTWEST PLAY 4 SYSTEM

EastWest products in the future, you might want the wizard to remember them so you don't have to. If so, check the box or boxes for those options.

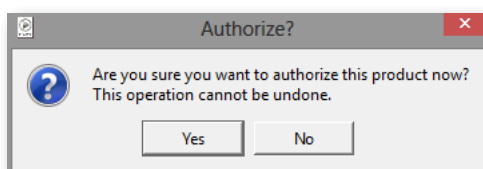


The screenshot shows the main window of the EASTWEST Authorization Wizard. It has a light gray background. At the top, there are two text input fields: 'Email address:' and 'Soundsonline Password:'. Below the password field are two checkboxes: 'Remember me' and 'Remember my password'. Underneath these is the 'Authorization Code:' section, which consists of five small text input boxes arranged horizontally. At the bottom left is a red circular logo with the letters 'ew' in white. To the right of the logo are two buttons: 'Cancel' and 'Authorize'. A blue 'Help' link is located at the bottom right of the window.

In the five boxes labeled Authorization Code, enter the code that you received with your purchase. (Once you have entered 4 characters in a box, the cursor moves automatically to the next box, so there's no need to use the tab key or mouse to move from box to box.) When all 5 boxes are filled, the Authorize button becomes active. Click on it to transmit this data to the online Authorization Server.

Click on the Help link to open the informative screen at the right.

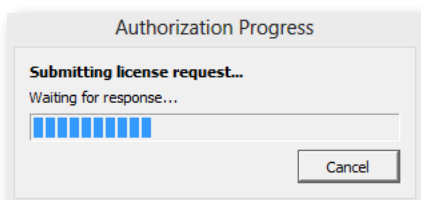
Once you're ready to start the authorization process for your library, click on the Authorize button. The message box seen below reminds you that this process cannot be undone.



The screenshot shows a small dialog box titled 'Authorize?'. It has a question mark icon on the left. The text inside says: 'Are you sure you want to authorize this product now? This operation cannot be undone.' At the bottom are two buttons: 'Yes' and 'No'.

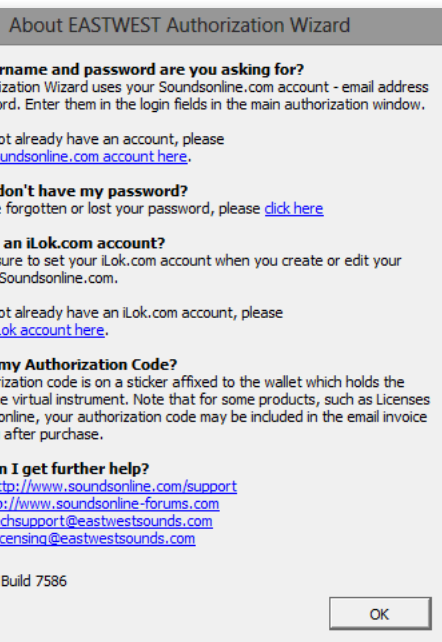
Select the Yes button to continue

or the No button to abort the process. Once the Authorization Wizard begins, a progress bar, like the one below, appears to inform you of each step being taken.

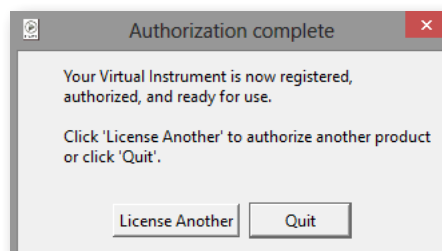


The screenshot shows a dialog box titled 'Authorization Progress'. It has a subtitle 'Submitting license request...' and a progress bar with several blue bars of increasing length. Below the progress bar is a 'Cancel' button.

When the Authorization finishes, it displays the message below. If you have another library to authorize, click on that button. Otherwise, click on Quit, and you are now able to use this library on whichever computer the iLok key is attached to.



The screenshot shows a window titled 'About EASTWEST Authorization Wizard'. It contains several sections of text: 'What username and password are you asking for?' with a link to 'create a Soundsonline.com account here'; 'What if I don't have my password?' with a link to 'click here'; 'Do I need an iLok.com account?' with a link to 'create an iLok account here'; 'Where is my Authorization Code?'; and 'Where can I get further help?' with links to the website, forum, support email, and licensing email. At the bottom left is the version information 'Version 2.0 Build 7586' and at the bottom right is an 'OK' button.



The screenshot shows a dialog box titled 'Authorization complete'. It contains the text: 'Your Virtual Instrument is now registered, authorized, and ready for use.' Below this is another line of text: 'Click 'License Another' to authorize another product or click 'Quit'.' At the bottom are two buttons: 'License Another' and 'Quit'.

Authorizing a Library When Your Music Computer Is Not on the Internet

If the computer on which you will be running your EastWest libraries does not have an Internet connection, you can perform the authorization on another computer as long as you insert the iLok security key in a USB port of that Internet-connected machine. That is, the license is stored in the iLok and not the computer, so the iLok has to be at least temporarily online and then, once authorized, can be moved back to the computer where the PLAY System will be running.

Either copy the Authorization Wizard program to an Internet-connected computer, or rerun there the Installation process for the software, selecting only the Authorization Wizard when asked for what components to install.

After completing the installation of the Authorization Wizard on your Internet-connected computer, follow the instructions as presented above.

Note: if your music computer and Internet-connected computer are different types (Mac and PC), that is *not* a problem. The iLok security key is completely portable between the two systems.

Individual iLok Drivers

The drivers for the iLok security key are installed as part of the installation procedures described above. Therefore, under most conditions you do not have to work directly with the iLok driver installation programs. The following files in the folder “Pace Driver Installers” are included on DVD # 1 only for the unlikely case that a problem is discovered with the drivers:

- iLokx32Setup.exe: installs the driver for the security key
- Tpkdx32Setup.exe: installs the driver that the PLAY Engine uses to check for a valid license
- setup.exe: installs both of the drivers mentioned above

Note that in a 64-bit environment, the “32” in the file names will be “64” instead.

If a problem occurs with your installation, EastWest Technical Support might ask you to run one of these files.



PLAY

5. Getting Started

- 30 Verifying the Installation
- 31 The Settings Dialog
- 39 Playing a First Note
- 41 Next Steps

[Click on this text to open the Master Navigation Document](#)

Getting Started

Once the setup program finishes and the authorization is complete, you're probably eager to use your new software, but there are still a few tasks that need to be performed to integrate PLAY with your hardware and software environment. This chapter walks you through the process of customizing your setup.

You will need to do most of these steps only the first time you install one of the PLAY System Virtual Instruments. For example, if you did a full installation of Quantum Leap Ministry of Rock and you're now ready to install EastWest/Quantum Leap Symphonic Orchestra, you should only need to do these steps again if the new installation isn't working as expected.

You may want to return here if the software ever stops working, which could happen, for example, when you install new hardware and/or software.

In addition, some of the tabs in the Settings dialog, described later in this chapter, can be used to fine-tune the performance of PLAY for your specific hardware environment.

Verifying the Installation

Step 1: Open the PLAY Engine

The best way to test whether the PLAY Advanced Sample Engine is correctly installed is to open the PLAY Engine as a stand-alone program (that is, not as a plug-in in a sequencer or other host). To do this, open one of the libraries by choosing it from the list of installed programs:

- On a Windows PC: Start > Programs > East West > [*library name*]
- On a Mac: Applications folder, double-click on "East West," open [*library name*]

If the Setup routine installed the library's icon on your desktop—or if you put one there manually—then you can also open the standalone version by double-clicking on that icon.

If the library's window opens, then the software is correctly installed; go to Step 2. If it does not open and there's an error message, try to correct the problem specified in the message. If there's no error message and no window appears, then verify that all the steps in the Installation and Authorization chapter were followed. If necessary, rerun the setup program. If a re-installation doesn't help, contact EastWest Technical Support.

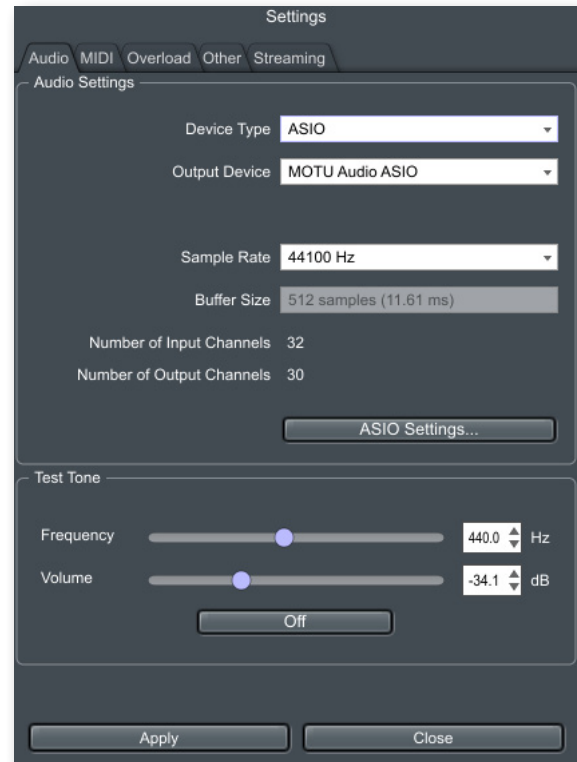
The Settings Dialog

Step 2: The “Audio” Tab

The next task is to configure the Audio connections. Click on the Settings button near the top of the PLAY window. A dialog similar to the one shown here opens. There are five tabs at the top. For this step, the Audio tab should be selected.

If in doubt about which of the options to select when following the directions below, check the documentation that came with your audio card. And remember that all your digital audio software should be using the same settings.

Note that the settings in the Audio tab apply only when a PLAY System library is running in standalone mode, that is, not inside a sequencer or other host. When used as a plug-in, the PLAY System uses the settings selected in its host. Even if you eventually plan to run PLAY exclusively inside a host, you should set up the values in this tab.



From the **Device Type** drop-down list, select the type of audio device driver that will be handling all audio input and output. The options that appear in this drop-down list depend on the operating system and what’s installed on your computer.

The **Output Device** is associated with your audio card hardware. If you have more than one audio card attached to your computer, you can choose which one will handle the output audio. In most cases, there will be only one option for this control.

The **Sample Rate** drop-down presents the values supported by your sound card. Select the value you will be using in your current audio project. Note that if you cannot open this drop-down list it means sample rate—and/or audio buffer size—need to be set in your audio driver. In the image above, the second drop-down list is grayed because it needs to be set in the ASIO driver interface.

Select the same audio **Buffer Size** that is specified in your audio device type (ASIO, DirectSound, CoreAudio, etc.). Again, you may not be able to change this here if it can only be selected in the driver interface.

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The **Number of Input Channels** and **Number of Output Channels** controls on this tab report the number of audio channels available on your sound card. This is static data provided for your information; the setting cannot be changed.

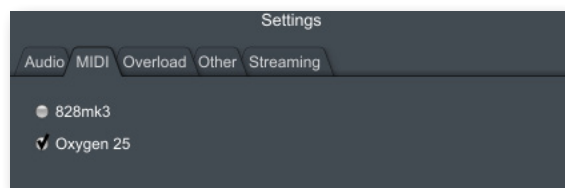
The image above shows a button named **ASIO Settings**. You will only see this button if you are using an ASIO driver in Microsoft Windows. It is provided as a shortcut so you can open the driver to set Sample Rate and Audio Buffer Size.

Further down this tab is a group of controls called **Test Tone**. These controls can be used to verify that audio being generated by PLAY is correctly routed to your speakers, headphones, or any other destination. Use the two sliders to set the frequency and volume, then click on the long button to start or stop the tone. Make sure to keep the volume in the low- to mid-range at first, especially if the sound is being sent to headphones. No library has to be loaded, so you can run this test now, if you like.

If you make changes here and want to save them before moving on to another tab, click on the **Apply** button at the bottom of the dialog box.

Step 3: The “MIDI” Tab

The MIDI tab allows the user to specify which MIDI sources can send data to the PLAY Engine. The types of devices that will be listed here include MIDI keyboards, control surfaces, and sound cards. For each device, turn it to the On or Off state by clicking in its checkbox. A check in the box means that PLAY will respond to MIDI data from that source (as in the second item in the list in the image). Each click toggles the value between On and Off.



All devices turned On here appear in the MIDI Port drop-down list in the main window for the library. To keep that list short, turn on only the sources that are expected to send MIDI data: notes and control codes. These values can be changed later if needed.

If you do not see a given MIDI device in the list, it may be because it is currently turned off. If that's the case, close the PLAY window completely, turn on the MIDI device, and then re-open PLAY. When you return to the Settings dialog and the MIDI tab, you should now see that device in the list.

Step 4: The “Streaming” Tab

Steps 4, 5, and 6 are more advanced. It's not necessary to adjust these settings during the initial setup; instead, you may want to return to this part of the manual after you have experience with the product. If this is your first time installing PLAY, you should read these three sections quickly to know what's provided and then move on to Step 7.

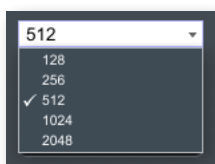
Disk Streaming is a technology that provides most of the benefits of having all the sample data in RAM without requiring the many Gigabytes of memory such an approach

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could require. Only enough data is maintained in RAM to start playing each required sample immediately and the rest is streamed from the disk on demand.

As shown in the image at the right, the **Free System Memory** readout lists the amount of RAM the computer currently has available. This number is the total RAM minus all the programs running (including the operating system). Use this as a general guide to know how close you are to running out of memory.

The **Engine Memory** value tells you how much of the computer's memory the PLAY Engine is using for Buffers in the computer's memory. This value is affected by the Maximum Voices control, and the Engine Level control. Note that the value for Engine Memory that appears here is only recalculated after any change in those two controls is saved using the **Apply** button at the bottom of the dialog box.



The **Maximum Voices** control provides five settings to control how much memory is allocated for sample buffers in RAM. As shown in the image at the left, the four values range from 128 to 2048. In general, the larger the value here the more computer memory PLAY requires. Use one of the smaller settings if your computer has 3 gigabytes of available RAM or less and larger settings for larger systems. To determine the best value for your setup, you may have to do some trial-and-error testing. And it's best to do your testing on a project that is a typical large piece for the way you work. The goal is to maximize the number of voices you can play back without generating pops, clicks, or drop-outs in the audio. Note that setting this value higher than you need can cause a significant and unnecessary slowdown in the time it takes a project to load.

The Maximum Voices value specifies the global set of buffers that are used for all instances of PLAY you have open concurrently. Be aware that each instrument also has a Maximum Voices setting, so if some notes are not playing or are ending too soon, and this global value is set high enough, you also need to check how many voices are allowed for individual instruments.

The total number of voices you need in any project depends on several factors:

- how many instruments are being played at once
- how polyphonic each instrument is (a piano usually plays more notes at a time than a flute and therefore requires more concurrent voices)

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- how many microphone positions have been loaded (for those instruments recorded with more than one mic position, such as in Symphonic Orchestra and Hollywood Strings)
- whether the instruments include release trails
- whether any open instruments use layering, that is, whether they play back more than one sample at a time to create the audio output
- in some cases, the tempo of the piece, especially when release trails are in use

Start out with the following setting:

- 256 for a system with 3 GB of available RAM or less
- 512 for a system with more than 3 GB of available memory

If you encounter any audio problems during playback (such as pops, clicks, or dropouts) try raising this setting to the next highest value. Also, if you notice that some notes are ending earlier than you specify, it might be PLAY ending a note in order to make a voice buffer available for a new note; you will either need to raise the number of Maximum Voices or render only some instruments to audio at a time, in a process known as track-freezing.

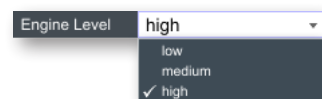
Be aware that the larger the value you select, the longer each project will take to load. If projects are taking an unexpectedly long time to load, try lowering the value in this control, but if audio problems appear, you will have to return this value to the larger number.

The best choice depends on many factors, so sometimes trial and error is the best approach in finding optimal settings. In general, use the lowest number of voice buffers that causes no problems.

Note that if you set the Maximum Voices value too high for the available hardware resources, PLAY is smart enough to attempt to adjust the parameters to more closely correspond to what your computer can handle.

The **Reset Engine** button can be used to kill any active voices (*i.e.*, any notes being played) and to return the audio engine to its initial state. Use this button in the unlikely case the audio engine is not correctly processing MIDI data. One example is a note that continues to play beyond its indicated length (called a “stuck note”).

The **Engine Level** control provides 3 different settings to control how the PLAY engine uses the computer’s memory. In general, use a higher Engine Level when working with larger instruments, meaning those that tend to play back a lot of samples concurrently. A few examples include:



- The EastWest/Quantum Leap pianos library can play a lot of samples at once because:
 - › piano technique can be very polyphonic
 - › the notes can sound for a long time, especially when using the pedal

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- Some of the legato instruments in Hollywood Strings (as well as the “Powerful System” patches) can play as many as 6 to 12 samples at once for each note.
- In EastWest/Quantum Leap Symphonic Choirs, each sung syllable may require multiple samples to create the sounds of the various consonants and vowels, and cross-fading among these phonetic elements means they’re playing concurrently.
- Any cross-fade patch controlled by the Mod Wheel is playing two or more samples at a time.

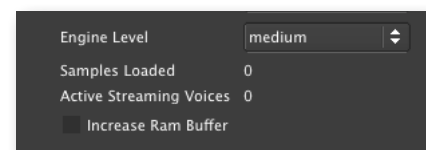
While these larger instruments can drive up very quickly the number of samples sounding at once, you can also get a large voice count by creating a score in which many instruments sound at once, so set your Engine Level based on the total number of samples you expect to play at once, but do not set it higher than you need to. You may have to use trial and error to find the right setting for your various projects.

The **Samples Loaded** control displays the number of sample files currently assigned to buffers in memory. You can use this value when determining whether you have allocated enough RAM for playing the samples you need in your project. If this value is getting too large, then consider using the Purge function, described on page 60, to remove from memory samples you do not use.

The **Active Streaming Voices** number shows how many voices are being played back at that moment in all open instances. This differs from the Voices value that appears in the Player view, which shows the currently open voices in only the instance of PLAY where it appears.

Increase Ram Buffer: PLAY 4 includes an optimization to make more efficient use of the high performance hard drives now on the market. This new optimization uses direct-from-hard-disk streaming more aggressively than in older versions of PLAY. This results in more efficient overall performance, and faster load times for saved projects.

This optimization is turned on by default because most users can take advantage of it. If you want to turn it off, then click on the checkbox labeled **Increase Ram Buffer**. When this option is checked, Fast Disk Mode is disabled.

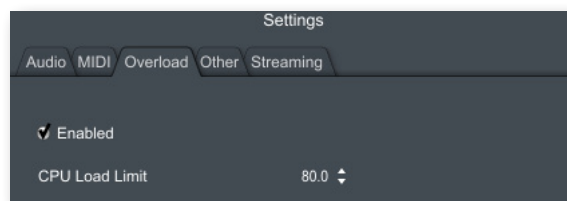


If you experience dropped notes, pops, clicks, or other audio artifacts, then your hard drive may not be fast enough for this feature; you should test whether checking the Increase Ram Buffer box eliminates these problems. (If checking this box does not eliminate such problems, you may be loading too many instruments for the capabilities of your hardware.)

ADVANCED: The Streaming parameters described above are factors tied to the audio buffer size and content format. This is different from some other engines where the sizes are static values.

Step 5: The “Overload” Tab

This tab provides 2 controls that allow you to specify how much of your computer’s processing power is available to the PLAY Engine. This can be turned On or Off by clicking on the **Enabled** checkbox. The spin control allows you to specify the percentage of the computer’s central processor that PLAY can use. If the Enabled box is not checked, any change in the CPU Load Limit has no effect and the engine will try to use as many resources as possible.



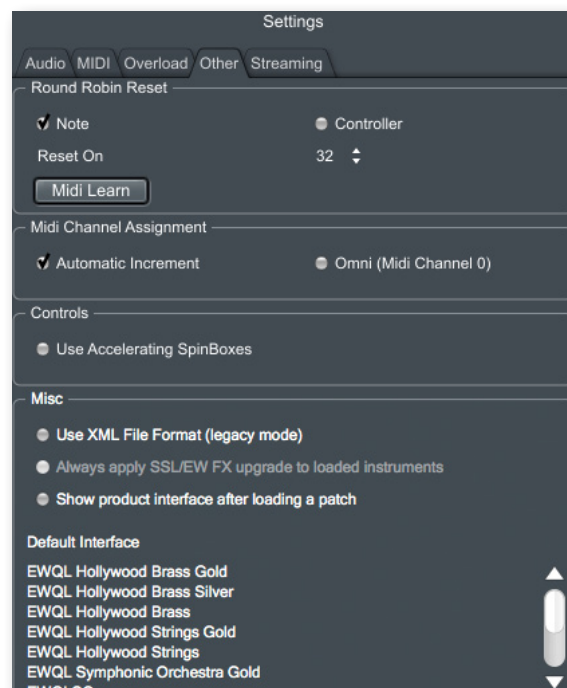
If the CPU Load exceeds the specified percentage, PLAY will lower the load by dropping those voices that started playing earliest. A CPU overload can cause digital artifacts, such as audible pops, short drops in the audio output, and other problems, which usually sound worse than dropping old voices. This protection is most often needed in projects with lots of instruments playing at once. During playback of your project, keep an eye on the CPU display in the Player view to see how close the CPU is to reaching the Overload parameter you set in this dialog.

As a general rule, set the **CPU Load Limit** control as high as you can without getting the digital artifacts, but not all the way up at 100%. The default value of 80% is good for most systems, so leave it there unless you start hearing problems in the playback. Finding the right setting for your environment may be a matter of trial and error.

If the playback of your projects occasionally reaches the overload point, you may want to consider using the “freeze track” feature available in most sequencers. If that does not help or it happens so often that it becomes too much of a hassle, then you may need to consider getting more capable hardware or spreading the project across multiple computers networked together.

Step 6: The “Other” Tab

The Other tab includes groups of controls to specify several other features of the PLAY 4 software. The image at the right shows the variety of controls on this tab.



A round-robin articulation contains two or more slightly different samples for each note. The samples are played in rotation each time the key is struck repeatedly, giving a more realistic performance, avoiding what’s often called the “machine gun effect.”

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The PLAY Engine remembers which sample should be played the next time the note sounds. If, for example, a round-robin patch contains two samples, A and B, and a piece uses that note 7 times, the engine plays A B A B A B A. If the piece is played again from the beginning, the engine will play starting with B, because that's next in order. The second rendition will be subtly different. Being able to reset all round-robin articulations to the beginning of the cycle allows for consistent playback.

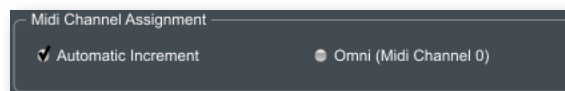
The controls in the **Round Robin Reset** group allow the user to specify whether a MIDI note or MIDI control code will reset the round-robin cycle to the beginning. Use the radio buttons to select which type of MIDI event will cause the reset. The numeric value in the spin box specifies which note number (middle C equals note 60) or which control code (CC) will be interpreted as a Reset (pick a note or a CC not otherwise used). To set the numeric value in that control, do one of the following:

- click on the up or down arrow with the mouse
- click in the control to give it focus and type in a number with the computer's keyboard
- hover the cursor over the value and use the mouse wheel
- click on the Midi Learn button and then play a MIDI note or send some MIDI control code data; the checkbox and the numerical value will reflect the MIDI data it receives; click the button again to turn off the Midi Learn feature

Once you have set this value, all the round robin instruments in any given MIDI channel will be reset when that note or CC value is received.

The **MIDI Channel Assignment** group allows the user to select what happens when a new instrument is opened in PLAY:

- **Automatic Increment** causes each new instrument to be assigned automatically the MIDI channel that matches the number of the instrument being opened. For example, if three instruments are currently open, when you open the next instrument, it will be assigned channel 4.



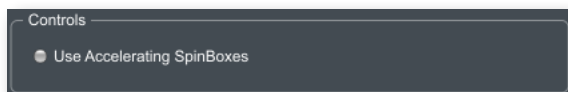
- **Omni (MIDI Channel 0)** causes each new instrument to be assigned MIDI channel 0. An instrument in this Omni mode responds to MIDI events on every channel 1–16. This is the default behavior, so that when anyone new to PLAY first opens an instrument it will play notes no matter what MIDI channel is sending them. Many users will want to change to Automatic Increment in order to save time when building a project.

Note the following behavior when Automatic Increment is in force:

- If you delete an instrument or manually change channels, a new instrument may open with an already used channel.
- If you replace one instrument with a different one, the new instrument will inherit the MIDI channel of the instrument being replaced.
- If you open a file containing multiple instruments (known as a “multi”) and the instruments were set to Omni (MIDI channel 0), they will be assigned unique non-zero MIDI

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channels. Those multi-instrument files with instruments set to a specific (non-zero) channel will not have the channels changed.

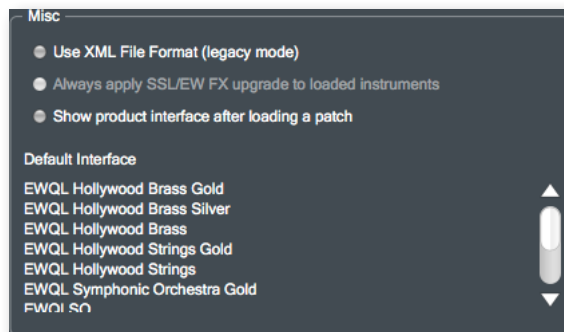


The third group, called **Controls**, gives the user the option to set the behavior of spin boxes. When this item is checked, the longer you hold down

the mouse on an up- or down-arrow, the faster the value changes. The advantage is that large changes can be accomplished faster; the disadvantage is that when the values are changing rapidly, it's harder to stop exactly where you want and a second adjustment may be necessary. When this item is unchecked, the rate of change is constant, no matter how long the mouse cursor stays pressed on the arrow.

The group at the bottom includes 4 options you can change.

The one at the top of the group asks whether you want to save your projects in XML format. You should only enable this option if you work with a lot of old projects and go back and forth between old and new versions of PLAY. The current “binary format” is more efficient than the older “XML format.”



Next in this group is a checkbox for setting the default behavior for the Mixer-page plug-ins. It is enabled when you have a license for the SSL/EW FX Upgrade (see page 78 for information about this feature). When checked, any instrument you open in PLAY automatically has the SSL/EW FX section inserted into it. When unchecked, an upgrade prompt is displayed when opening the FX drawer for instruments that do not currently contain the SSL/EW FX section.

If you check the option “Show product interface after loading a patch,” then the UI for all views (Player, Browser, and Mixer) immediately changes to the look of the just-loaded library. If you leave it unchecked, then it will continue to use the prior UI until you explicitly select a new instrument to display.

At the bottom of the group is a list of all the currently installed PLAY virtual instruments. Select the one whose UI you want to display when the PLAY plug-in opens in a sequencer or other host. This selection does not affect what displays when you open PLAY in stand-alone mode; in that mode, you are opening a specific library and that library’s UI is what you will see first. (Note: once you open any specific instrument, its UI will appear no matter which interface is the default.)

Playing a First Note

Step 7: Loading an Instrument

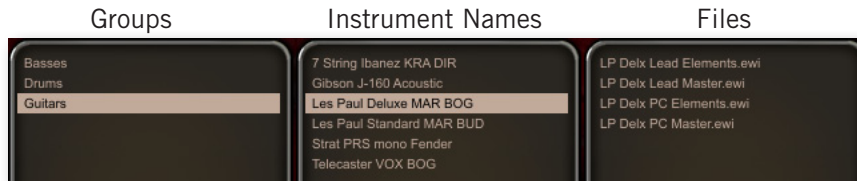


If the Browser View (shown here) is not currently displayed on your screen, go there by clicking the Browser button near the top of the UI.

The left-most column has two regions: a list of open instruments at the top, and both the System and Favorites panes at the bottom, though only one of the bottom panes can be seen at a time. The one or more installed libraries should be listed in the Favorites pane. If you click on a library name, a set of folder names appears. Click on a folder and the contents of that folder appears in the column to the right.

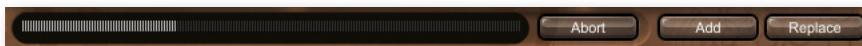
After opening either one or two levels of subfolders (depending on the library), you should see one or more files that end in a “.ewi” extension. These are EastWest instrument files that can be opened. See an example below showing the case where two sub-levels appear.

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How to use the Browser view is explained in more detail in Chapter 8, starting on page 70. For now, the goal is to open a single instrument so we can hear the PLAY Engine play a note, verifying that the installation, authorization, and setup were successful.

Click on one of the .ewi file names. With that .ewi file name still highlighted, click on the Add button near the bottom of the window. Look quickly at the progress bar to the left of that button and you should see the color change from left to right as the instrument loads into memory.



Step 8: Generating a Sound

If the instrument has opened successfully, some of the formerly tan-colored keys on the onscreen keyboard turn white. These are the playable notes. If some keys turn blue, those are keyswitch notes. If you use the mouse to click on one of the white keys, you should hear a note. If not, note that occasionally, some notes sound in only some of the keyswitched articulations. Before you attempt any other troubleshooting, try clicking on a few more notes over the full range of white keys.

If you don't hear a sound from any white key, the cause can be one of several reasons:

- You have not successfully authorized this PLAY virtual instrument.
- You have not inserted the iLok security key into a functioning USB port on this computer. An error message should appear if this is the case.
- You did not correctly set up the Audio parameters in step 2 above.
- Your sound card and/or speakers are not turned on.

Note that when using the on-screen keyboard, clicking near the bottom of any key generates a louder sound than clicking near the top. Make sure you're clicking near the bottom before you try anything else.

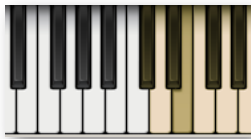
If you're still not getting a sound, try returning to the Settings dialog, and go to the Audio tab, as described in Step 2 earlier in this chapter. Click on the wide button in the Test Tone group. If you can hear the tone, then the audio path from PLAY to your speakers or headphones is working correctly. If you hear no tone (and the volume setting is loud enough that it should make an audible tone) then you have narrowed the problem to that part of the path. (Note that the Test Tone does not require a working license be installed in an attached iLok security key.)

Step 9: Using a MIDI Keyboard

If you were able to play a sound using the mouse and the onscreen keyboard, the next step is to do the same with a MIDI keyboard (or other device for sending MIDI notes). If you don't plan to use such a device, you can skip this step.

Make sure the keyboard is attached to the computer and powered on before opening the PLAY software. With an instrument loaded, press a key. If you hear a sound, then the keyboard is sending MIDI notes to the PLAY Engine and you're done with this step. If there is no sound, look at the onscreen keyboard when playing the note on the physical keyboard. If you see the corresponding key on the screen darken slightly, then the PLAY Engine is receiving notes. The color indicates the function of each key for the currently loaded instrument:

- white keys generate a sound
- blue keys are keyswitches (for selecting articulations within an instrument)
- tan keys are unused



If the key that darkens onscreen is not white (as in the diagram at the left), move to a white key and try again. (Note that if you have a keyboard of only a few octaves, you may have to shift it up or down to get in range.) The picture to the left shows an E depressed. It's best not to select one of the keyboard's black keys, *e.g.*, E-flat, because it's harder to see those keys darken on the screen.

If playing a note on the keyboard does not cause any key onscreen to darken, then the PLAY Engine is not receiving the MIDI data. Revisit Step 3 above to make sure you have correctly identified this keyboard in the Settings Dialog. Also verify that the MIDI, USB, or other cable is securely connected at both ends. If your keyboard plugs into a MIDI hub or a sound card, make sure that device is powered up. If you have not yet used this keyboard successfully on this computer, check with the keyboard's documentation to verify both the keyboard and the driver are properly installed.

Next Steps

Once you can load an instrument into the standalone version of the PLAY Advanced Sample Engine and can hear a note by playing on a keyboard, you're ready to explore the other features. Here are some of the things to try next. Use this manual and the accompanying manual for the specific library—or libraries—for which you own licenses and learn how to do the following tasks:

- Open more than one instrument and assign each its own MIDI channel so they can be played individually.
- Open a sequencer or other host and insert one PLAY as a plug-in. Write a MIDI melody in the sequencer and have the PLAY Engine plug-in play it.
- Play with the controls in the Articulations window, including the Active and Loaded buttons, as well as the articulation-specific volume controls.
- Load an instrument with keyswitches and play a musical phrase that jumps from one articulation to another mid-phrase. This can be performed in both the standalone and plug-in versions.

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- Adjust the parameters for specific articulations; that is, learn how to use all those knobs and buttons in the user interface.
- Learn how to save your settings so they can be reloaded at a later time. (Be careful when you save a new instrument to the hard drive so that you do not overwrite the original instrument definitions.)



PLAY

6. Instruments and Articulations

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[Click on this text to open the Master Navigation Document](#)

Instruments and Articulations

The Library Architecture

In the real world, instrumentalists can often make a choice how to play each note or phrase. These different ways the musician can create sound with an instrument are called articulations. Examples on a violin are:

- a *sustained* note
- a *staccato* note
- a *trill* between two notes
- a *pizzicato* note

On a snare drum, examples are:

- a *rim shot*
- a *drum roll*

In the world of sampled music, there's the same variety of ways an instrument can be played. In many—but not all—EastWest libraries, an affordance called a keyswitch allows the user to select among the articulations provided. Selecting one of the notes within a keyswitch tells the PLAY Engine to use the specified articulation until a new keyswitch note changes it.

ADVANCED: Occasionally, a keyswitch might select more than one articulation to be played at once, generating a layered sound. The library-specific manuals indicate when this is the case.

Each articulation is created from its own set of samples. These samples are audio files of each note of a single articulation, usually at one of several dynamic levels, such as *pp*, *mp*, *mf*, or *ff*.

The diagram on the next page shows the relationship among these important terms:

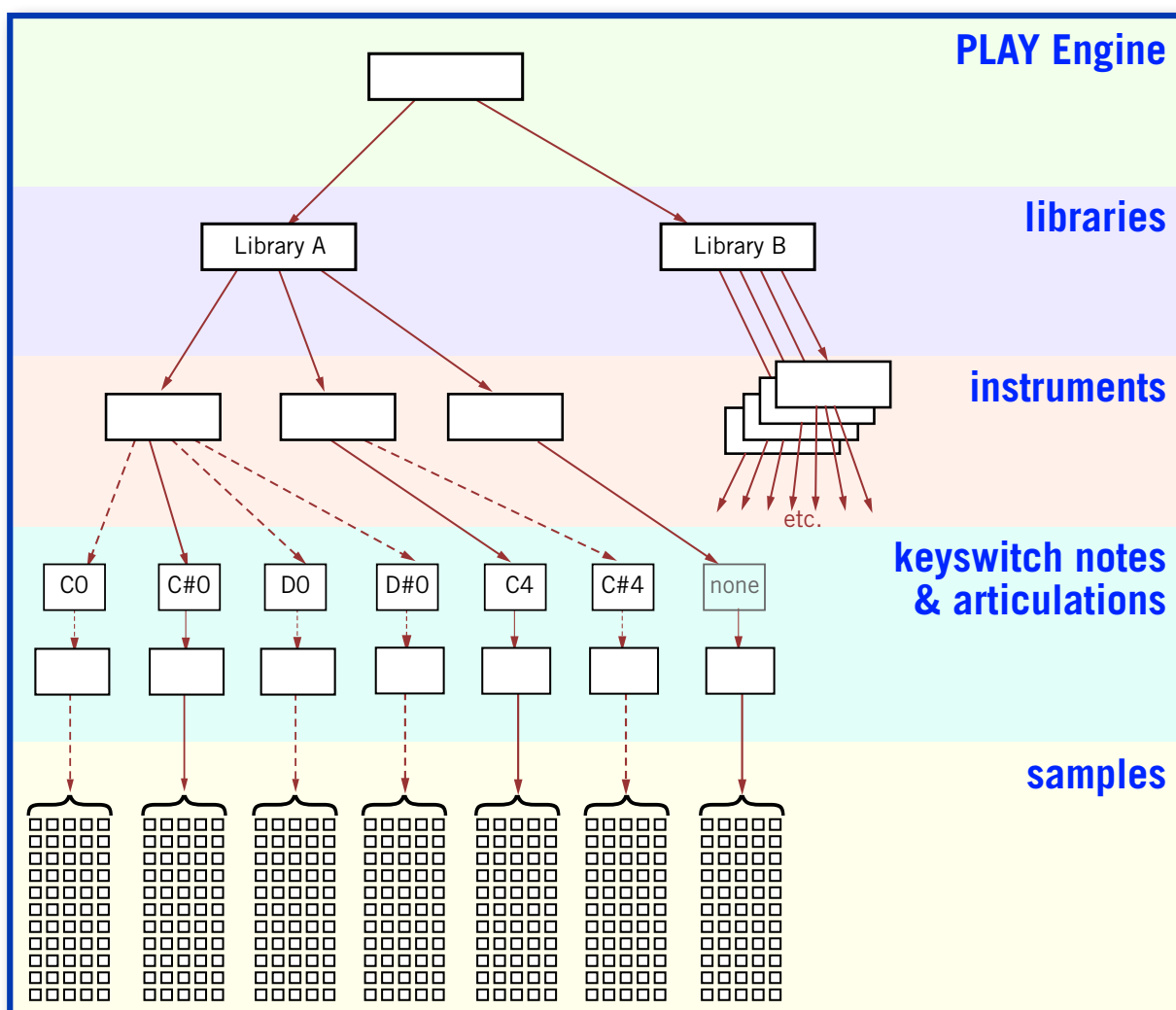
- **PLAY Engine**, the software program that knows how to generate audio from EastWest instruments
- **library**, a.k.a. **virtual instrument**, a collection of instruments playable with the PLAY Engine
- **instrument**, a collection of articulations and usually a keyswitch, opened as a unit in the PLAY Engine, almost always associated with a single live instrument
- **keyswitch**, a set of two or more notes used to select which articulation(s) to play
- **articulation**, a collection of samples recorded from a live instrument being played in a specific manner
- **sample**, a recording of a live instrument

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When you use the PLAY Engine to generate the sound of a note, you are specifying both an instrument and an articulation. (If you don't explicitly indicate the articulation, then the default articulation sounds. It's the lowest keyswitch note, often—but not always—C0. If an instrument has no keyswitch the default articulation is the only possibility.)

Once a MIDI channel is assigned to one of the instruments in the PLAY Engine, the samples can be played. This can happen either in real time, such as from a MIDI keyboard, or from notes saved in and played back by a sequencer. By assigning different MIDI channels to the different instruments, you can play several of them at once.

When using the standalone version of the PLAY Engine, only one instance can run at a time. But as many instruments can be loaded as the computer's resources allow. The number of MIDI ports determines how many unique MIDI channels are available. At 16 MIDI channels per port, a system with 6 ports can use 6 times 16, or 96 independent channels.



The diagram presents graphically the relationships described above. The arrows depict how each higher entity can contain or control the entities below it. The dotted lines represent the paths to instruments not currently sounding because the keyswitch controls which articulation is generating sound for any given note.

One keyswitch note is labeled “none.” That path flows from an instrument with only a single articulation; therefore, no keyswitch is necessary.

In the diagram, the keyswitch notes and articulations are grouped together to stress the one-to-one relationship: the keyswitch is the highest level—and single most important—decision maker in terms of what samples to play. Other parameters in the decision include the note being played, the velocity of that note, and the mic position (when different mic positions are available).

Instruments

Of all the levels mentioned above, instruments are the things you work with most. When you set up an ensemble, whether an orchestra or a three-piece band, you’re selecting instruments. You don’t have to select articulations right away. All the available articulations are part of the instrument.

Once you have loaded an instrument, you might choose to change its parameters from the default values. For example, you might alter the volume, adjust the AHDSR envelope, add a delay effect, and so on. If you want to have those parameters remain the next time you open this instrument, then you need to save it. There are three ways to do that:

- Choosing Save from the Main Menu saves all the open instruments in a single .ewi file, together with any parameter settings. You can open the group at a later time with everything the same. When asked for a folder, save it anywhere you like, but be careful not to overwrite the original instrument file in case you need to start with the default values at a later time.
- If, instead, you want to save a single instrument so you can load modified instruments one at a time, then make your changes and save them when only one instrument is open.
- If you’re running the PLAY Engine as a plug-in to a host sequencer (and not stand-alone), save the host project to the hard drive. All supported plug-in specifications save all parameters inside the plug-in when the host saves the project.

Note that the first two options allow you to load the modified instrument into another project; the third option does not.

Articulations

Any specific instrument might have only a single articulation or might have about a dozen different ways of playing the instrument that can be individually selected by means of the keyswitch. (Some instruments in some libraries have more than two octaves’ worth of keyswitch notes, but that’s rare.)

Because the MIDI channel is assigned at the instrument level, all the articulations respond to MIDI notes on the same channel. This approach allows a phrase to be contained in a single MIDI track even when different notes will be played with different articulations. One consequence of assigning the channel at the instrument level is that if you want to play a chord in which all its notes start at the same time, you cannot play one note in the chord using, for example, the staccato articulation and another with the sustain articulation. To do that requires you to load the same instrument twice and assign them to different MIDI channels.

All the articulations within an instrument are displayed in a list control in the Player View. If there are too many to view at once, a scroll bar is provided so you can move up and down through the list.

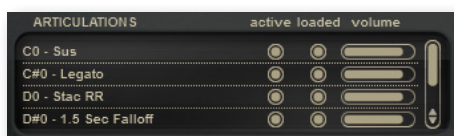
“Master” and “Elements” Instruments

When loading some instruments, you may see two similar instrument names in the Browser View: one with “Master” and one with “Elements” in the name. The two instruments are similar except that only the Master patch uses a keyswitch to select among the included articulations.

- **“Master” instruments** have all articulations active when first opened. A keyswitch (see below) allows the user to select one articulation to play at any time. This is a good choice when you anticipate switching among the articulations. Unload any articulations you don’t need to remove their samples from memory.
- **“Elements” instruments** open with only the default articulation active. That’s likely to be the first one in the list. All others are set inactive and their samples are not loaded into memory. Secondly, there’s no keyswitch, so it’s not easy to change from one articulation to another in the middle of a piece. Thirdly, you can set the Active and Loaded indicators to select which articulation(s) you want to play. Note that if you load and activate two or more articulations, you will achieve a layered sound (the multiple articulations playing simultaneously). This is a good choice when you need a single articulation for the entire piece; or you can load the same Elements instrument more than once, set them to different single articulations, and use different MIDI channels for different articulations, instead of the keyswitch.

Viewing the Articulation List

To see the list of articulations after loading an instrument, go to the main PLAY window, where you will see a list control that looks something like the image below. (The exact appearance can vary a lot from one library’s UI to the next, so check your library-specific documentation.) Each row in the list is a single articulation. The image below shows the simplest form the Articulations control can take, with only 4 articulations visible at once.



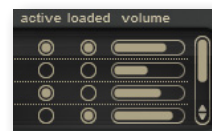
The control at the left shows an articulation list when a keyswitch is selected. At the left is the note name of the keyswitch that initiates the use of each articulation. The most common first keyswitch note is C0 (MIDI note 24). But if the range of the playable notes extends into that part

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of the keyboard, then a different octave (for example, C4, MIDI note 72) might start the list. (See the section called keyswitches, later in this chapter.)

After that is a description, usually abbreviated, of each articulation. See a list of the most common abbreviations later in this chapter.

Next are two buttons. The first button, labeled “active,” allows the user to turn on and off the playback of a given articulation. It’s like a Mute button, but at the level of an individual articulation. The second button, labeled “loaded,” allows the user to load or unload that articulation’s samples from the computer’s memory. Unloading samples free up RAM so you can load more instruments than you might otherwise. Click on a button to toggle between On and Off.



To the right of the two buttons is a volume control. This allows you to adjust the loudness of any specific articulation relative to that of other articulations in the same instrument. The scroll bar at the far right allows you to move up and down through the list, much like any other scroll bar except that the arrows to move up or down by one item are both at the bottom.

Keyswitches

A keyswitch is a means of selecting an articulation to make current. It responds to a pre-defined set of MIDI notes, each of which corresponds to one articulation. The note name is listed at the left in the Articulations list in the Player View.

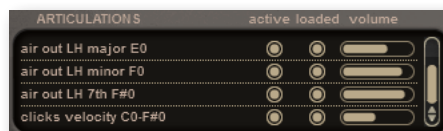


The onscreen keyboard indicates the keyswitch notes by turning the keys blue. You can use this shading as a reminder of what keys to push on your MIDI keyboard, or you can use the mouse to click on one of these keys to change the articulation. When a keyswitch is selected—by whatever method—the key changes to a different shade of blue, as in the D# in the image at the left.

ADVANCED: Note that it is possible—though not common—for an instrument to have more than one articulation but no keyswitches; this is a way for the library producer to create a layered effect. The expectation is that most users will want to play both layers together, but the “active” button in the articulation list can be used to turn off one layer or the other, if desired.

You can switch from one articulation in a keyswitch to the next by sending a MIDI note to the Player on the appropriate channel. The notes are always outside the range of playable notes for the instrument. Most EastWest keyswitches use notes in the octave from C0 to C1. The small number of very low instruments that can play in this range use notes above their range, often starting at C4. See specifics about keyswitch notes in the library-specific manuals.

Occasionally you may see an instrument with a range of keyswitch notes listed in the Articulations



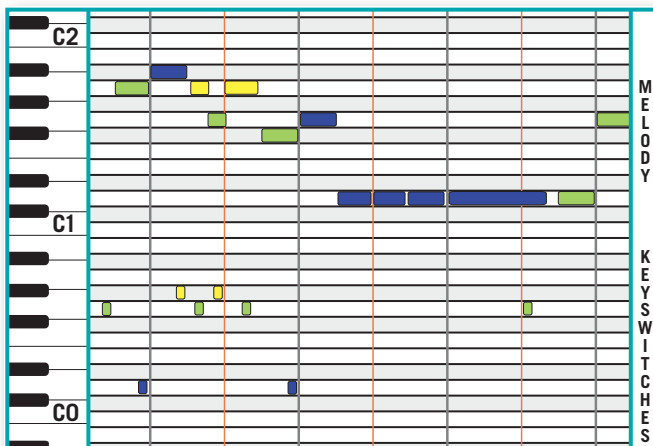
list. An example is shown in the image where you see “clicks velocity CO-F#0.” This is an audible component that is layered in using separate samples. This articulation plays for all keyswitch notes from C0 to F#0 and it has its own volume control (shown here at a reduced loudness compared to each sound it’s layered with). They could be key clicks, string noises, or any separable component of a sound that the producer considers optional.

How to Position Keyswitch Notes

The Note-On event of a keyswitch note must precede every audible note it’s intended to affect. The position of its Note-Off event is not important.

When using the PLAY Engine live, press the note before the first note to that you want to use the new articulation.

In a sequencer, draw the note anywhere as long as its start occurs before the start of the notes to be affected. Some musicians like to give keyswitch notes very short durations or velocities close to 0, purely as a visual reminder in the sequencer track that these are non-audible notes. The picture on



the right shows a sequencer track with notes above C1 and keyswitches below C1. In this drawing, the color of each note matches the color of the keyswitch in effect. Note especially how the last keyswitch note starts *and ends* during the D1 note directly above it without affecting that note.

Tips on Using Keyswitches

Once a keyswitch note is sent to PLAY, its articulation remains in effect until either another keyswitch note is sent or the instrument is unloaded (with the Remove button or by closing the PLAY Engine). This behavior can have unwanted side effects when moving back to an earlier position in the piece to replay it. As an example, suppose you place four keyswitch notes in a track at the given measures:

- D# measure 5
- E measure 12
- F# measure 17
- E measure 23

Problem 1: You play the piece through to the end. You then play it over again.

The first time you play it, the beginning is played with the default articulation (keyswitch note C). The second time you play it, the beginning is played with the articulation con-

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trolled by note E. That's the state the instrument was left in at the end of the piece and there's nothing to reset it.

Solution 1: Put an explicit keyswitch before the first audible note in the track.

Do not rely on the default unless there will be no keyswitches in the entire track.

Problem 2: You stop at measure 19, move back to measure 14, and start playback from there.

The first time, measures 14, 15, and 16 play the articulation on note E. The second time, those measure use the articulation on note F#. That's the state the instrument was left in when the piece was stopped.

Solution 2: Have predetermined places to restart and position keyswitches at each one.

Any solution here would require more keyswitch notes and would be more intrusive. It's nice to have the freedom to stop and start a piece at any point. At least be aware of this problem and decide whether to live with it or take steps to avoid it.

Samples

The user of the EastWest PLAY System does not need to work with samples directly. They are the recordings of each provided articulation of each instrument at each recorded dynamic level. The software within the PLAY Engine knows how to select the samples to play based on many factors, including the selected articulation; the velocity of the current note; and, in some cases, whether the ends of the MIDI note are close enough to other notes to use a legato sample.

The many, many samples are what make up the bulk of what gets written to the hard drive during installation. And it's the Main Menu's setting for

Current Instrument > Stream From Disk

that determines whether to leave most of the sample data on the hard drive until needed or to load it all into memory (for a given instrument).



7. The Player View

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The Player View

The PLAY System displays three primary user interfaces (UIs) in its main window: the **Player View**, the **Browser View**, and the **Mixer View**. The Player View, described in this chapter, displays the controls for one instrument at a time. The exact set of controls and their appearance vary from one library to the next. This is the UI where most of the work is done to define the audio output.

The Browser View displays a listing of installed libraries and allows you to open individual instruments from the computer's file system. Also in the Browser View, it is possible to set up virtual folders for quick access to frequently used instruments. This view is described in detail in the next chapter.

The Mixer View displays multiple instruments (and in some cases, mic signals) next to each other, allowing quick access to the most frequently used controls: dynamics, panning, and input and output options. This view has its own chapter, starting on page 76.



The chapters on the 3 views describe the appearance and behavior of the standalone version. Because only minor differences between the standalone and plug-in versions exist, see Chapter 88 for a description of the ways the Plug-in version differs.

The Four Regions in Player View

In general terms, the window contains four regions, as outlined in the image on the previous page. Because the exact position of these regions and what's located in them can vary significantly from one library to the next, see the separate manuals for the libraries you own to read the details about the appropriate UI.

From top to bottom, the four regions are:

- the basic PLAY System controls (blue box)
- the large region in the center where a user modifies individual articulations (red box)
- controls just above the keyboard that provide status information (green box)
- the keyboard at the bottom (yellow box)

Before discussing what's included in each of these regions, let's look at the types of controls seen in the first 3 regions mentioned above.

The Various Types of Controls

There are five distinct types of controls in the UI that can accept user input. Some controls can accept data from both the keyboard and the mouse; others can have their values changed with the mouse only. The exact appearance of controls may vary from one library to another, but how they behave remains the same.

On/Off Buttons: This kind of button has two states: On and Off. The On position is indicated when its light is illuminated. The only way to toggle a button between its On and Off states is by clicking the button with the mouse cursor.

Some knobs and other controls may use a button as an overriding on/off switch. That is, the controls are inactive unless their button is turned on. Looking at the two images at the right (separated by a red line) the three knobs in the Delay group are inactive in the bottom one because the button to their left is turned off.



Action Buttons: This type of button performs an action when clicked with the mouse. Examples include: opening an instrument, moving between the Player and Browser views, and adding a new folder to your list of favorites.

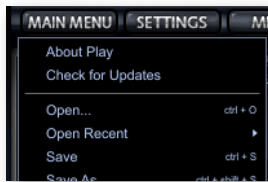
Knobs: A knob is used when it's possible to modify a numeric value (for example, loudness or a time interval) over a definite range. The knob can be rotated until the desired value appears in text immediately adjacent to the knob. (Note that most knobs will jump to specific, preset values in the permissible range, so it may not be possible to set the value to a specific arbitrary number. Select the number that most closely approximates the effect you want to achieve.) See examples of knobs in the image above.

To modify a knob's value, start by clicking on the knob with the mouse. To *increase* the value, drag the mouse cursor *upward* with the left button held down. To *decrease* the value, drag the mouse cursor *downward* with the button held down. If you hold down the

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Ctrl key on a PC or the Cmd key on a Mac while you click and drag, the knob goes into fine-tuning mode, allowing you to make smaller changes than in the normal mode. The mouse cursor disappears temporarily to let you know you're in the fine-tuning mode.

To set the knob to its default position, double-click on it.



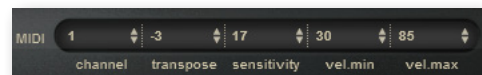
Drop-Down Lists: When the user can select from a selection of text strings, click on the control to display the list of options. With the mouse, scroll through the list (if necessary) and then click on the choice.

Note that the PLAY System Main Menu has been implemented as such a drop-down list. The top part of the menu is shown at the left.

Spin Boxes: A spin box allows the user to enter integer values over a fixed range. In Player View, an example is the spin boxes labeled “MIDI.” See the image below.

To enter a specific numeric value, click on the spinner's number and the digits change color.

Then type in a valid value. Or hover with the mouse and use its wheel to change the value.



The Basic Controls

In a band along the top of the EastWest PLAY System window live four basic controls:

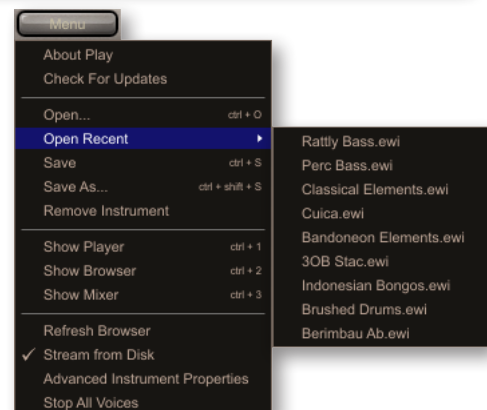
- the Main Menu
- the Settings button
- buttons to move among the Player, Browser, and Mixer Views
- the Instrument List

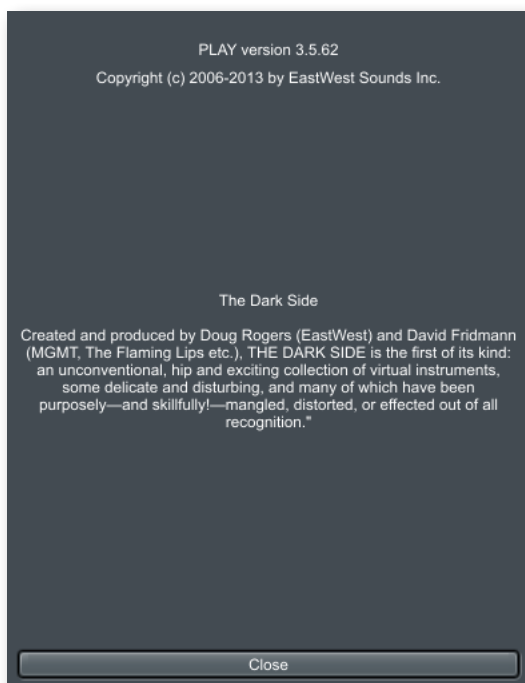
These buttons are present in all 3 views, though their appearance may be slightly different in different views. The layout can also vary a lot from one library to the next, as shown in the two images below. The images are Stormdrum 2 on top and Gypsy on the bottom.



The Main Menu

The Main Menu drop-down list operates much like the menu bar in most other programs, including its use of cascading menus, as shown in the small menu that opens to the right of “Open Recent” in the adjacent image. Click on the Main Menu control to get quick access to these tasks. (In some libraries, it is called only Menu.)





About PLAY: Clicking on this first item in the menu opens the “About Box.” The upper part shows pertinent information about the product, including the version, and brief copyright information. If you ever need to contact EastWest about support, please copy down the complete version number from this window and include it with your question.

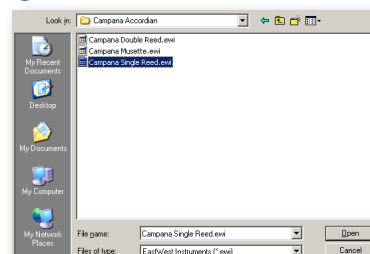
The lower part lists information about the library of the currently selected instrument in this instance of PLAY.

Check for Updates: This menu item uses your Internet connection to see whether a version newer than this one is available to be downloaded.

Open: This menu item is one way to load an instrument from the file system. You can open one of the original instruments installed on your hard drive, or a file you saved from the Save operation (see below).

Only a file with the extension “.ewi” can be opened. You cannot, for example, open a “.aif” or “.wav” file, or any instrument not specifically designed to work with the PLAY Advanced Sample Engine.

It’s usually faster to open instruments from the Browser View, and it’s recommended that the Browser be used for both out-of-the-box instruments and those you have modified and saved to the file system. The behavior in terms of adding a new instrument to the list of open instrument or replacing an existing instrument is the same as in the Browser. See page 73 for details about opening an instrument in the Browser view.



Once the instrument has been opened, it can become the currently selected instrument (but only if “Show product interface after loading patch” is selected in the Settings dialog). All the controls in the Player View apply to the newly opened instrument.

Open Recent: If you hover the mouse cursor over the Open Recent item in the Main Menu, a list appears of the last 9 instruments opened. This list includes instruments opened from the Open menu item as well as from the Browser. Click on an instrument’s file name to reopen it. This list of recent instruments is shown in the Main Menu image at the start of the description of the menu.

Save: It’s possible to write the current collection of instruments—including any changes you made with controls in the Player View—to a file in the file system so that it can be

reopened at a later time. The file you save to will have a .ewi extension. When you're ready to reopen the file, you can use either the Open command in the Main Menu or the Browser View controls.

Note that when the PLAY Engine is run as a plug-in, the host saves the current status of its plug-ins with every save operation. There are two reasons you might want to do an additional, explicit save from the Main Menu:

- As a further precaution, in case of an unexpected problem.
- To be able to open this same configuration in another project. When you've selected several instruments that sound good together and have maybe made some modifications to individual instruments, you might want to reuse this ensemble in another piece. If so, save it now to the file system and open it already configured when you're ready to reuse it.

Save As: This performs the same operation as the Save option (see above), except that it allows you to change:

- The directory on the hard disk in which the file will be saved.
- The name of the file.

Use this kind of save when you want to save your changes without overwriting the state of the instrument file before you made the recent changes.

Remove Instrument: This menu pick removes the currently selected instrument from this instance of PLAY.

Show Player, Browser Mixer: These 3 options afford the user another way (besides the buttons at the top of the screen) to change the view. And note the listed accelerators of Ctrl 1, Ctrl 2, and Ctrl 3 (Cmd 1, Cmd 2, Cmd 3 on an Apple) that are a third way to change to a different view.

Refresh Browser: This option appears only when the Browser view is open. If you have made a change in the file system while this instance of PLAY is open, and the change is not shown in the list of folders and files in the Browser, then use the operation to force PLAY to reread the directory in the file system.

Stream From Disk: The PLAY Advanced Sample Engine has two ways to play sample data. This menu item allows you to toggle between these two approaches.

- When the menu item "Stream From Disk" is checked, only a small part of the sample data is loaded when the instrument is first opened, enough to start playing the sample immediately while it waits for the rest of the data to arrive from the file system.
- When the item is not checked, the entire set of sample data is loaded into RAM when the instrument is first opened.

This setting applies only to the currently selected instrument. Therefore, it's possible to have some instruments entirely loaded into the computer's memory and others ready to stream from the hard drive. Stream from Disk is the default for every newly loaded instrument.

Advanced Instrument Properties: Selecting this option opens a dialog box, allowing the user to perform several actions that apply to the current instrument. See the description of that dialog box below.

Stop All Voices: Select this item if a note continues to play after the Note Off event, often called a “stuck note.” It will shut down all notes immediately.

Advanced Instrument Properties Dialog

Selecting the Advanced Instrument Properties option from the menu opens the following dialog, with its 2 tabs. The first of those tabs, Instrument Properties, is described here. The description of the second tab starts on page 60.

The Instrument Properties Tab

Note that each open instrument from the current instance of PLAY has a row in the table. If more instruments are loaded than can fit in the dialog box, use the scroll bar to move up and down through the list.



The **Engine Tempo Sync** control is the one control in this dialog that applies to PLAY in general and not to specific instruments in the table. But only some instruments can actually use this tempo setting. An example of this is 1st Violins Measured Tremolo TS.ewi from Hollywood Strings. The “TS” in the name indicates that the patch uses tempo sync to determine the rate of the tremolo. Another example is the many performances in the Mickey Hart Live Loops folder that comes with Quantum Leap Stormdrum 3.

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This control only applies when PLAY is run in standalone mode; the control is not present when this dialog is opened in PLAY as a plug-in. Instead, PLAY uses the tempo from the host to sync to when run as a plug-in. The value displayed here is a tempo in beats-per-minute (bpm).

For each instrument open in this instance of PLAY, its name appears at the left, followed by 10 modifiable parameters. Some of these controls are duplicates of those in the Player view, and changing the setting in one place also changes it in the other.

Transpose raises or lowers the incoming signal by one MIDI note (one semitone). For example, let's say you transpose by +1. If you then play C3 (middle C, MIDI note 60), the PLAY engine will convert that to C#3 (MIDI note 61) before turning it into audio. No processing is done to the audio signal. Note that this will not affect the highest or lowest note in the range; if E5 is the highest note for some instrument that has been transposed by +1, and you play the E5 key, you will not hear F5 because there is no audio available for F5.

The **Tune** controls retune the audio signal during playback. Unlike the Transpose control (discussed above), Tune change the pitch of the audio. As an example, a value of “-1.30” in this control moves the pitch of this instrument down 1 half-step plus another 30 cents. The larger the interval you specify, the more the sound quality will degrade, so be sure to listen to the output to make sure you like what you hear.

The **High Key** and **Low Key** controls specify a range of notes to which this instrument will respond. You can use this to remove notes you don't want to sound, even if the note is played on the keyboard or in the sequencer.

You can also use these controls to combine multiple instruments in a single MIDI channel. As an example, maybe you want to play guitar chords from E1 to E2 and guitar picks from F2 to C4 on your MIDI keyboard, even though chords and picks are separate articulations. Load 2 separate files in the same MIDI channel, or, when available, the same guitar Elements file twice. In one of them, set the High Key to E2 and set the articulation to some type of chords. In the other, Set the Low Key to F2 and set the articulation to single picked notes. With this setup, a single MIDI keyboard—or single track in a sequencer—can play both articulations.

The **Velo Min** and **Velo Max** controls specify the minimum velocity and maximum velocity to be processed for that instrument. If PLAY receives a value below the minimum, it will use the stated minimum instead. And a similar remapping occurs at the upper end, as well. These are most useful when playing live on a keyboard, but they might help create dynamic boundaries in a sequencer, too.



The **Sensitivity** control accepts values in the range from -100 to 100. This value determines in what part of the dynamic range the instrument is most sensitive. If the Player view includes a Sensitivity graph, changing the value in this dialog will change the graph, too. The image at the left shows a sensitivity of



-40, which translates mid-level velocities higher (velocities are along the horizontal axis, loudness along the vertical axis). This compresses forceful hits on the keyboard into a narrow range of loudness; at the same time, light keyboard touches might vary from *pp* all the way to *mf*, giving you greater control over the softer sounds and less control over the louder sounds.

The image at the right shows a sensitivity graph for a value of +90. In this case, it's easier to get the loud sound you want because a greater range of velocity values will give you a narrow range of loudness.

The **Key Switch** control sets the default keyswitch note for the selected instrument. The default note specifies the articulation in the keyswitch file that plays when no keyswitch note has been played in its MIDI channel in the current session. For example, if you usually want the articulation assigned to note D#0 to be heard at the beginning, then you can set the default to D#0 and not have to add a D#0 before the first note.

The instrument must be saved to the file system (with a .ewi extension) and reopened from that .ewi file for the new default value to take effect.

The **Pitch Bend Intensity** control specifies how strongly the Pitch Bend Wheel modifies the pitch. A value of "100%" specifies that pushing the Pitch Bend Wheel all the way up or down moves the pitch by an octave. The smaller the value, the finer the control the user has when making subtle bends of only a few cents. Negative values reverse the direction, so pushing the wheel up lowers the pitch.

The **Voice Limit** control specifies the maximum number of voices that can play at once for this instrument, up to a limit of 5000. The default value depends on the library, and sometimes on the instrument. If you notice the value in the Voices display (directly above the onscreen keyboard) getting very close to the currently set limit, then you should consider raising the Voice Limit. If the PLAY engine needs more voices than this control allows, it will start turning off the samples that started playing first.

Generally, instruments that can play more than one note at a time, such as those with keyboards, require more voices than monophonic instruments, such as the woodwinds. remember that some instruments may play more than one sample when sounding a note (most notably any instrument that includes a cross-fade, but others as well). And for any instrument that includes release trails, those are separate samples and, therefore, separate voices.

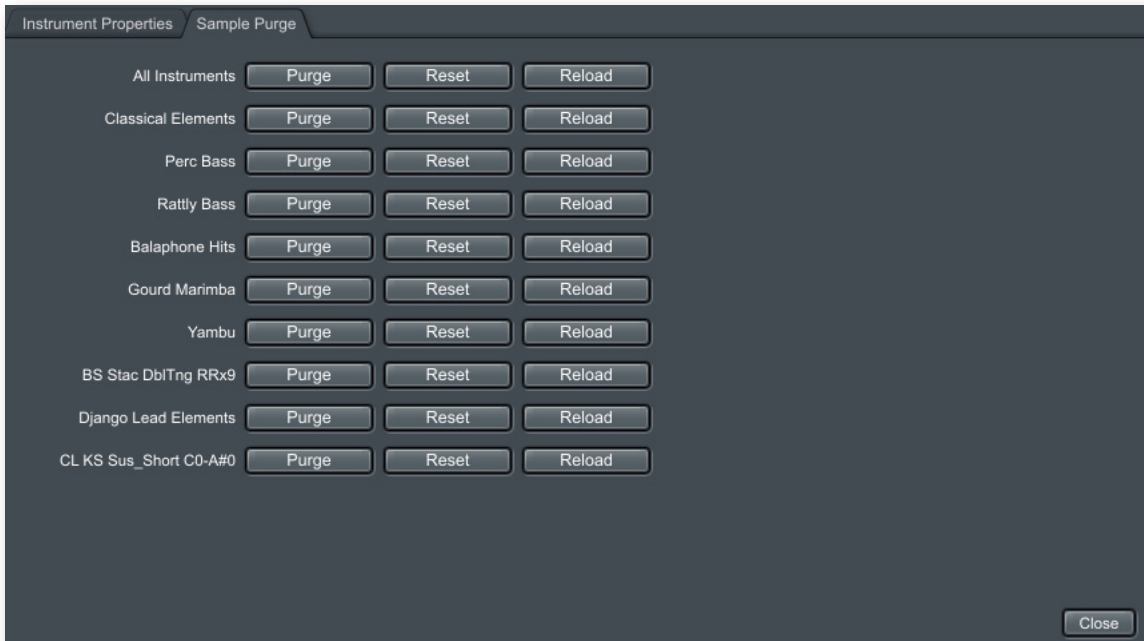
One reason you might want to reduce the Voice Limit parameter to a very low number is to ensure that an instrument never plays more than one note at a time, such as in the bass line; this technique maintains the monophonic sound even when the MIDI keyboard player is slow to release a key. Be sure to factor in release trails (if any) when setting the parameter for such a reason.

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Another reason to reduce the Voice Limit is on a piano part that uses CC64 to hold down the sustain pedal. If the sound gets muddy, consider lowering the Voice Limit so that the longest-held notes get shut off when too many notes would otherwise sound at once.

The Sample Purge Tab

The controls on the **Sample Purge** tab provide a means for the user to remove from the computer's memory any samples not actually necessary to render the current project. Each open instrument has 3 buttons to manage this task, and the top row of buttons applies the process to all instruments in this instance of PLAY in a single step. That means you can run a Purge for one instrument at a time or for the whole project.



The key to how Purge works is that each sample keeps track of whether it has been played since the point when this instance of PLAY was most recently opened. Any samples that have not been played are assumed to be not needed for this project.

Do not purge too soon. Wait until you have a core of instruments and parts that are fairly stable, even if you will be adding more instruments. If you purge while you're in the middle of significant changes, you'll end up repeating the process more often than you need to. The goal of purging is to free RAM for loading more instruments and their samples; if you're not running low on available sample memory, there is little benefit in a Purge.

The 3 buttons are labeled Purge, Reset, and Reload. Here are the steps to use when purging samples:

1. Optionally, press the **Reset** button to un-tag all samples. This step is required if there's reason to believe a significant number of notes not in your project have been played in this session.

2. Play your project—or at least the instrument(s) you’re about to purge—all the way through. This step tags all the samples you want to preserve in memory.
3. Press the **Purge** button. This step removes from memory all the un-tagged samples for the current instrument, that is, the samples not used in your project.

The **Reload** button reloads the samples for the current instrument that were purged with the Purge button. Press this button any time you make changes to an instrument’s part where you may have added notes that were purged earlier. You can then re-run the steps above.

The Settings Button

Pressing this action button opens the Settings Dialog. This collection of controls is described in detail in Chapter 5, Getting Started, because several of the controls within this dialog must be set up before the PLAY System will work correctly. Go to page 31 for more information.

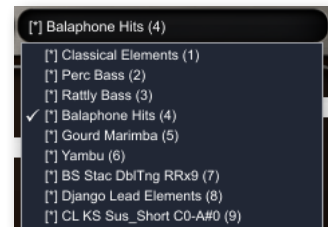
The Browser, Player, and Mixer Buttons

The purpose of these action buttons is to move among the 3 views. Buttons appear only for the 2 views not currently visible.

The Instrument Drop-Down List

In the upper right-hand corner of the PLAY window is the last control in this part of the window: the Instrument drop-down list. All instruments currently open in this instance of PLAY are listed here. Click on the control to open the list. Selecting an instrument makes it the current instrument, which means:

- The controls in the Player View now display the values for that instrument.
- The graphics in the Player and Browser views are dictated by this current instrument.
- The onscreen keyboard plays notes from this instrument.
- Any actions that apply to the current instrument, such as Remove Instrument, affect the one you select from this list.



The number in parentheses is the MIDI channel currently assigned to each instrument. Or the word “Omni” means no specific channel has been assigned, meaning that it responds to all channels. Use the MIDI Channel control to set this value for each open instrument. To have this value set when an instrument is opened, read the description of the MIDI Channel Assignments on page 37. The asterisk [*] before an instrument name means it includes unsaved changes.

Note that selecting an instrument in this control does *not* indicate which instrument will sound when you press a note on an external MIDI keyboard. That behavior is controlled by the choice of MIDI channels.

The next set of control to be described are in the large, center section of the Player view. Remember that controls for a single purpose can vary a lot in appearance from one PLAY library to the next.

The Stereo Channel Controls (Channel Source and Pan)

There are three controls that affect how the left and right stereo input channels contribute to the audio output of each note. Two of them appear in many of the virtual instruments and are described here. The third varies by library, so it is described in the library-specific manuals.



Channel Source

If present, this drop-down list provides four possibilities for using the separate left and right tracks of the stereo signal.

- **Stereo:** This is the default setting. The input audio data in the left channel feeds the left channel output, and the input data in the right channel feeds the right channel output.
- **Mono (Sum):** Selecting this option mixes the two stereo channels from the input into a single mono channel, so that the output signals of the two channels are now identical.
- **Mono From Left:** When this option is selected, the input audio data from the left channel is used for both the left and right output. The right channel input is ignored.
- **Mono From Right:** This option, the opposite of the one above, uses input audio data only from the right channel and sends it to both left and right output. The left channel input is ignored.

Note that it's possible for the left and right input audio to be something other than the data from left and right mics capturing the same audio event. A library's producer might choose to capture two related but different events and record each on a separate stereo channel within the same samples. Playing the samples in **Stereo** yields a layered sound with a perceived spatial distance between the two sounds. Playing them with a **Mono (Sum)** output merges them to a single location in the stereo sound field, making them harder to pick out individually. Choosing **Mono From Left** or **Mono From Right** removes one or the other from the mix. Look in the articulation listings within each library's manual to see how this feature will affect the sound of its instruments.

There may be lots of reasons for selecting a mode other than Stereo, for example, faithfully reproducing the sound of pre-stereophonic recording techniques.

Pan

This knob controls the relative dynamics of the two stereo channels, effectively moving the sound source to the left or right within the stereo field.

The Delay Controls



One common processing effect is known as Delay. When turned on, this effect causes each original note in this instrument to be repeated one or more times, producing something like an echo effect. The three knobs in this section of the UI define how this effect generates the output.

On/Off Button: This button activates the Delay controls. When it's off, The PLAY Engine generates no delay.

Time: This parameter specifies the time interval between each repeat of the note. The minimum value is one-hundredth of a second, and the maximum value is five seconds.

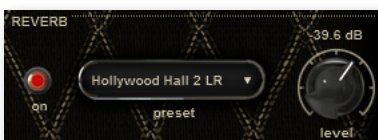
Feedback: With this parameter, it's possible to specify that some fraction of each repeat be fed back into the delay generator, causing a series of echoes. When the second knob is set at 100%, each repeat is fully as loud at its predecessor, causing the echo to continue forever with no diminution. A setting of 75% causes each repeat to be three-quarters as loud as its predecessor; eventually dropping below the level of audibility. Very low feedback levels will effectively limit the number of audible echoes to one or two.

If you need to stop a series of echoes that seem likely to persist longer than desired, the On/Off button will kill the effect.

Level: The third knob specifies the relative loudness of the first echo in decibels. A value of 0 dB indicates that the first echo is to be as loud as the original (and the feedback, if any) regulates the subsequent dynamics. A positive value, for example 2.0 dB, makes the first echo louder than the original. A negative value reduces the loudness of the first echo relative to the original note.

The Reverb Controls

The PLAY Engine's Reverb controls can simulate the natural reverberations produced when a sound is generated in an enclosed space. These are the natural echoes from the walls and even the surrounding air. They give an instrument or group the more natural sound we are accustomed to hearing when music is played live—or even in a recording of a live performance.



The PLAY Advanced Sample Engine uses a type of reverb known as “convolution reverb” in which a short sound called an “impulse” was generated in a real space, such as a Hollywood recording studio or cathedral. That “impulse response” was digitized and PLAY knows how to convolve this “IR” with the samples at

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playback time to approximate the sound of playing the specified notes in the specified performance space.

On/Off Button: This button activates the Reverb controls. When it's off, The PLAY Engine generates no reverb effect.

Preset: This drop-down list contains the names of all the available spaces for which IR's have been made available. Select the one that best describes the recording space you are trying to simulate.

Level: This knob specifies the loudness of the reverb relative to the loudness of the note. Negative values indicate that the reverb is quieter than the played note. If the level is too low, the effect may be barely audible or even not perceptible.

The AHDSR Envelope Controls

The term “envelope” refers to a series of five stages that shape the dynamics of each note, from the moment the sound starts until it ends. The stages are called:

- **attack:** the time in milliseconds from the beginning of the note until it reaches its highest volume
- **hold:** the time in milliseconds that the loudest point of the attack is maintained
- **decay:** the time in milliseconds that it takes to drop from the highest point of the attack to the sustained tone that follows
- **sustain:** the loudness of the tone, in decibels, that continues after the attack until the note is released
- **release:** the time in milliseconds for the note to diminish from the sustain level to silence (after the end of the MIDI note)

The initial letters of these five parameters give this envelope the name AHDSR.

ADVANCED: Many sample players and synthesizers from other manufacturers do not include the Hold parameter in the envelopes. You may, therefore, see this type of envelope referred to elsewhere as “ADSR.”

Parameters for the five stages can be controlled individually with the five knobs in the PLAY user interface. The exact location and appearance varies from library to library, but how to use the controls applies to them all. Here's the appearance of the Envelope controls from the Fab Four library.

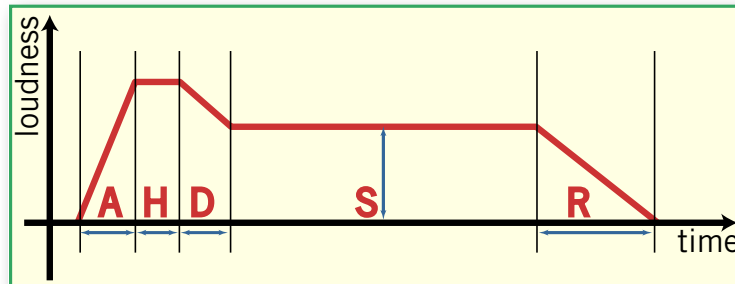


Each instrument in every library is preprogrammed with its own AHDSR values when installed. In many cases, there's no need to change these values; they can be used as they are, right out of the box. Or you may decide to modify these values to achieve a particular sound for that instrument. Note that in most cases these values have been set to achieve

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a natural, authentic sound to the instrument being sampled; the more you vary these values from the presets the less natural the PLAY System instrument is likely to sound. Only you can decide whether varying these parameters in a particular way achieves the sound you're looking for.

The following diagram charts how these five values shape a sound.



Attack, Hold, and Decay Parameters

These three values determine the overall length of the attack: the sum of the three numbers defines how long it takes for the sound to get past the initial force that might cause a louder beginning and start the sustained part of the note. Struck and plucked sounds tend to have more forceful and briefer attacks. Bowed and blown notes often have more gradual attack and decay parameters, achieving a more subtle attack. These are general guidelines with many exceptions.

The attack of a note normally spikes to a high point and then almost instantaneously begins to fall back to the sustainable tone. Setting the Hold value much above zero intensifies the attack by making it more prominent without making it louder, but can also make the sound less natural, which may or may not be what you want to achieve.

Making a change to these parameters can cause a significant change in how the instrument is perceived. For example, giving a piano sound long Attack and Delay values can make it seem less like an acoustic piano, more like a synthesized instrument.

Sustain Parameter

This is the only parameter of the five that is not a time interval. It specifies the loudness of the sustained part, in other words, what level the decay should drop to below the high point of the attack.

The length of the sustain section is specified by the MIDI Note events. That is, the sustain ends when the MIDI note or the sample ends.

Release Parameter

Once the bow leaves the string of a violin or the damper falls on the piano string, the note is finished. But the sound does not immediately drop to silence. The physical instrument and its environment continue to transmit sounds for a brief period. The Release

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parameter specifies how long it should take for the sounds to drop from the sustain level to inaudibility.

A Graphical Envelope

Many, but not all, of the EastWest and Quantum Leap libraries for the PLAY System have a user interface that displays a graph, similar to the one above. When present, it is useful both to understand the default envelope for each instrument and to help in shaping a new envelope should you decide to make that change. See the library-specific manual for more information about this graphical feature when it's present.

The Master Volume, Solo, and Mute Controls

The **Master Volume** control might be a knob (as in the image at the right) or might be a slider (see the image on the left). Either way, it specifies the dynamic level for the current instrument. It applies equally to all sounds generated by this instrument. In contrast, the volume sliders within the Articulations control apply to only that one articulation.



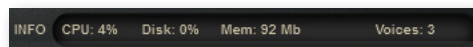
The **Solo** button (sometimes marked simply as S), when turned on, turns off the audio output of all *other* instruments in this instance of the PLAY Engine, leaving only the current instrument to generate sounds. This is useful when trying to focus on what's happening in only one instrument out of the entire mix.

The **Mute** button (sometimes marked simply as M), when turned on, turns off the audio output of the current instrument. It has no effect on other instruments.

Other Controls

The Info Control

Information about usage of computer resources is provided in the Info display. This is a read-only presentation of 4 parameters. Sometimes the values are laid out horizontally, as in the image, and sometimes vertically.

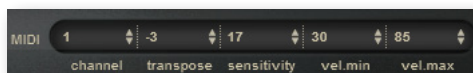


- **CPU:** the percentage of the total processor capacity the PLAY Engine is consuming. It can be useful in deciding whether you need to take advantage of strategies for lowering processor usage, such as “freezing” or other selective bouncing to audio tracks.
- **Disk:** the rate at which data is being streamed from the hard drive, measured in kilobytes per second (kB/s)
- **Memory:** The number of megabytes (MB) of RAM being used by loaded samples. One way to lower this value if it gets too high is to unload unused articulations with the Purge function. Note that this control may be labeled “Mem” or “RAM,” depending on the library.
- **Voices:** the number of samples currently being played. Note this is not the number of notes; it's often higher than that figure because the PLAY Engine may achieve a

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particular sound by playing more than one sample per note. Plus release trails may continue playing the final decay of the sound after the MIDI note ends, overlapping the next note's samples. It sometimes takes 10 or more voices to sound a single note.

The MIDI Data Controls

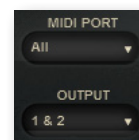


There are 5 controls that affect how MIDI data is received:

- Channel (from 0 to 16): Omni indicates that the instrument is listening for MIDI data on all channels; 1 through 16 indicate a specific channel for receiving the MIDI data.
- Transpose (from -24 to 24): This number specifies how many semitones to transpose the incoming MIDI note values. (Negative values lower the pitch.) This control, when non-zero, replaces the incoming MIDI notes with new MIDI notes higher or lower by this amount. It does not retune the audio.
- Sensitivity (from -100 to 100): This value specifies the extent to which note velocity affects dynamics. See a description of Sensitivity on page 58.
- Minimum Velocity (from 0 to 127): Any MIDI note with a velocity below this value will instead be played at this minimum value. This is a way to assign a minimum loudness to notes played by this instrument. This control and the next can be used to limit a live keyboard performance to a certain range. Or use these two control in a plug-in to raise the dynamics of the softest notes—and/or soften the loudest notes—without affecting other notes.
- Maximum Velocity (from 0 to 127): Any MIDI note with a velocity above this value will instead be played at this maximum value. This is a way to assign a maximum loudness to notes played by this instrument.

MIDI Port and Output Controls

In the MIDI tab of the setup dialog, you are able to turn on one or more MIDI devices, such as keyboards, sound cards, and control surfaces. It's in the MIDI Port control that you specify which of them to listen to for the current instrument. The choices are "All" or any one of those turned on in the Setup dialog. For example, if you open a guitar, a bass, and a drum set, you can specify which keyboard or drumpad or other device will control each PLAY instrument.

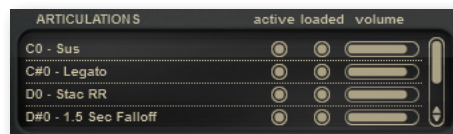


Note that the MIDI Port control is empty when being run as a plug-in. That's because in that mode the host program manages all interaction with external MIDI devices.

The Output control specifies to which of the sound card's audio output channels the PLAY Engine's output should be sent. These are listed in pairs "1 & 2," "3 & 4," and so on because they are accepting stereo signals.

The Articulation List

The Articulation list displays the names of all articulations in the current instrument together with sub-controls for specifying parameter values de-



fined at this level. Depending on the library, it may be as small as 4 entries, as shown here, or much larger at 16 entries. This control is described in more detail on page 47.

Library-specific Controls

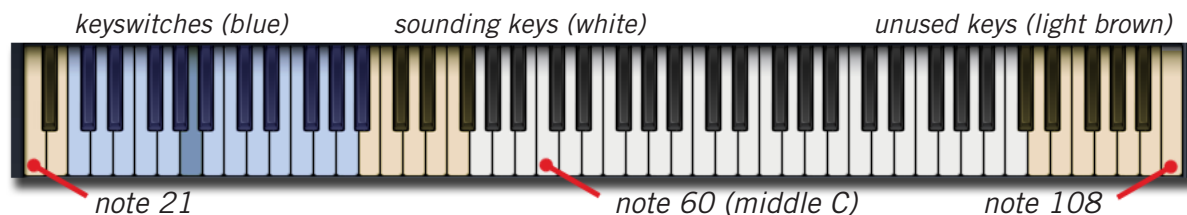
It's likely there are other controls in the Player View that are not listed in this chapter. They are controls that do not apply to all libraries. Read the library-specific manual for information about these controls.

The PLAY System Keyboard

At the bottom is an 88-key keyboard. This part of the display can be used in several ways:

- Each selected instrument indicates its range by turning all keys associated with playable notes white.
- When a keyswitch instrument is current, the keys available as keyswitch notes are displayed in blue. And the currently selected keyswitch note is shown in a darker blue.
- You can use the mouse to click on any white key to audition that note for the selected instrument. Likewise, you can use the mouse to click on any blue keyswitch key to select a different articulation within the selected keyswitch file.
- Clicking near the top plays the note with a lower MIDI velocity, and near the bottom with a higher velocity. In this way you can hear both soft and loud versions of the note.
- When this instance of the PLAY System player receives MIDI Note-On and Note-Off data, the keyboard responds by depressing and releasing keys, much like a “player piano.” When troubleshooting a system, watching the keyboard is one way to determine whether MIDI note data is reaching the player and, for example, whether it's in the correct octave.

The 88 keys in this display match the 88 keys on a standard acoustic piano keyboard. As such, the lowest and highest keys correspond to MIDI note numbers 21 and 108, respectively.



ADVANCED: The note *names*, such as A#2 and C3, are not uniformly applied in all systems; for example, where the EastWest PLAY System and many other software packages use C3 for Middle C—note number 60—some other packages use the name C4 or C5. Internally, all interaction between software packages uses the consistent note *numbers*; just be careful when selecting notes by *name*. When using PLAY in a host, you may be able to adjust the naming convention in the host to make different systems conform in their naming conventions.



PLAY

8. The Browser View

- 70 The Five Panes**
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- 73 Opening an Instrument**
- 74 The Browser View's Keyboard**

[**Click on this text to open the Master Navigation Document**](#)

The Browser View

The second main window of the PLAY System is the Browser View. This interface provides a means for loading instruments installed on the computer, managing the list of open instruments. In this view you can navigate through folders in the computer's file system, as well as virtual folders exclusive to the PLAY System, to locate and open an instrument file. You can also see the list of open instruments, see which ones are currently receiving MIDI input, and perform a few tasks in the controls provided.

The four controls at the top—Main Menu, Settings button, Player/Browser button, and the Instruments list—are described in the previous chapter. See the text starting on page 53 for instructions on how to use these features.

The Five Panes

The Instruments, System, and Favorites Lists

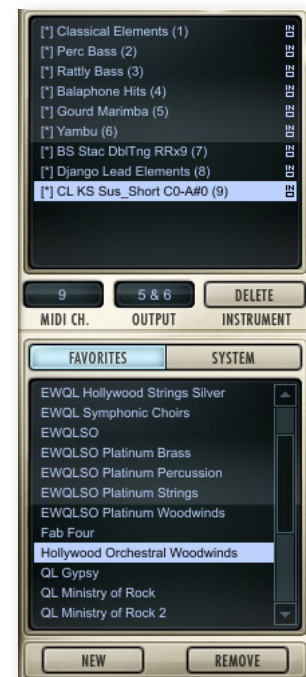
The Browser View's 5 panes are arranged in 4 columns. The left column contains the Instrument List pane at the top. Below you have a choice of viewing the Favorites List or the System List in a separate pane. The image at the right shows the Instrument List pane and the Favorites List. (Note that the color scheme changes to reflect the graphics of the library for the currently selected instrument, so you may see different colors than in this image. This image is from Hollywood Orchestral Woodwinds.)

The image shows that 9 instruments have been opened. The asterisk [*] before an instrument name means it includes unsaved changes. The number in parentheses next to each instrument name is the currently assigned MIDI channel (a number from 1 to 16). To the far right of each instrument name is a small square (called a “light”) under the word “IN.” Below this paragraph is an example of the square filled in to signify that the instrument is currently processing a MIDI note. Use these lights during setup of a new project to make sure each set of MIDI data is going to the correct instrument. Or use the lights during playback to verify that all instruments are receiving MIDI input.

CL KS Sus_Short C0-A#0 (9) IN

The three controls directly below this list allow you to:

- change the MIDI channel for the selected instrument
- change the audio outputs for the selected instrument
- delete (that is, close) the selected instrument



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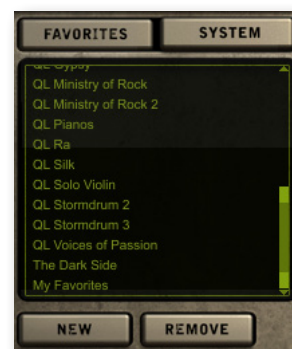
The System List enumerates the computer's drives, C:\, D:\, and so on, as well as the folders that the operating system maintains for the current user. This is a starting point from which to navigate to any folder in the file system. Note that removable media, such as DVD readers and flash drives, are also included. If a removable drive is added or removed while the Browser View is open, the listing is refreshed immediately to reflect the change.

Note that the New and Remove buttons do not apply to the System list. They apply only to the Favorites list.

The Favorites list contains two kinds of entries:

- Each installed PLAY System library is listed by name.
- Below the libraries you can add your own virtual folders for saving the instruments you plan on using repeatedly.

To add a new virtual folder, click on the New button below this pane. You are asked for a name. Click OK to create a folder with that name. In the image at the right, a personal folder named “My Favorites” is at the bottom. Once any virtual folder has been created, you can right-click on a PC (or Ctrl-click on a Mac) on any instrument file (with a .ewi extension) to open a selection of virtual folders. Click on the one you want to copy it to. If you own more than one library, you can make your own personal library: perhaps 2 vintage guitars from Fab Four, a Les Paul guitar from QL Ministry of Rock, and a Flamenco guitar from QL Gypsy.



Note that it is not possible to create a hierarchy of subfolders. Only a single level of Favorites folders is possible. You can, though, create as many Favorites folders as you like. If you create more folders than can be viewed in the one pane, a vertical scroll bar appears.

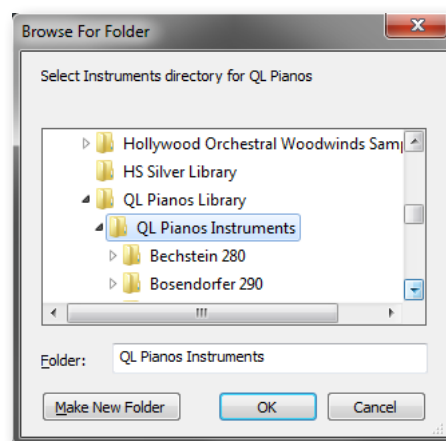
Any virtual folder in the Favorites Pane can be removed by selecting it (the color behind the text changes) and clicking on the Remove button. A message appears asking whether you're sure you want to delete the folder. Answer Yes or No.

If you click on the Remove button when an installed library is selected, you will be asked whether you want to remove the library from this list.

Specifying a Library's Directory on Your Hard Drive

For any library in your Favorites list, you can change the directory where PLAY starts to look for that library's instruments. For example, if you decide to move the instrument and sample files from one hard drive to another, you can use this feature to tell PLAY where you have placed the files.

If you are using a PC, right-click on a library name in the Favorites pane. If you are using a Mac, control-click on the name. A small context menu will appear, allowing you to select “Set Product Library Directory...,” which will open a dialog, similar to the one at the right. (Note that you may see a somewhat different dialog, because its look depends on the operating system you are using.)



When changing directories, be sure to select the folder that ends in the word “Instruments.” As you can see in the example dialog box above, this is a subfolder of the “Library” folder. Be sure, when moving any library, that you move the entire “Library” folder, keeping the “Instruments” folder and “Samples” folder together.

It's possible you may see a second option in the context menu mentioned two paragraphs back: “Add another Product Library.” If you have installed one or more libraries and for any reason they do not appear in the Favorites list, they should appear in a menu that cascades, as below. Select the library you want to add to the list and it will appear.



In the Favorites list, this context menu only applies to installed PLAY libraries, not to any folder you create yourself in that pane.

Navigating in the Browser View

The remaining three columns are used to navigate to the instrument you want to open. Each column has its own function. And the way to use these columns differs somewhat depending on whether you start from the System Pane or the Favorites Pane. Most of the time, you'll want to start from the Favorites Pane.

Starting from the System Pane: If you know the path to an instrument you want to open, select the drive—or the Desktop, if appropriate. All its folders open in the first column.

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Each time you select a folder in the first or second column, its subfolders open in the column immediately to the right. If the newly selected folder contains one or more instrument files (always with extension .ewi), they appear. Continue to select folders along the path until you see the instrument file (ending in extension “.ewi”) you’re looking for.

Starting from a Library Folder in the Favorites Pane: Selecting a library name opens a list of collections; depending on the library, this list might include:

- geographical regions
- instrument groups (such as Guitars or Drums)
- specific brands of pianos
- et cetera

Click on the collection to see either a list of subfolders or a list of instrument names in the next column. In the case of subfolders, continue to click until you see specific instruments files (they end in “.ewi”). Select the instrument file you want to open.

Starting from a Virtual Folder in the Favorites Pane: Because a virtual folder cannot contain subfolders, selecting a virtual folder immediately opens a list of the instrument files it contains.

Note that a few libraries contain more than three levels of subfolders and files. If necessary, the lists move one column to the left to create an empty column at the right. The way to open the parent folder of a subfolder listed in the first of the three columns is to click on any name in that first column.

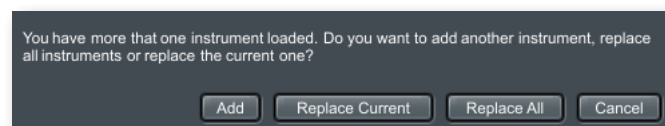
Opening an Instrument

When an instrument file is selected (as indicated by its highlight), there are three ways to open the instrument.

Click on the Add Button: This action opens the instrument, adding it to the list of open instruments. This instrument becomes the selected instrument, meaning its UI and controls will be displayed in the Player View (but only if “Show product interface after loading patch” has been selected in the Settings dialog).

Click on the Replace Button: This action replaces the open instrument with the new one. If the current instrument has unsaved changes, you are asked whether you want to save the changes before continuing.

Double-click on the Instrument File Name: If at least one instrument is already open, a message box asks whether you want to perform an Add or a Replace. Otherwise, the selected instrument is opened immediately.

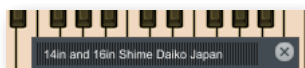


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Once the PLAY Engine starts to load the components of the instrument into RAM, the moving bar, shown below, displays the progress. The Abort button allows you to end the process immediately; when it's pressed, the components of the partially opened instrument are removed from the computer's memory.



Beginning with PLAY 4, there is a second progress bar that opens in the lower-right corner of the Player and Mixer views, as shown below. This extra indicator appears because the instrument is being loaded as a background task, allowing you to continue using other instruments and performing other interface functions while the load is in progress.



The Browser View's Keyboard

Note that the keyboard at the bottom of the window also works in the Browser View. When more than one instrument is open, it's the current instrument, as selected in the Instruments drop-down list in the upper right corner, that determine which instrument will sound when the keys on the keyboard are clicked with the mouse. Clicking on an instrument in the list at the left of the Browser view makes it the selected instrument. Double-clicking in that list also open the Player view.

As with the keyboard in the Player view, clicking high on a key uses a low velocity and clicking near the bottom uses a high velocity.



PLAY

9. The Mixer View

- 76 The Mixer Controls
- 78 FX Plug-ins in the Mixer View (Optional)
- 80 SSL's EQ & Dynamics Channel Strip Plug-in
- 83 SSL's Transient Shaper Plug-in
- 84 EastWest Convolution Reverb
- 85 SSL's Stereo Bus Compressor
- 86 The Preset Control

[Click on this text to open the Master Navigation Document](#)

The Mixer View

The Mixer view is new in PLAY 4. It allows the user to view and control the output from all the channels within the current instance of PLAY. Here, you can control the loudness and the pan position, as well as the MIDI input and the audio output channel. You can also mute or solo each track (the M button and S button, respectively). In any PLAY virtual instrument that features multiple microphone positions, it is also possible to mix and blend the output from those mics.



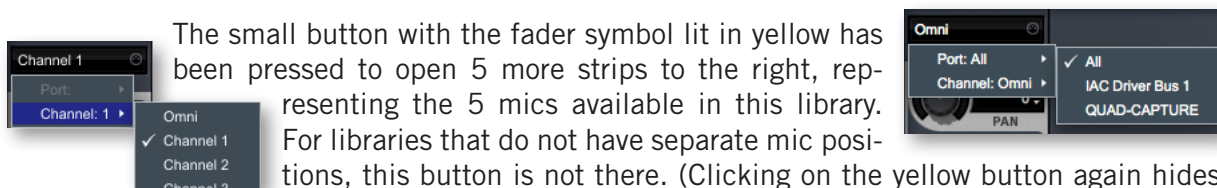
Note that your screen may be different in small ways, based on which library is open and/or which optional upgrades have been installed.

The Mixer Controls

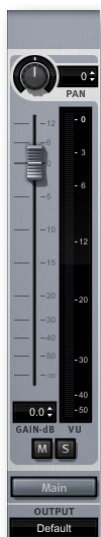
The image above shows the PLAY mixer page with the Stormdrum 3 instrument named 36in Thai Gong Hits loaded into the left-most column. At the top, “Channel 1” means that it responds to MIDI input on channel 1 only. And where the MIDI input for the other instrument reads “Omni,” that means it responds to all MIDI channels. Click in this

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control to see a list of other input options you can select, as in the image at the left. The Port option is grayed when PLAY is run in standalone mode. The Port option becomes active when PLAY is run as a plug-in, as in the image at the right.



The small button with the fader symbol lit in yellow has been pressed to open 5 more strips to the right, representing the 5 mics available in this library. For libraries that do not have separate mic positions, this button is not there. (Clicking on the yellow button again hides the mic strips so that you can see more channel strips, but any values you set still apply when the strips are hidden.) The name of each mic is listed at the bottom. In the image above, the Close and Hi-Fi buttons are lit in white to indicate that those samples are loaded in memory and the mics are currently active. To load or unload the samples from memory, click on the button for that mic position. (The names of the mic positions can differ in different libraries.)

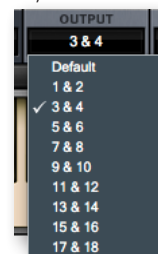


The meter and slider for each instrument or mic represents the current output level for that audio channel. The Pan knob at the top of each strip moves the apparent position of the instrument left or right within the stereo field. And note that you can pan the individual mics separately.

At the very top of a mic strip might be a knob marked REV SND (which stands for Reverb Send). That knob is only present in some recently released libraries. If it's missing in your UI, as in the mic strip at the left, the rest of this paragraph does not apply for that library. It allows you to indicate how much of the sound from this mic to direct to the currently selected reverb. The REV SND control applies a second gain to the signal going to the Reverb, allowing you to send up to 12 dB more to the Reverb than to the standard output, or to reduce the signal as much as 60 dB. In other words, both the gain from the strip's vertical fader and the gain from the REV SND knob are applied together to the signal going to the PLAY Reverb. This approach maintains a consistent ratio between the strength of the main and reverb outputs.

At the very bottom, just above a horizontal scrollbar (which is only visible when the channels strips together are wider than the width of the window), is a drop-down list labeled Output. This control allows you to select which of the 9 stereo pairs of audio buses should receive the output.

- For an instrument strip, the default is Main L/R, the first pair—and in many projects the only pair used. Click on the control to open a list of other options.
- For a mic strip, the Default setting directs the audio to the output for its instrument strip (immediately to the left of the 5 mic strips). Selecting any of the other pairs directs the output to a different bus pair. You would likely want to select anything other than Default only if you want to do mixing of the individual mic signals in a mixing board or mixing program external to PLAY.

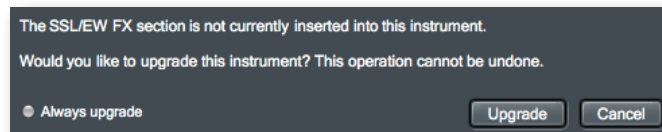


FX Plug-ins in the Mixer View (Optional)

This section describes a set of features that are not in the standard PLAY 4. They are included with some recent libraries; for example, the first library to include the FX plug-ins is Quantum Leap Stormdrum 3, and others are planned. If you have one of those new libraries, see the library-specific manual where the full feature set is described. If you do not own a license to such a library, you can upgrade PLAY 4 to include the features described here, which do not include a few of the features that come with the new libraries.

This optional feature set allows PLAY 4 to integrate with a set of FX processors licensed from Solid State Logic (SSL), plus a Reverb from EastWest. These plug-ins can be used to modify the audio output for any specific instrument. You can upgrade to include the FX plug-ins by clicking on the FX button in a channel strip for an instrument that is not in a library that already contains this feature. The result depends on whether you already have the plug-ins from another library.

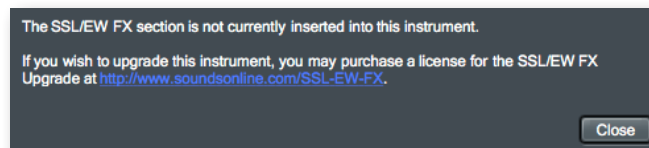
If you do have a license for such a library, the following dialog box appears.



Click on Yes and the plug-ins will be added to this instrument, as well. Or click on No if you decide that it's better not to make a change to the project, either to preserve an existing sound or to maintain portability to another system without the plug-ins.

If you check the “Always upgrade” checkbox, that sets the option on the “Other” tab in the Settings dialog. See page 36 for more information about that setting.

If you do not have the license, the following message box appears:



If you want to buy the optional plug-ins, go to the indicated SoundsOnline web page and make the purchase.

To open the plug-in UI for an instrument, first change to the Mixer view, then click on the FX button in the channel strip for that instrument. For this upgradable feature set, you cannot open the plug-ins from a mic strip.

The controls for the plug-ins sit on top of the channel strips in what's called a “drawer.” Note that the bottoms of the channel strips are still visible below the FX drawer, as in the image that follows.



The image above shows the full set of plug-ins for the instrument loaded into the second instrument strip (Acapulco 115 BPM).

At the bottom of the drawer are 2 controls: a Preset list (which is empty in the image) and a Channel list, where you can use the left and right arrow buttons to move to a different strip. Using this Channel list, you can move through the various instrument strips without having to close one drawer and open another.

Included in the FX drawer are:

- an EQ & Dynamics plug-in, consisting of:
 - › a Filter
 - › an EQ
 - › a Compressor and Noise Gate/Expander
- a Transient Shaper plug-in
- a Convolution Reverb plug-in.
- a Stereo Compressor plug-in.

The specific controls are described in detail after this overview.

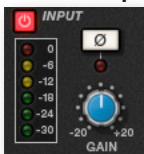
To hide the UI for all the plug-ins, click on the X button in the lower right corner. The settings are preserved while the controls are hidden, with the saved values reappearing when they are reopened with the FX button.

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SSL's EQ & Dynamics Channel Strip Plug-in

This plug-in passes the signal through 5 separate sections, as described separately in the text below.

Input Section and Output Section

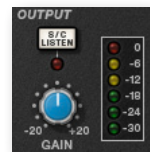


The Power button in the upper-left corner enables the channel strip processing.

Turn the Gain knob in the Input Section to control the level of the incoming audio signal. The post-gain signal level is shown in lights to its left. As a rough guide, the '-6' yellow indicator should occasionally come on but the red '0' indicator should remain off.

Press the Ø button to invert the phase of the input signal.

The Output Section is the last step in the processing. The Gain knob controls the audio level of the output signal. Adjust this level last to achieve the loudness of the signal that you want. The same rules for the yellow and red indicator lights apply here as in the Input Section.



The S/C Listen button directs the Dynamics Side Chain to the channel output.

Filter Section



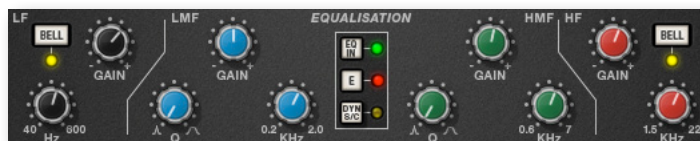
The Filter controls provide access to two separate kinds of filters. The black knob controls an 18dB/Octave high-pass filter (20Hz to 500Hz). Use it to remove lower frequencies from the audio. The purple knob controls a 12dB/Octave low-pass filter (3kHz to 22kHz). Use it to remove higher frequencies.

Turn either knob fully left (marked OUT) to turn that filter off. Turn either one (or both) clockwise to move the filter frequency in from its extremity.

You have a choice where to insert the Filters in the audio stream. To place the Filters immediately following the Input control, press the Input button. To switch the Filters into the Dynamics Side Chain, press the Dyn SC button. Note that when the Dyn S/C button is engaged the Input button has no effect.

Equalizer Section

To use the EQ, switch it into circuit by pressing the EQ In button, which is near the top in the center of the UI for this section.



The EQ section has four bands, each with its own knob color. All bands have gain and frequency control. The low (LF) and high (HF) bands are shelved by default but can be switched to a bell shape (parametric) by pressing the Bell button; the Bell option gives you more control over the exact shape of the EQ curve. The low-mid (LMF) and high-mid

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(HMF) bands have Q controls (to adjust the sharpness of the modified curve) in addition to what the others have.

Listed in the table below are the ranges for the knobs in each section.

Band	LF	LMF	HMF	HF
Frequency range	40Hz – 600Hz	200Hz – 2kHz	600Hz – 7kHz	1.5kHz – 22kHz
Gain range	±16.5dB	±20dB	±20dB	±20dB
Q range	—	0.5 – 2.5	0.5 – 2.5	—

The E button in the center toggles the EQ emulation between the G Series and E Series consoles. The difference between them is described in the following table.

G Series	E Series
The bell curve has a more rounded shape at low gains, and the shelf curve overshoots zero slightly at the base of the curve.	The bell curve is slightly more pointed, and there is no overshoot on the shelf curve.
G Series EQ is more subtle and is generally more suited to instruments and vocals.	E Series EQ is more aggressive and is therefore better for removing problem frequencies. It is generally more suited to drums.
Note: At full boost or full cut, the E and G Series curves are identical.	

To switch the EQ into the Dynamics Side Chain, press Dyn SC.

Dynamics Section

This section consists of both Compressor controls and Noise Gate/Expander controls. Both sections work independently but can be operational at the same time, providing sophisticated control of signal levels. The example image of the UI is shown below, after the description of the Compressor.

There are two buttons at the top. The Dyn In button turns on the whole section. The Pre EQ button moves this section before the Equalizer; otherwise, this processing is performed after the Equalizer.

Compressor: On the left are 3 blue knobs for controlling the Compressor: Threshold, Release, and Ratio. To activate the Compressor/Limiter, turn the Ratio knob so that its ratio is no longer set at 1:1.

To turn the compressor into a ∞ :1 limiter, turn the knob fully to the right.

There is no gain makeup control because the T/HOLD (threshold) knob controls both the level at which gain reduction is introduced and the gain make-up, thus keeping the output level steady regardless of the compression.

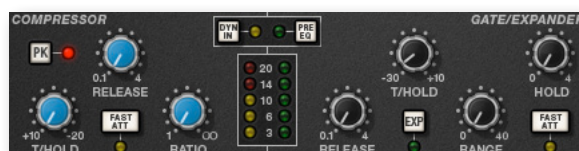
The Release knob controls how quickly the level returns to normal after the input level has dropped below the threshold (measured in seconds). The attack time is adjusted

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automatically to match the audio. To choose a consistently fast attack time, press the Fast Att button.

Turn on the PK button to switch from RMS to Peak signal detection. In normal RMS mode, the compressor reacts to the average signal level and has a soft knee characteristic. When switched to Peak mode, it responds to peak signal level and introduces a hard knee characteristic, resulting in more dramatic compression.

The level of compression being introduced is shown in the left-hand of the two meters in the centre of the Dynamics section.



Noise Gate/Expander: To activate the Noise Gate/Expander, turn the Range knob so that its range is no longer zero. The green indicators in the right-hand of the two meters in the centre of the Dynamics section show the amount of gain reduction being introduced.

By default, the Noise Gate/Expander section functions as a Gate. To switch to the Expander, press the Exp switch.

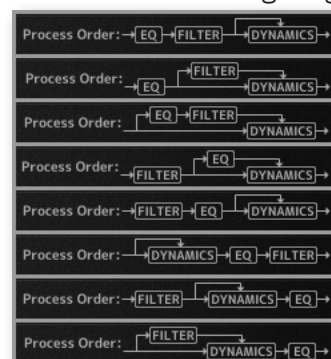
The Threshold function uses different levels to open the gate to audio and to close it again: the level at which the expander opens is higher than the level at which it closes again. In other words, when the expander is opened, it stays open until the signal level crosses the quieter Close threshold. This is known as hysteresis and is very useful as it allows instruments to decay more naturally. The word “Threshold” normally refers to the Open threshold.

The Hold knob controls the delay before the signal level starts reducing again. The Release knob controls how quickly the level then reduces. Note that the Release knob interacts with the Range knob, which determines the depth of gain reduction.

The Attack Time (the time taken for the Expander/Gate to ‘recover’ once the signal level is above the ‘deactivate’ threshold) is normally set to 1.5ms per 40dB. Press the Fast Att button to introduce a faster attack time of 100µs per 40dB. This is useful when gating signals with a steep rising edge, such as drums.

Processing Order

The graphic at the right shows the 8 possible orderings for the 3 processing stages, with and without a Side Chain. The original audio signal starts at the left and the processed signal exits at the right of each diagram. The lower (straight) line is the standard audio path. When the EQ and/or Filter is in the upper path, then that component is in the Side Chain



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(as described below). The one of these 8 diagrams currently in effect appears in the upper-right corner of the drawer.

The default order is Filter >> EQ >> Dynamics, with nothing in the Side Chain, as shown in the 5th diagram in the image.

To place the Filter section after the EQ section, deactivate the Input button in the Filter section so that its light is off.

To place the Dynamics before the EQ, press the Pre EQ button in the Dynamics section, so that its light is on.

When the Input and Pre EQ switch are active simultaneously, the processing order becomes Filter >> Dynamics >> EQ.

The Side Chain

The Side Chain is a path for the audio signal that is used to control the Dynamics section when it acts on the main audio signal. The Side Chain is not normally audible, but can highlight aspects of the audible signal that need processing.

The EQ and Filter sections can be assigned to the Dynamics Side Chain, allowing for advanced processes like de-essing, as described below. This is done using the Dyn S/C switches in the respective sections.

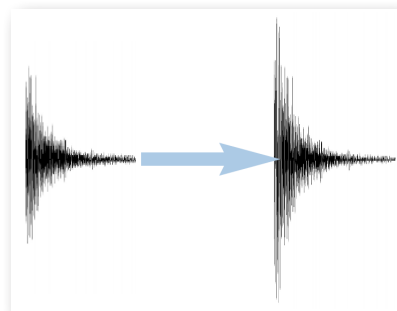
Both EQ and Filter sections can be assigned to the Side Chain together, in which case the EQ precedes the Filter.

Here's an example of using the Side Chain to remove the hissing sound of the letter S when it's too prominent. First, the audio is split into 2 signals. EQ is applied to the signal in the Side Chain to make the hisses louder, so that the compressor can use the louder S sounds as a clue that the main signal needs to be compressed (made softer) at those moments more than at other moments. In the main signal, the S sounds are made softer.

To listen to the signal feeding the Side Chain, press the S/C Listen button in the Output section to route the Side Chain signal to the channel output. **It is important** to remember to cancel the S/C Listen button once you have finished auditioning the Side Chain!

SSL's Transient Shaper Plug-in

The Transient Shaper allows you to augment the attack at the start of a drum hit (or any note) by increasing the amplitude of the attack portion of the signal while leaving the decay and held note unchanged. In the image at the right, the right hand waveform is a processed version of the one on the left. It has been passed through the Transient Shaper where the amplitude of the attack portion has been increased.



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Switch the Shaper on by clicking on the Power button in its top left-hand corner. The lights at the right give visual feedback on how much attack is being added using the Gain and Amount controls. If the top red light illuminates, reduce the effect.

The **Gain** knob controls the detection level of the controller signal, and should be set so that only the transients you want to shape are detected. If this is set too low then the Shaper will do nothing; if it is set too high then the Shaper will detect too many transients, resulting in an exaggerated process, and the attack appearing too long. The default setting of 0dB should be a good starting point.

Note that the Gain setting here does not directly affect the output signal's gain.

Amount controls the amount of the processed signal added to the unprocessed signal. This process can increase the peak level of a signal significantly, so watch the output meter carefully.

Speed controls the length of time the added attack takes to fall back down to the normal signal level once it has reached the top of the attack phase. Turn the knob clockwise for a slower speed, and longer transients.

The **Inv** button inverts the processed signal so that it is subtracted from the unprocessed signal. This has the effect of softening the attack, resulting in more body in the drum sound.

Press the **Audition** button to listen to the processed signal to assist in the setup process.

Note that when the Inv and Audition buttons are both pressed, the signal is not inverted.

EastWest Convolution Reverb

This Convolution Reverb is an extension of the one in the Player view. It adds some features that are not part of the Player page Reverb:

- a high-pass and low pass filter set, with 2 handles on the graph for modifying the filters visually
- a mono button
- additional reverb environments that are not available on the Player page Reverb

In addition, the True Stereo reverbs that are added only when this FX plug-in is installed appear in the Player view list as well as here.

To include a reverb effect on an instrument, turn it on by clicking on the button in the upper left corner. Or you can also turn it on from the Reverb controls on the Player page. When the button is illuminated, the plug-in is turned on.

Turn on the **Filter** for the Convolution Reverb by clicking on the Filter button so that it is illuminated. Then use the two circular handles on the graph to control the frequencies



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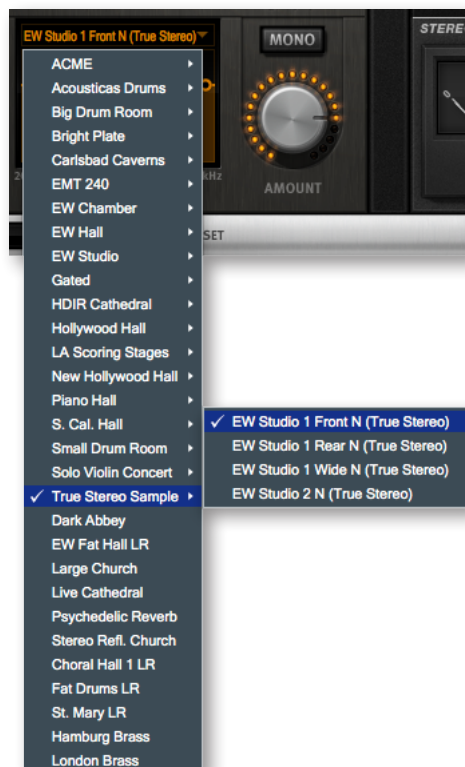
affected by the filter. Drag the handles with the mouse (or with a stylus or finger when a touch-screen provides that capability).

The **Pre-Delay** knob controls the amount of time (if any) that the Reverb effect is delayed after the attack of each note. Postponing the start of the effect allows the attack to sound without processing and to have the reverb affect only the sound of the note as it is held and/or decays. Use your ear to determine how long of a pre-delay works for each instrument. (The Pre-Delay can also be changed with the knob on the Player page.)

Use the **Reverb** drop-down list to select the name of the environment, as shown in the image at the right.

This EastWest Convolution Reverb can use true stereo reverbs. The **Mono** button, when illuminated, indicates that the processing should be performed without separate left and right channels for the IR.

The **Amount** knob controls how much of the effect to include in the output. Drag downward with the mouse to create a more subtle reverb, or drag up to increase the effect. (The Amount can also be changed with the knob on the Player page.)



SSL's Stereo Bus Compressor

This SSL compressor has become legendary in the music industry for its unique sound, so you may want to see how it can improve the sound of your mix.

This is a stereo version of the center section stereo bus compressor found on the XL 9000 K Series console. It provides high quality stereo compression, giving you critical control over the dynamic range of audio signals.

The compressor UI consists of 1 meter, 5 knobs, and 1 button, as in the image below.

Compression

This meter shows the real-time gain reduction in decibels (dB).

Threshold

With this knob you can controls the level at which gain reduction is introduced. The value is continuously variable: -20 dB to +20 dB.



Attack

This knob controls response time when the Threshold is crossed. Choose among the following times: 0.1, 0.3, 1, 3, 10 and 30 ms.

Make-Up

This knob selects the level of compensation to offset the compressor's action. It is continuously variable over the range: -5 dB to +15 dB.

Release

This control sets how quickly the level returns to normal. Choose between 0.1, 0.3, 0.6, or 1.2 seconds, or you can select Auto. In the case of Auto, the release time is dependent upon the duration of the signal peak.

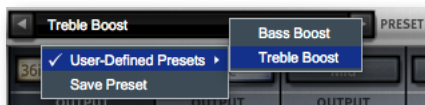
Ratio

This knob controls the degree of compression. Choose a ratios from: 2:1, 4:1, and 20:1.

Comp In

This button switches the compressor in and out of the signal path. Use this button to do a quick comparison between the compressed and uncompressed signal to judge the effect of the current settings.

The Preset Control



In the bottom-left corner of the plug-in drawer is a drop-down list labeled Preset. Once you have set the values of the controls in a configuration you might want to use again, you can click on the drop-down list and select Save Preset. Then provide a name for that preset. Later on, when you want to set all controls to the saved configuration, select the named preset from the drop-down list.



10. The PLAY Engine as Plug-in

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The PLAY Engine as a Plug-in

Opening the PLAY Engine in a Host Program

Most modern software sequencers permit software written by other companies to run within the sequencer. All the plug-in's input and output (I/O) is managed by the sequencer host. And several plug-ins—from the same or different manufacturers—can run concurrently, each contributing its part to the audio output. Some plug-ins, such as the EastWest PLAY Engine, are sound generators that respond to MIDI data. Other plug-ins might provide effects, such as signal compression, EQ filtering, or echo simulation.

The details of how to open the PLAY Engine in several popular sequencers are spelled out in the following sections. In each case, you need to first open the sequencer host. Then follow the directions below. If you are familiar with inserting other sample players and synthesizer plug-ins, the procedure for the EastWest PLAY Engine will be the same.

Four specific sequencers are mentioned in their own sections in this chapter: Cubase, Digital Performer, Logic, and Sonar. These four hosts are singled out below for mention because they are the most commonly used with plug-ins like the PLAY Engine; many others can also be used and the instructions for how to open the plug-in will likely be similar.

The following table specifies the minimum version of each sequencer with which the EastWest PLAY Engine has been tested. Because such information can change on short notice, it's best to check the online support page at the EastWest web site to read the most recent information:

<http://support.soundsonline.com>

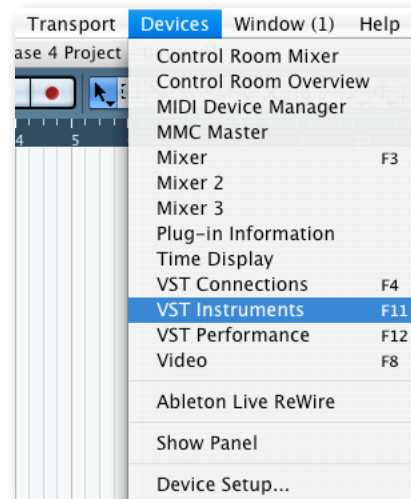
Using the PLAY System Plug-in with Cubase

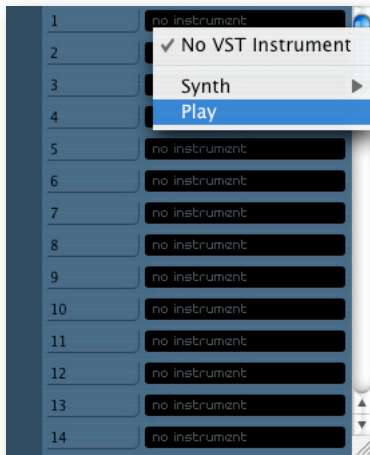
With a project open in Cubase, select

Devices > VST Instruments

from the menu, as shown in the image to the right. This action opens a small window that lists all currently open VST plug-ins. Click on the first available slot—the top one if this is the first VST instrument being added—and a pop-up menu lists all available VSTs on the computer. Select PLAY.

The image on the next page displays this small window and the pop-up menu.





Cubase asks whether you would like to create a new MIDI channel for the plug-in, click on “Create.”

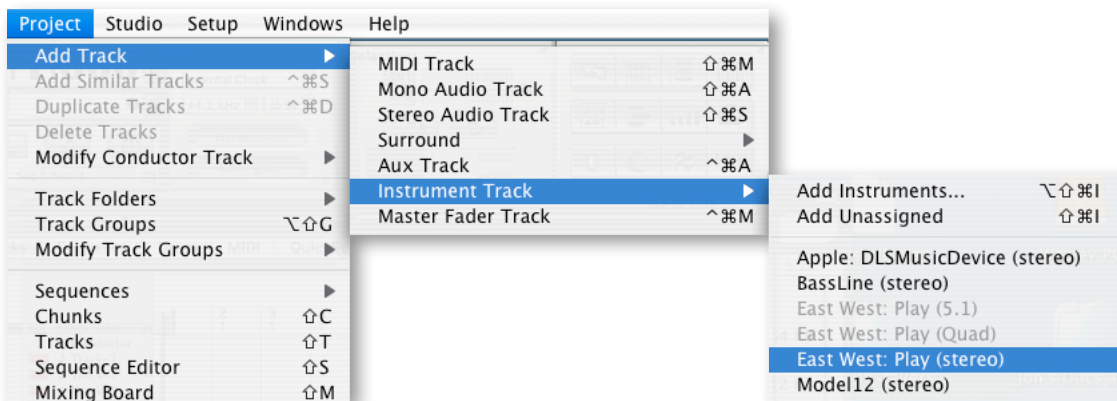
When PLAY opens, click on the Browser button near the top of the window. In the Browser View, select the library you wish to open. This operation is described starting on page 70.

Click on the Player button where you can select the desired MIDI channel, as described starting on page 61. Make sure this is the same MIDI channel assigned in Cubase.

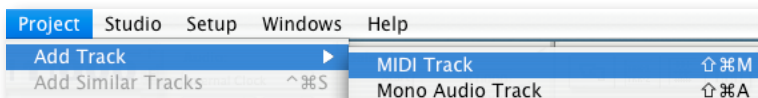
If you have done everything correctly, Cubase should now be able to play the instrument you opened in the PLAY plug-in. And you can open more instruments in PLAY; just make sure you always match the MIDI channel in PLAY with the one in Cubase.

Using the PLAY System Plug-in with Digital Performer

With a project open in Digital Performer, select
Project > Add Track > Instrument Track
from the menu system. Choose a stereo instance of PLAY.



Set the output of the PLAY instrument track to the appropriate sound card output. When PLAY opens, click on the Browser button near the top of the window. In the Browser View, select the library you wish to open. This operation is described starting on page 70. Go to the Player window where you can select the desired MIDI channel, as described starting on page 67.



Create a new MIDI track in DP:

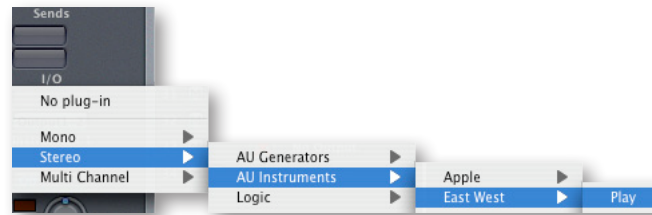
Project > Add Track > MIDI

The newly created MIDI track ap-

pears in the Tracks window. Set the output of the MIDI track to PLAY. Record-enable the MIDI track.

Using the PLAY System Plug-in with Logic

With a project open in the Logic sequencer, highlight any not-yet-used Instrument Track. For example, you can start with the track labeled “Inst 1.”



Under the “I/O” insert in the Channel Strip section of the Arrange window, select: Stereo > AU Instruments > East West > Play

This opens the PLAY window. Click on the Browser button to open the Browser View. In the Browser View, select the library you wish to open. This operation is described starting on page 70.

Click on the Player button where you can select the desired MIDI channel, as described starting on page 67. Make sure this is the same MIDI channel assigned in Logic.

If you have done everything correctly, Logic should now be able to play the instrument you opened in the PLAY plug-in. And you can open more instruments in PLAY; just make sure you always match the MIDI channel in PLAY with the one in Logic.

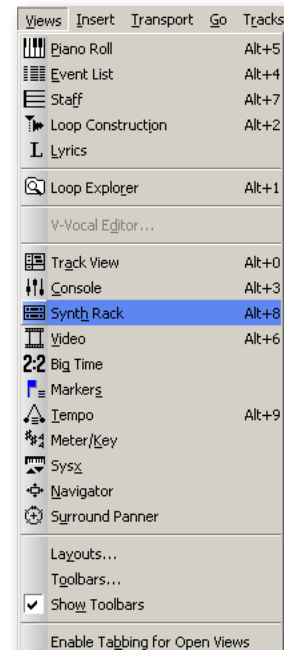
Using the PLAY System Plug-in with Sonar

In Cakewalk’s sequencer, known as Sonar, you can load the PLAY Engine from either the Insert menu or the Synth Rack. Whether loaded from the one or the other, every instance running in Sonar appears in the Synth Rack. The picture on the next page shows the Synth Rack with two instances of PLAY running concurrently.

If the Synth Rack is not visible, you can open it from the View Menu, as shown at the right, or by clicking on the button with the same small icon in the toolbar.

From the Insert Menu: Open this menu to reveal an option labeled “Soft Synths.” Moving the mouse over that item opens a cascading menu that lists all the installed plug-ins that Sonar has learned about on this computer.

Note that some of the plug-ins, including the PLAY Engine, may be grouped in submenus; for example, all the VST plug-ins are likely to be found by opening the “vstplugins” submenu. Click on the version of the PLAY Engine—VSTi or DXi—you wish to insert.



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From the Synth Rack: Click on the “Add” button (in the upper-left corner, outlined in yellow in the picture below) to open the same menu described in the two paragraphs immediately above.



ADVANCED: Sonar calls all these plug-ins “Soft Synths,” short for “software synthesizers,” even though the PLAY Engine is not literally a synthesizer. The term “synth” is often used informally to indicate any electronic sound generator, including a sample player such as the EastWest PLAY Engine.

In a not-yet-used MIDI track in Sonar’s Track View window, assign PLAY as the track’s plug-in, as shown in the image at the right. Create up to 16 tracks per instance of the PLAY plug-in. The MIDI channel selected in the “CH” drop-down, also shown in this same image determines which instrument in PLAY will respond to MIDI notes in the track. Assign the corresponding MIDI channel in the PLAY Engine.



Automation

The term “Automation” refers to a facility for manipulating knobs, sliders, and other controls with an external process and being able to repeat the same movements automatically on subsequent playback. This feature is available in many modern sequencers. The details of the implementation vary from one software product to the next, but the goals are similar. Read the sequencer’s documentation to find out how to set up automation that can affect the controls in the Player View within the PLAY Engine.

For example, suppose you want to have an instrument jump back and forth between the left and right speakers and then seem to move slowly from right to left across the “sound stage” of the resulting audio track. It’s possible to manipulate PLAY’s Pan control to accomplish this effect, and to automatically do it the same way each time the sequencer’s project is played back.

The two most common ways to achieve such an effect are as follows:

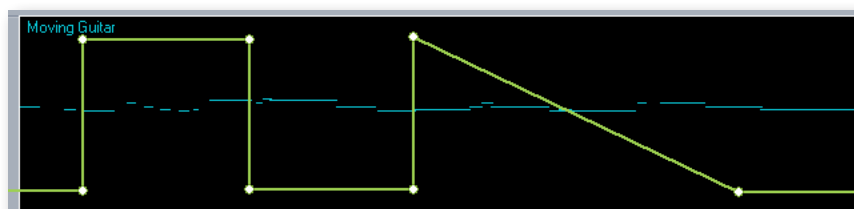
- **Record the movements** of a physical knob—or slider—on MIDI hardware known as a control surface. To do this, map a specific hardware control to PLAY’s Pan knob and then turn on automation recording for that mapping. While the project is playing in the sequencer, move the hardware control as needed. At the end turn off automation

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recording. The next time you play back the project, the Pan knob will move the same way without having to move it yourself.

- **Draw the automation** in what's called an “envelope.” To do this, set up a mapping so that the sequencer knows which of the PLAY Engine's controls to manipulate. Then create an envelope for that control in the appropriate track of the sequencer. Then use the tools provided to draw in the movement of the knob. The following image shows such an envelope for the panning example described above.

Specific details on how to do both of these tasks with your sequencer can be found in its documentation.

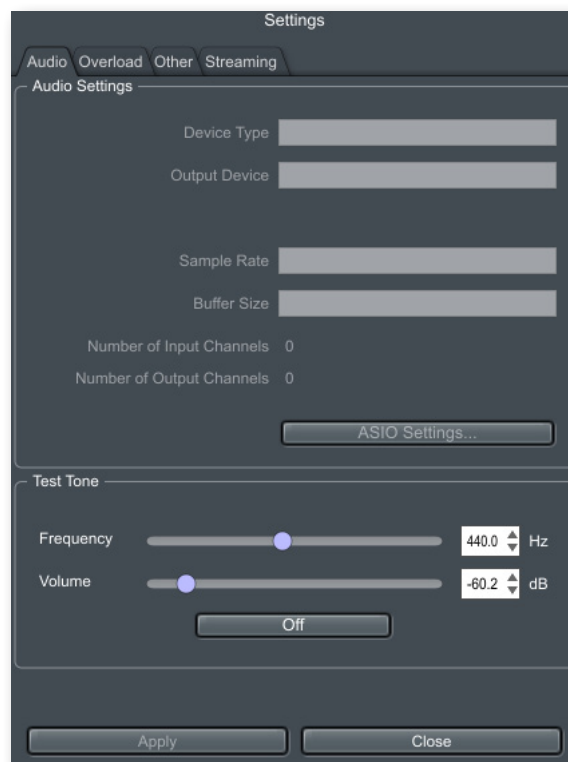


In this image, the short, horizontal blue segments are MIDI notes played on a guitar. The continuous green line indicates graphically the position of the Pan knob: 90% left, 90% right, left, right, and then moving slowly to the left.

How the Plug-in and Standalone Versions Differ

For the most part, the two versions look and behave the same, but there are differences that often derive from the fact that the host programs provide the plug-in version some of the services that the standalone version must do for itself.

- When you open the PLAY Engine in standalone mode, you are selecting the name of a virtual instrument. The UI that appears, matches the virtual instrument you opened. For example, when you open Quantum Leap Gypsy, it's the Gypsy UI you first see.
- In contrast, when you open the PLAY Engine plug-in, the UI that first appears belongs to the instrument named as the default library in the Settings dialog (see page 36). Of course, once you load any instrument it's that instrument's UI that appears.



The audio settings (see the image above) and MIDI parameters configured in the standalone version's Settings dialog are not relevant to the plug-in version; the values are set

in the host. Therefore, the Audio Settings are grayed out and not selectable. And the entire MIDI tab is not even there, as shown in the image. Oops!

The MIDI Port control in the Player View is not relevant, so the drop-down list contains no values. Instead, the sequencer assigns a virtual MIDI port to each instance of the PLAY System plug-in. Each of these virtual ports can send MIDI data on 16 separate channels that correspond to channels 1 through 16 in the MIDI control in the Player View.



PLAY

11. Using MIDI Commands

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Using MIDI Commands

What Is MIDI?

MIDI is a digital data specification by which one musical device can communicate with another to describe a musical performance. A “musical device” can be an electronic instrument as well as a computer running MIDI-aware programs. (The term MIDI is an acronym for the name, “Musical Instrument Digital Interface.” The specification is maintained and published by the MIDI Manufacturers Association.)

MIDI data describes much more than what notes are to be played and when. It includes information describing dynamics, tempo, expression, and much more. (See the table below.) One thing that MIDI cannot specify, though, is the sound of each note. The exact same MIDI data can be sent to sound generators that imitate a flute and a ukulele, with very different results. While this independence of MIDI data from the audio can sometimes cause problems, it can be used to great advantage with sound libraries like those from EastWest.

This spec has become the standard means for conveying musical data in several very different types of environments:

- MIDI can be used in real time. A musician plays a keyboard—or other instrument that can generate MIDI codes—and the data is sent via a cable to a sound generator that understands the codes. The keyboard makes no musical sound itself, relying on the device at the other end of the MIDI cable to do so.
- MIDI data can be stored in a program for later playback. Such a program is called a sequencer. A musical piece stored in a sequencer can consist of any number of concurrent musical lines, from one to an entire orchestra—and more.
- MIDI can be used to share musical data between computer programs. A typical use of this capability is the export of data from a sequencer (good at creating audio files) and its import into a notation program (good at creating printed scores). Or *vice versa*.
- A file containing MIDI data can be sent from one computer to another as a way of sharing a musical piece. Because there is no audio data in the file, a “MIDI song” is typically much smaller than even a compressed audio file, such as an MP3. The downside is that the instrumentation and sound of the file on the receiver’s computer are entirely dependent on the local setup, especially the sound card (if the piece can be played at all). While the notes and rhythm will be preserved, there’s no guarantee the sounds of the instruments will be the same. Ways around this problem are out of scope in this manual.

ADVANCED: The PLAY Engine, like many other MIDI-based programs, calls the 16 MIDI channels 1 to 16. Some other software, including some host programs, may number the MIDI channels 0 to 15 (which is still 16 separate numbers). If you set matching values in the PLAY Engine and the host sequencer, but the expected instrument does not sound, try adding one to the channel number in PLAY or subtracting one in the sequencer (but not both). If the instrument now sounds correctly, you have found such a mismatch.

The Most Common MIDI Parameters

In addition to data about notes, tempo, meter, the published spec for MIDI defines control codes so that various aspects of a performance can be conveyed along with the basic note data. There are potentially up to 128 possible control codes, but not all numbers from 0 to 127 are currently defined. Here are some of the most commonly used codes.

MOST COMMON MIDI CONTROL CODES			
0	Bank Select	64	Hold Pedal (on/off)
1	Modulation Wheel *	65	Portamento (on/off)
2	Breath Controller	66	Sostenuto Pedal (on/off)
4	Foot Pedal	67	Soft Pedal (on/off)
5	Portamento Time	68	Legato Pedal (on/off)
6	Data Entry	69	Hold 2 Pedal (on/off)
7	Volume *	120	All Sound Off
8	Balance	121	All Controllers Off
10	Pan Position *	123	All Notes Off
11	Expression *	124	Omni Mode Off
12	Effect Control 1	125	Omni Mode On
13	Effect Control 2	126	Mono Operation
		127	Poly Operation

This information is included here for the benefit of those users who might choose to use these MIDI codes to control a performance in ways beyond the scope of this manual. Here, we will discuss only four of the codes: 1, 7, 10, and 11, as indicated by the asterisks in the table.

Using MIDI to Shape a Performance

The sound of a performance by a live musician differs from that of a cheap music box in all the ways that the musician interprets the music: through tempo adjustments, expressive dynamics, accents, timbre changes, decisions about which articulation to use for each note, and so on.

But a MIDI stream is only digital data; it's the job of the musician—whether playing in real time or adding data to a sequencer project—to use MIDI to convey his or her musi-

cal intentions. The MIDI standard was designed to convey all these interpretive elements. And the EastWest libraries were designed to respond appropriately to expressive cues.

Control Code 1: Mod Wheel

Mod Wheel data is added to the MIDI stream each time the position of the wheel changes. There are 128 positions from Off (value = 0) to Full (value = 127). How the sound generator responds to Mod Wheel values is implementation-specific. It might adjust the distortion on an electric guitar, affect the loudness in a Dynamic Cross-Fade patch (DXF), or change the amount of an LFO filter on the patch. Really, almost anything is possible.

Some of the EastWest and Quantum Leap libraries include articulation files called Dynamic Cross Fades, also called “DXF files.” As the name indicates, the Mod Wheel is used to fade between two or more sets of samples that differ in loudness—and usually, therefore, timbre as well.

A typical articulation file contains several layers of samples, each layer recorded with the instrument being played at a specific loudness: such as *pp*, *mp*, *mf*, or *ff*. And typically, it is the Velocity parameter of the note that determines which layer is played back. In a DXF file, it is the position of the Mod Wheel that determines the layer. That difference means that which sample is played can be modified mid-note, instead of having to wait for the next Note-On event. The documentation for those libraries that include such files provides more information where the articulations are described.

Control 7: Volume

Both CC7 and CC11 affect dynamics. In EastWest libraries, Volume data is designed to be relatively static, perhaps even to be set once near the beginning and left unchanged thereafter. The recommendation is to use Volume to adjust the relative loudness of each track; if it's discovered during a final mix session that the lead guitar needs to be boosted throughout the piece—or in certain large sections—adjust the Volume where appropriate. Expression is designed more for continuous dynamics; see below.

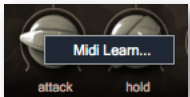
Control Code 10: Panning

Sound generators, including the libraries from EastWest, respond to Panning codes by adjusting the relative loudness of the sound in the two stereo channels, giving the listener an impression of the instrument being left or right of the center line, and by how much, if any. Some libraries may have the instrument already positioned correctly in the sound space, such as instruments in a symphony orchestra being recorded where they normally sit in a concert hall. Listen to the sounds in your specific library to see whether that's the case.

Control Code 11: Expression

As mentioned above, Expression and Volume are two different codes associated with dynamics. CC11 is *intended* to be used to add the moment-by-moment dynamics that mimic the way live musicians are constantly adjusting the force of the breath or the pressure of the bow on the strings to achieve musicality. These changes produce the dynamic arc of a melody or even swells in individual notes.

The MIDI Learn Feature



Most controls in PLAY can be connected to MIDI Control Codes using the MIDI Learn feature. Right-click on a control and click on “Midi Learn...” to engage this feature. Then adjust one of the CCs on an attached MIDI controller. The control in the UI on which you right-clicked will “hear” the incoming control code data, and assign the number of that CC to this control. To disconnect a control from the learned CC, right-click and select “Detach From Midi,” as shown below.

In this way you can adjust instrument parameters in real time. It can be done either from a MIDI keyboard or other control surface during a live performance, or by capturing the control code data in a sequence and playing it back every time the sequence is run.

