

Hollywood Orchestra Virtual Instrument

Diamond Edition

Users' Manual

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PLAY

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Welcome

About Hollywood Orchestra

This extensive library is a collection of the Hollywood Orchestral Percussion, Hollywood Brass, Hollywood Woodwinds and Hollywood Strings. These instruments were recorded, engineered, and produced with the superior level of sound quality the EastWest brand is known for. Each of the instruments was recorded in Studio 1 at EastWest Studios, giving the four libraries a consistent sound and ambience.

The Hollywood series was designed from the start to emulate a traditional large studio orchestra. It focuses on a typical orchestral instrumentation. If you seek a larger sound palate, EastWest has created many other libraries stocked with a variety of other modern, ethnic, percussion, vocal, guitar, and keyboard instruments.

Please visit http://www.soundsonline.com/ for the entire catalogue.



Studio 1 at EastWest Studios, during setup for the recording sessions

Producer: Doug Rogers

With over 30 years experience in the audio industry, founder and producer Doug Rogers is the recipient of over 70 industry awards, more than any other sound developer. His uncompromising approach to quality and innovative ideas have enabled EastWest to lead the sound-ware business for more than 25 years. "The Art of Digital Music" named him one of "56 Visionary Artists & Insiders" in the book of the same name.

He released the very first commercial Drum Samples CD in 1988, and followed it with the multiple award-winning "Bob Clearmountain Drums" sample collection which he co-produced. In the years that followed he practically reinvented the sound-ware industry. EastWest introduced loop sample libraries to the market in the early nineties, followed closely by the first midi driven loops collection (Dance/Industrial). He released the first library to include multiple dynamics, followed by the first sample library to stream from hard disk, an innovation that led to the detailed collections users expect today.



His recent productions are Symphonic Orchestra (awarded a Keyboard Magazine "Key Buy Award," EQ Magazine "Exceptional Quality Award," Computer Music Magazine "Performance Award," Sound On Sound "Readers Award" (twice), and G.A.N.G. [Game Audio Network Guild] "Best Sound Library Award"); and Symphonic Choirs (awarded Electronic Musician "Editor's Choice Award," G.A.N.G. "Best Sound Library Award," and Keyboard Magazine "Key Buy Award"). Most recently, his productions include Quantum Leap Pianos, the most detailed virtual piano collection ever produced; Fab Four, inspired by the sounds of the Beatles; The Dark Side (Fab Four and The Dark Side were both M.I.P.A. Award winners, judged by 100 music magazines); Hollywood Strings, Hollywood Brass, Hollywood Orchestral Woodwinds, Hollywood Orchestral Percussion; ProDrummer 1, co-produced with Mark "Spike" Stent; ProDrummer 2, co-produced with Joe Chiccarelli; and Ghostwriter, co-produced with Steven Wilson. Over the last 17 years he has partnered with producer/composer Nick Phoenix and set up the Quantum Leap imprint, a subsidiary of EastWest, to produce high-quality, no-compromise virtual instruments. EastWest/Quantum Leap virtual instruments are considered the best available and are in daily use by the who's who of the industry.

Producer: Nick Phoenix

Nick began scoring film trailers in 1994. To date, he has scored or licensed music for the ad campaigns of over 1000 major motion pictures. “Godzilla,” “Ender’s Game,” “Skyfall,” “World War Z,” “Rush,” “The Hobbit,” “Avengers,” “Star Trek 2,” “Inception,” and “Harry Potter and The Deathly Hallows” are a few recent examples. Nick founded “Two Steps From Hell” with Thomas Bergersen in 2006.

www.twostepsfromhell.com

Two Steps From Hell has grown from a production music library into the top epic music artist in the world, with millions of fans and six top selling CDs on iTunes, a phenomenon never before seen in the music industry.

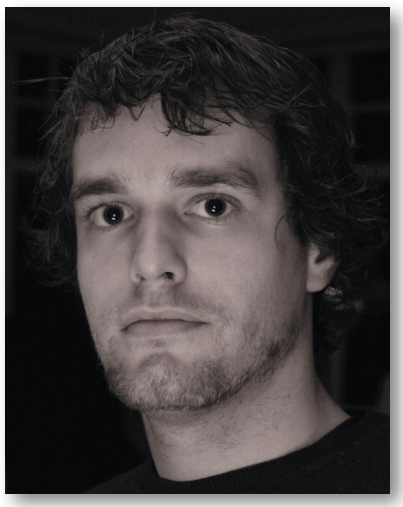
The journey as a composer has inspired Nick to record and program his own sounds and samples. A 17-year partnership with Doug Rogers and EastWest has yielded award winning software titles such as the Hollywood Series, Stormdrum 1, 2 and 3, Symphonic Orchestra, Symphonic Choirs, Silk, RA, Voices Of Passion, Ministry Of Rock 2, Gypsy, Quantum Leap Pianos, Goliath, and many others.



Producer: Thomas Bergersen

Thomas Bergersen holds a composition and orchestration Master's degree, and has worked in the capacity of composer, orchestrator, or music arranger on many Hollywood productions.

He founded Two Steps From Hell (**www.twostepsfromhell.com**) with Nick Phoenix in 2006 and has since written music for countless movie trailers. "Star Trek," "Harry Potter 6," "Tales of Despereaux," "The Dark Knight," "Valkyrie," "The Hulk," "Rendition," "Spider-Man 3," "Golden Compass." "The Assassination of Jesse James," "Pirates of the Caribbean 3," "Babel," "Hitman," "I Am Legend," "300," "No Country For Old Men," "Harry Potter 5," "The Brave One," "Wall-E," "Blood Diamond," "Speed Racer," and "Night at the Museum" are a few recent examples.



Thomas is also a trumpetist and has performed on major TV productions including NBC News. In his pursuit of the ultimate realism in samples, he has produced a great number of orchestral sample libraries for his own use. With Hollywood Strings, it was time to join forces with veteran producers Doug Rogers and Nick Phoenix, and to share this knowledge with the rest of the world. And this collaboration has continued with Hollywood Brass, Hollywood Orchestral Woodwinds, and Hollywood Orchestral Percussion.

Thomas' studio is located in Santa Monica, California. **www.thomasbergersen.com**

Sound Engineer: Shawn Murphy

Shawn Murphy is an Academy Award, C.A.S. (Cinema Audio Society), BAFTA, and Emmy award-winning sound engineer who has recorded and mixed the scores for more than 300 feature films including: “Indiana Jones and the Kingdom of the Crystal Skull,” “Star Wars: The Phantom Menace,” “Star Wars: Episode II - Attack of the Clones,” “Star Wars: Episode III - Revenge of the Sith,” “Star Wars: A Musical Journey,” “Jurassic Park,” “Jurassic Park, The Lost World,” “Harry Potter and the Prisoner of Azkaban,” “Titanic,” “The Curious Case of Benjamin Button,” “The Bourne Ultimatum,” “Minority Report,” “Saving Private Ryan,” “Munich,” “The Passion of the Christ” (score mix), “X-Men: The Last Stand,” “Memoirs of a Geisha,” “Ice Age 2,” and “Ice Age 3.”

Hollywood Strings was the first virtual instrument collection he engineered. And his work with EastWest/Quantum Leap continued with Hollywood Brass, Hollywood Orchestral Woodwinds, and Hollywood Orchestral Percussion.



Credits

Producers

Doug Rogers, Nick Phoenix, Thomas Bergersen

Sound Engineer

Shawn Murphy

Engineering Assistance

Ken Sluiter, Jeremy Miller

Scripting

Patrick Stinson, Thomas Bergersen, Klaus Voltmer

Production Coordinator

Rhys Moody

Programming

Justin Harris, Nick Phoenix, Jason Coffman, Andrzej Warzocha,
Thomas Bergersen

Editing

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Arne Schulze, Pierre Martin, Spencer Putnam,

Art Direction

Steven Gilmore, Thomas Merkle, Doug Rogers, Nick Phoenix, Thomas Bergersen

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Doug Rogers, Nick Phoenix, Rhys Moody, Klaus Voltmer, Klaus Lebkücher,
Bartlomiej Bazior, Stefan Holek, Adam Higerd,
Truc Phan, Helen Evans, Elon Arbiture, Julian Ringel, Patrick Stinson,
Ezra Buchla, David Kendall, Nick Cardinal, Jonathan Kranz

Manual

John Philpit, Andrew Hlynsky

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.

Each time you install one of the PLAY System libraries, two manuals are copied to the file system on your computer:

- **The manual that describes the whole PLAY System**. This, the largest of the manuals, addresses how to install and use all aspects of the software that are common to all libraries.
- **The library-specific manual**, such as the one you are currently reading. This smaller document describes aspects that differ from one library to the next, such as the user interface and the list of included instruments and articulations.

Using the Adobe Acrobat Features

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. 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, you can click on the last words of the previous sentence ("Adobe web site") 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. Note that images are clearest and screen shots most legible at 200% and next best at 100%.

Important Note:

If you have a computer or tablet with a touch screen, you might have received preinstalled a version of Acrobat Reader designed to work with touches to the screen. In some cases, these touch-friendly versions don't behave exactly the same way as the official Adobe product. If you are encountering problems navigating through this document, consider downloading the free Acrobat Reader from the adobe.com website. (It is OK to have both versions installed at the same time.)

The Master Navigation Document

Because the EastWest PLAY System is a collection of components, each with its own Users' 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 on the title page of each chapter in each document. From there, you can open any other document in the collection.

As one example, if you're reading some chapter in this documentation for the Hollywood Orchestra library, and need to open the manual for the PLAY System as well, go to any chapter title page and click on the link at the bottom of the page that says, "Click on this text to open the Master Navigation Document." It will open in a new window on the 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 Hollywood Orchestra library manual and the PLAY System manual open in separate windows so you can refer to them both.

Separate Gold and Diamond Manuals

The Hollywood Orchestra virtual instrument is available in separate versions: Gold and Diamond. And each has a manual slightly different from the other, so it is important that you use the correct version of the manual. This is the manual for the Diamond Edition. If you have the incorrect version of the manual, contact Technical Support at EastWest.

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

If you visit the forums to receive support from EastWest (instead of going directly to the support site listed above), make sure you post your support request in the Support forum and not in the General Discussion forum.



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Hollywood Orchestra, An Overview

The Hollywood Orchestral Series

This EastWest virtual instrument contains a selection of instruments heard in both traditional and modern orchestras. The included instruments fall into four sections, each broken down into instrument families:

- Hollywood Strings
  - 1st Violins
  - 2nd Violins
  - Violas
  - Celli
  - Basses

- Hollywood Brass
  - Trumpets — Solo; 2; 3
  - Trombones — Solo; section of 2 Trombones plus 1 Bass Trombone
  - Cimbasso — Solo
  - Tuba — Solo
  - French Horns — Solo; 2; 6
  - Low Brass — the sound of multiple brass instruments playing, usually in unison

- Hollywood Percussion
  - Cymbals
  - Drums
  - Metals
  - Woods

- Hollywood Woodwinds
  - Flutes
  - Clarinets
  - Double Reeds

Together, these libraries provide a very large battery of instruments for many different styles of orchestral writing. For more detailed explanations, please see the family specific instructions beginning in Chapter 4.

A wide variety of articulations were recorded for each instrument. In some cases, these various articulations are presented as separate entries in PLAY's Browser view. In other cases each articulation is accessible via keyswitch, meaning the articulation changes based on pressing a trigger key.

These instruments can be used on their own or they can be integrated into a larger orchestral framework with other members of the EastWest Hollywood Orchestra. All these members of the EastWest Hollywood series have been designed to work together to create an integrated orchestral sound:

- They were all recorded in the same studio.
- They were all recorded with the same microphones in the same positions within the recording space.
- They were all engineered by Sound Engineer Shawn Murphy.
- They were all produced by Producers Doug Rogers, Nick Phoenix, and Thomas Bergersen.
- They were all programmed using the same practices and software.

Comparison of the Diamond and Gold Editions

The Gold Edition is mostly a subset of the Diamond Edition. It is intended for those with smaller or less capable computer systems, and for those looking for most of the features and power of the Diamond Edition but at a smaller price. Here are the differences:

- **Bit Depth:** the samples in the Diamond Edition are 24-bit; those in the Gold Edition are 16-bit.
- **Delivery:** the Diamond Edition is provided on a hard drive. The Gold Edition is available by download or the user can purchase the CCC Gold "Sound Data Hard Drive" (http://www.soundsonline.com/CCC-Gold-HD) which contains the sound data only and can then purchase product licenses online.
- **Mic Positions:** The Diamond Edition includes samples from 5 independent microphone positions that can be mixed together to achieve control over both acoustic vantage and spaciousness of the sound; the Gold Edition provides a single mic position.

The list of articulations for the two libraries are the same.

What's Included

This Hollywood Orchestra library (Diamond Edition) you purchased includes all of the following:

- a complete set of sample-based instruments, enumerated later in this manual
- approximately 680 Gigabytes of 24-bit, 44.1 kHz samples
- the EastWest PLAY 4 Advanced Sample Engine (Note that PLAY 4 is required; earlier versions are not supported with this library.)
- the unique authorization code that identifies the license you bought
- manuals in Adobe Acrobat (.PDF) format for both the EastWest PLAY 4 System and the Hollywood Orchestra virtual instrument
- an installation program to set up the library, software, and documentation on your computer
- an Authorization Wizard for registering your license in an online database

One required item *not* usually included is an iLok security key. If you already have one from an earlier purchase of software, you can use it. Otherwise, you need to acquire one. They are available from many retailers that sell EastWest products, or you can buy one online at Amazon.com.

Hardware Requirements

See the PLAY System manual for a complete list of the Hardware and Software Requirements for installing and running any PLAY System library.

Because both the size and complexity of many of the Hollywood Orchestra instruments are greater than in some other PLAY libraries, you will likely need an even more capable system than is recommended for those other libraries:

- Intel or AMD quad-core processor, or higher, running at a minimum of 2.66 GHz
- 8 GB of RAM or more
- a 64-bit operating system; and a 64-bit host when running PLAY 4 as a plug-in

Note that this is a recommended system, and is more powerful than the minimum of what is required.

Solid State Drives

There is no doubt solid state drives (SSDs) are a revolution for storing and streaming samples. While currently more expensive than traditional hard drives, the seek and retrieval times are almost instantaneous, which means you may be able to create even larger projects and/or to use lower latencies without needing workarounds to avoid disruption of the audio output. When using multiple products from the EastWest Hollywood series, SSDs may be your only option (in some cases, "light" patches are provided for other users), and the number of mic positions that can be accessed simultaneously may also be dependent on solid state drives. Installing 2 or more smaller SSDs with a true hardware RAID 0 solution offers the best performance. For professional users, we recommend consulting computer system specialists to achieve the best performance.

EastWest has done extensive testing in which PLAY 4 running with solid state drives for the samples and instruments was able to reproduce over 700 concurrent voices without any pops, clicks, or other artifacts that can occur when the same sequence streams from a traditional hard drive.

This data indicates that it is not the PLAY 4 software that provides the bottleneck in the data flow, but rather the "seek time" required to locate the many hundreds of samples on a traditional hard drive when they need to be streamed to the CPU all at once. For those composers and orchestrators looking to build large projects using the kinds of instruments that add realism through the use of complex cross-fades, solid state drives (along with more than 8 GB of RAM) can help make that happen.

Requirements for Sample Storage

The available space on the hard drive required for an installation of Hollywood Orchestra (Diamond Edition) is approximately 680 GB (Gigabytes).



3. The Hollywood Orchestra User Interface

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Click on this text to open the
Master Navigation Document

The Hollywood Orchestra User Interface

Each PLAY library presents its own interface when one of its instruments is the current one, as specified in the Instruments drop-down in the upper right corner. (See below.)

Much of this interface is shared by all PLAY System libraries, and the common features are described in the PLAY System manual. The universal controls in Hollywood Orchestra are described later in this section. If you don't see a control described in this chapter, look at the PLAY System manual (that's the other manual installed on your hard drive during program setup) or in the instrument specific chapter. (Chapters 4 - 7)



Here are the controls described in this manual (and not in the PLAY 4 System manual):

- Performance (Each instrument section has a slightly different set of performance controls.
- Round Robin Reset
- Stereo Double
- the Master button and Pre-Delay knob in the Reverb controls
- the graphical representation of the Envelope
- String Library Specific Controls

Performance



Legato Button

Legato is the style of playing notes in a phrase with no significant silence between them in order to produce a smooth and flowing melodic line. Use this button to turn on a legato effect for the articulation. This script-based effect is separate from the actual Legato instruments included in Hollywood Orchestra.

Monophonic True Legato Button

Turning on this button causes a legato instrument to become monophonic. That is, if one note is still playing when another note starts, the first note will be terminated, even though the MIDI note has not yet reached the Note Off event. If you choose to turn off this behavior so that you can have more than one melodic line at once in a single instance of a legato patch, you run the risk of PLAY making inappropriate slurs from one melodic line to the other.

Portamento Button

Portamento, also sometimes called glissando, is the technique of a continuous slide in pitch from one note to the next note in the phrase. Portamento, as available with this script, is usually a short, anticipatory movement between the pitches of two adjacent notes. This script-based effect is separate from the actual Portamento instruments included in Hollywood Orchestra.

Repetition Button

Repetition refers to the rapid playing of a single note more than once with no different notes played between them in the same phrase. Turning on this button causes repeating notes to sound slightly different, avoiding the sense of mechanical repetition.

Note that Repetition scripts do not have the equivalent of the Round Robin Reset button (as described below) to ensure an identical sound every time the same track is bounced to audio. The randomness of the results is a feature. You need to decide how important exact repeatability is when selecting either a round robin patch or the Repetition script.

Con Sordino Button

This articulations appears ONLY in the stringed instruments. The term "con sordino" means "with mute." On string instruments, a mute attaches to the strings near the bridge and dampens the vibration, creating a sound with its higher overtones reduced. Turn on this button to hear the "con sordino" sound.

You can also specify whether "con sordino" is in effect with MIDI CC 15. When this control code is 65 or greater, "con sordino" is turned on; when 64 or less, it is turned off. Use the control code for turning on and off this effect note-by-note during playback. Or use the button instead when it should be always on or always off for any given MIDI track.

Round Robin Reset Button

A round robin articulation is one in which several different samples are recorded with all parameters, such as volume, speed of attack, and so on, being essentially constant. The PLAY Engine then knows to alternate between the two or more samples during playback. The goal is to avoid what's often called the "machine gun effect" in which playing the same sampled note repeatedly causes the unnatural sound of consecutive notes being mechanically identical.

Any articulation with "RR" in its name uses round robin technology. Those with an "x3," "x4," or the like in the name, use 3, 4, or more different samples for each note. Or in this library, check the third column in the tables of instruments: if that column contains a number other than 1, then it's a round robin instrument.



There's one potential problem with round robin technology, and one way to solve it is the Round Robin Reset button. 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 over the whole piece, the PLAY 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.

You can use this button to reset all round robin articulations on demand. Or use your choice of a MIDI note or MIDI control code to reset them one instrument at a time from a MIDI keyboard or the data stored in a sequencer project. See the description of the Settings dialog (in the main PLAY System manual) for more information about this articulation-specific approach.

Other Button

This button controls whether a hidden script is turned on or off. This script, if present, manages some important features of a wide variety of articulations: from scripting that selects the correct staccato sample based on the speed with which notes are played to scripting that manages release trails for legato patches. Do not turn off this button when it's lit (unless you know how that action will affect the audio output). Turning it on when an instrument contains no script has no effect.

Stereo Double Controls



This knob, with its three buttons, gives the user the option of using exclusively the left stereo signal or right when "Stereo" is selected from the Channel Source drop-down. For any other setting, this control has no effect.

The knob lets the user determine the spread of the signals, how far apart the ear perceives the stereo channels to be. A value of 0% brings the two channels together at the center (unless the Pan knob positions the output differently), and is the equivalent of turning off the controls with the button to the left of the knob. A value of 100% calls for the maximum spread available. Select between the left and right signal with the L and R buttons, respectively.

The Master Button and Pre-Delay Knob in the Reverb Controls

The common features of the Reverb Controls are explained in the main PLAY System manual, but the Hollywood Orchestra user interface includes two features not in all PLAY libraries:

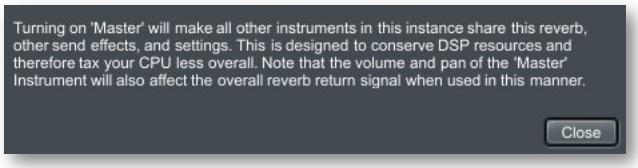
The Master Button

When this button is pressed and the On light is illuminated, the Reverb for this instrument applies to all the other instruments in this instance of PLAY, including instruments from libraries that do not include a Master button.



If the Master button is already engaged in another instrument in the current instance of PLAY, and the Master button is pressed in a new instrument, then the settings in the user interface (UI) of the new instrument become the settings for all instruments in this PLAY instance.

The processing of high-quality reverb can be very CPU-intensive and it is often the case that you want to use the same reverb on all the instruments in an audio track. Engaging the Master Reverb button allows you to run a single instance of the reverb processor and have the effect apply to multiple instruments.



When you engage the Master button, PLAY puts up a warning message, as shown above, to remind you that the reverb settings in this instrument will now apply to all instruments in this instance of PLAY.

The Pre-Delay Knob

Increasing this level delays the onset of the reverb so that the initial section of the sample is unaffected. This feature allows the sound of each attack to maintain its true color while the rest of the note still gains the benefit of the reverb effect.

The Graphical Representation of the Envelope



The Envelope Controls are described in the main PLAY System manual because they are common to all PLAY System libraries. Only some instruments include the graph, as shown to the right.

Note that the total width of the graph represents the total length of all phases of the envelope. Therefore, when you change something in one part of the graph, for example, the length of the decay, you may see the slopes of other components, the attack and the release, change as well because those phases become a larger or smaller percent of the whole; this is as expected.

The Browser View

The Browser behaves identically among all PLAY System libraries. Read the main PLAY System manual for information about how to use that view.

Performance Scripts

The Hollywood Orchestra virtual instrument includes three user-modifiable, built-in scripts that can provide extra realism to phrases that take advantage of their benefits:

- The Portamento script provides a sliding pitch between consecutive notes in a phrase. This can be used to emulate the subtle portamento that occurs, for example, when a brass player uses his breath to bend a note a little at the beginning or end of a sounding note.
- The Repetition script changes the quality of the notes when a single pitch is played multiple times in quick succession. Although similar to what can be achieved with Round Robin patches, the effect can be used on any articulation, not only those with "RR" in the name.
- The Legato script creates a more flowing and connected sound for notes in a continuous phrase.

The scripts themselves are not modifiable by the user, but important parameters can be adjusted using MIDI control codes. See details of how to use the control codes in the descriptions that follow.



In order for a script to actively affect the notes in an articulation file, the script must be activated in the PLAY user interface. The image above shows the Legato script turned off and the other two scripts turned on. In addition, the appropriate MIDI Control Code must not be turned Off; that means if MIDI values are being generated for the On/Off code on this channel, as in the table below, they must currently be in the range 64 to 127; if MIDI CC values are not being generated, the Control Code is considered On (as long as the light in the user interface is On).

The effect of engaging the Portamento or Legato effect is subtle. The goal is the sound of smooth, connected playing and not anything so pronounced that it will draw attention to the effect itself. These two scripts share many features in the ways they affect the sound; that is, the Legato script includes a small portamento component and vice versa.

MIDI Control Codes

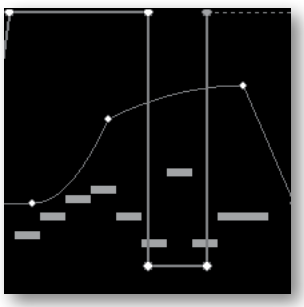
These MIDI values can be controlled in standalone mode by adjusting the controls (knobs or sliders) on a "control surface" or MIDI keyboard. When run as a plug-in inside a sequencer or other host, you can create a controller envelope to automatically adjust values during playback. See the documentation from your hardware or software for information about how to change the values of control codes.

The following table lists the codes that affect these scripts. Note that the MIDI Control Codes have no effect unless the corresponding script is turned on in the PLAY interface.

Code	Portamento	Repetition	Legato
5	Time		Time
65	On/Off		
68			On/Off
69		On/Off	

The three On/Off control codes all work the same way: a value 64 or higher turns the script on and any other value (0–63) turns the script off.

CC 5 affects the duration of the portamento or legato. The possible values are 0–127. The higher the value the longer the effect takes to complete; that is, you should set higher values to make the sound more pronounced. Use your ear to find the right values for each note in the phrase.



The image at the left shows two envelopes affecting the Portamento script in a host. The nine white horizontal bars are the notes. The light-gray line that jumps from the top to near the bottom and back to the top is CC 65 that turns the script on and off so that only some notes use portamento. The curving line near the middle is CC 5, setting the effect's "Portamento time" parameter for each note individually. (Note that the middle section, when the CC 65 line is near the bottom, CC 5 actually has no effect because the script is turned off at that point.)

Monophonic Behavior

Both the Portamento and Legato scripts change the instrument so that it can play only one note at a time whenever the script is turned on. If a note is still playing when a new note starts, the first note will end at that moment. This behavior allows for no ambiguity in how the notes form a phrase.

One consequence of this behavior is that if you want two concurrent legato lines—or one legato and one non-legato line—played with the same articulation, you need to open the same articulation file more than once and turn on the Legato script where appropriate. Of course, the same rule holds for the Portamento script.

Repetition Script

When playing consecutive notes of the same pitch, the use of a single sample over and over in quick succession can sound mechanically identical, which is called the "machine gun effect." The Round Robin patches are one way to fix this problem. The Repetition script solves the same problem in another way. For any articulation, this script uses one or more of three randomly selected options to keep the sound a little different on each repetition:

- Use the sample for a nearby note (for example, a half step higher or lower) and retune it to the needed pitch.
- Start the note a tiny amount before or after the specified start time.
- Detune the sample a few cents (hundredths of a semitone) higher or lower.

This variability gives the sound a more human, less robotic, feel. After all, what human instrumentalist plays every note exactly on pitch and at exactly the notated time?

The producers have selected which of these three approaches will be used for each articulation file—and how much variability to allow—to achieve the most realistic behavior. That is, some patches randomly use all three approaches, while others may use only one or two of them.

Note that Repetition scripts do not have the equivalent of the Round Robin Reset button to ensure an identical sound every time the same track is bounced to audio. The randomness of the results is a feature. You need to decide how important exact repeatability is when selecting either a round robin patch or the Repetition script.

The Articulations Control and Keyswitches



In the center of the Player view is a control that lists the articulations available in the current window. Often this list is short, containing only the one articulation given in the instrument name. The image at the right shows the control for a Timpani keyswitch instrument.

The checkboxes at the left of the control allow you to deactivate any articulation (turn it off while leaving its samples in memory) or, separately, to unload the samples from memory. The small knobs in the third column allow you to adjust the loudness of each articulation without affecting the loudness of the others.

The Finger Position Knob (String Library Only)

The sound changes for any given note when played on different strings. It is theoretically possible to play some notes in an instrument's mid-range in up to 4 different ways (ignoring harmonics). In practice, most string players use two—or occasionally a third—finger positions in most cases. The Hollywood Strings virtual instrument gives you some of that control, providing the two most common options.

The Finger Position knob controls—as much as possible—the string on which the note will be played. An instrument's lowest notes, such as Middle C on a violin, can only be played one way, but as you go higher up the scale, the number of ways to play a note rises, and then decreases again for the highest notes.



These 4 values available with this knob correspond to the hand positions that a string player uses during a real performance. You can use this knob to approximate the same position-related change in sound that can be achieved on a real instrument. Of course, because not all notes can be played on all 4 strings, the Finger Position value you enter is only a guideline of the sound you're looking for. In general, notes played on shorter string segments—that is, with the finger position closer to the bridge—have a warmer and mvore emotional sound. So this knob can affect that quality in the sound you're generating.

Note that finger position settings do not apply to all articulations, only those in which the bow moves across the string in a long movement. Those articulations that respond to finger position controls include "KSFP" (Key Switch Finger Position) in the name. And those that include "4th pos" in the name do not contain such a capability but, instead, always play notes in the 4th position (nearest to the bridge), where possible, for the warmer and more emotional sound. And, finally, note that the Basses contain no patches with "KSFP" in the name.

Using a MIDI Control Code for Finger Position

All patches that include "KSFP" in the name respond to MIDI control code 70 for specifying which finger position you want. The following table identifies the range for specifying each string. As always, note that not all strings are available for every note, so these ranges are just a guideline. See the tables on the following pages for details about which strings are available for each note within the range of each instrumental section.

RANGES FOR MIDI CC 70	
0–38	Finger Position 1
39–76	Finger Position 2
77–114	Finger Position 3
115–127	Finger Position 4

Using Keyswitches for Finger Position

The instruments that include "KSFP" in the name allow you to change the finger position not only with the knob or MIDI control code but also with keyswitch notes. The lowest of the 4 keyswitches (C0) sets the finger position to 1, causing the note to be played as far away from the bridge as possible. And the highest keyswitch (D#0) sets the finger position to 4 for the warmer sound.

If you decide to use any combination of keyswitch notes, knob, and control code, then PLAY will use whichever finger position was set last (by any means). In fact, no matter how you change the string number, you will see the Finger Position knob and the keyswitch note in the on-screen keyboard change, as well.

Finger Position Tables

The following tables, starting on the next page, and spread over 3 pages, specify how the 4 positions on the Finger Position knob translate into actual string selection for each note in an instrument's range. If you want to ensure that a specific note will be played on a specific string, find the note name at the left side of the table. Then scan across to determine which columns are shaded with the color of the string number you're looking for. (Remember that Middle C is named C3 in EastWest software.) For example, in the 1st or 2nd Violins:

- If you want A#3 to be played on String 3 (the green shading) then you need to set the Finger Position knob to 1 (or use keyswitch note C0).
- Or, if you want that same A#3 played on String 2 (the tan shading), then you need to set the Finger Position knob to 2, 3, or 4 (or use keyswitch note C#0, D0, or D#0).

The actual values for the Violas and Celli are different from the Violins, but the principle of how to read the tables is the same.

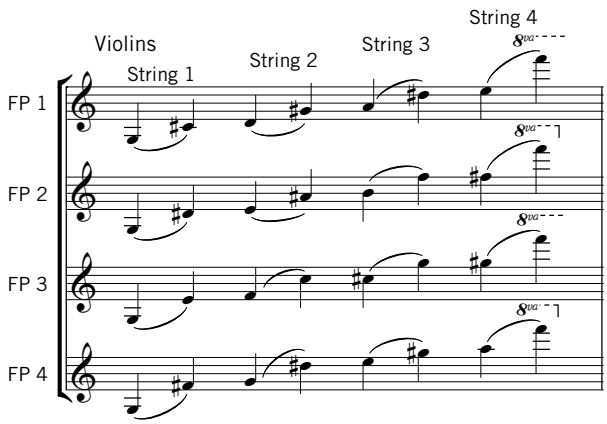
Note that an open string note is specified with the letter "O" in the tables. The sound of an open string is significantly different from the same note played by articulating the string on the fingerboard, so you will want to explicitly decide whether you prefer that sound or not, and select the Finger Position accordingly.

In addition to the tables for each of the 3 sections where a Finger Position control is provided, the same information is provided in traditional music notation, for those who prefer to read the note values from staves.

The tables start on the next page.

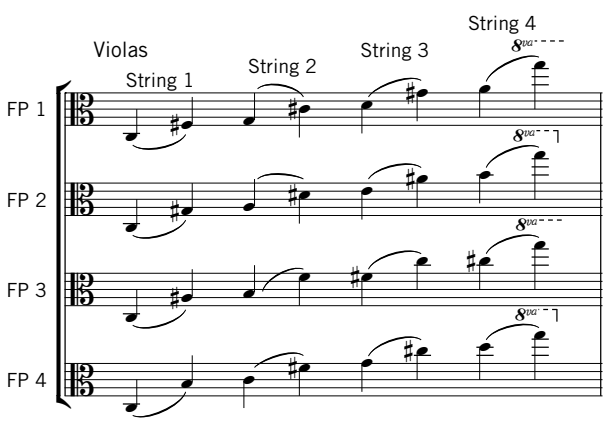
FINGER POSITION: VIOLINS

	FP 1	FP 2	FP 3	FP 4
A#4 and above are all played on String 4				
A4	String 4			
G#4				
G4				
F#4				
F4				
E4	0			
D#4	String 3			
D4				
C#4				
C4				
B3				
A#3				
A3	0			
G#3	String 2			
G3				
F#3				
F3				
E3				
D#3				
D3	0			
C#3	String 1			
C3 and below are all played on String 1				



FINGER POSITION: VIOLAS

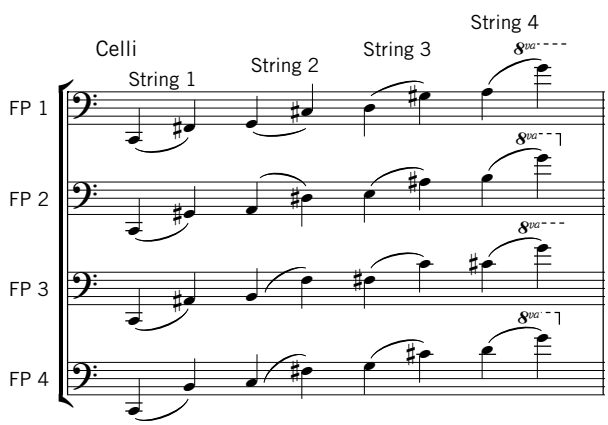
	FP 1	FP 2	FP 3	FP 4
D#4 and above are all played on String 4				
D4	String 4			
C#4				
C4				
B3				
A#3				
A3	0			
G#3	String 3			
G3				
F#3				
F3				
E3				
D#3				
D3	0			
C#3	String 2			
C3				
B2				
A#2				
A2				
G#2				
G2	0			
F#2	String 1			
F2 and below are all played on String 1				



For those not as fluent when reading a viola's alto clef, note that the breaks between strings on the celli are at exactly the same notes as on the violas, but an octave lower. You might find it easier to read the bass clef for the celli and mentally transpose up an octave for the violas.

FINGER POSITION: CELLI

	FP 1	FP 2	FP 3	FP 4
D#3 and above are all played on String 4				
D3	String 4			
C#3				
C3				
B2				
A#2				
A2	0			
G#2	String 3			
G2				
F#2				
F2				
E2				
D#2				
D2	0			
C#2	String 2			
C2				
B1				
A#1				
A1				
G#1				
G1	0			
F#1	String 1			
F1 and below are all played on String 1				





4. Hollywood Strings

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31 String Instruments
32 The Categories of Strings
39 01 Long
45 02 Long Powerful System
45 03 Short Tight
48 04 Short Loose
48 05 Effects
53 06 Keyswitch
55 Legato Slur and Portamento: 07 (basic) and 09 (Powerful System)
58 Legato Bow Change: 08 (basic) and 10 (Powerful System)
59 Full Strings

Click on this text to open the
Master Navigation Document

Instruments, Articulations, and Keyswitches
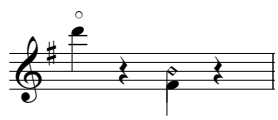
The EastWest/Quantum Leap Hollywood Strings virtual instrument is a library designed to create string orchestrations of the kind heard in movie soundtracks. The strings have many more articulations and options then any other of Hollywood Orchestra's sections.

Most of the library contains instruments that capture the sound of the 5 string sections (1st Violins, 2nd Violins, Violas, Celli, and Basses) playing in the multitude of articulations strings are capable of. There is also a folder where you can load up the entire string orchestra and play it at the keyboard in real time. All of this is described in detail later in this chapter.

The following pages include a table that lists each instrument in the Hollywood Strings library. You might want to print out the pages containing this table as a reference.
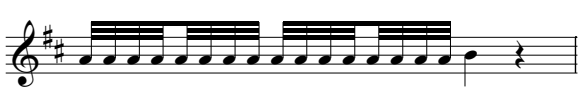
A Glossary of Articulation Names

- **Bartók pizzicato** is a style of playing in which the string is pulled away from the fingerboard, allowing it to snap back forcefully.
- **Col legno** refers to the sound of hitting the strings with the wooden stick of the bow, instead of the hair.
- **Détaché**, which means "separated" in English, refers to notes that do not have a legato connection to the next note in the phrase; that is, they come to a well defined stop before the start of the next note.
- **Flautando** technique is the creation of ethereal, flute-like notes when playing with no vibrato near the fingerboard with the point of the bow.
- **Harmonics** are created when a finger touches a harmonic node on the string and the bow plays close to the bridge. The image at the right shows the notation for a natural harmonic (sounding two octaves above the violin's open D string) and for an artificial harmonic (sounding two octaves above the written F#).
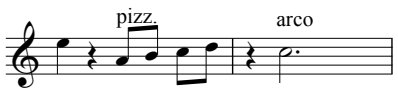


- **Marcato** refers to notes that are played with a strong accent at the beginning.

- **Measured tremolo** is the rapid repetition of a note, and at a specific number of strokes per minute, or at a specific note length. Everyone in the section plays the notes in synch and on the beats. The PLAY software determines the tempo by asking the host or, when in standalone mode, from the Engine Tempo Sync control in the Advanced Properties dialog for the current instrument.



- **On-the-bow staccato** notes are, like the other staccato defined here, short and not connected to the following note, but the end of the note is caused by the stopping of the bow's motion while still on the string (instead of lifting the bow off the string at the end). This articulation has a distinctive but subtle noise at the end of each note.

- **Pizzicato** is a style where the finger plucks the string and the bow does not touch the string. The opposite of "pizzicato" is "arco."
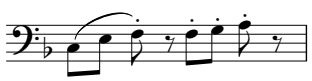


- **Repetitions** are notes where the same note was played immediately before it and the string is still vibrating at the time of the new attack. Because this vibration can affect the attack of the new note, this articulation is included in the library to achieve a more realistic sound than just repeating MIDI notes.

- **Ricochet**, also called jeté, is achieved by throwing the upper third of the bow onto the string so that it bounces several times and creates multiple notes in quick succession.

- **Spiccato** is a semi-off-the-string playing style that achieves a light and bouncy sound.
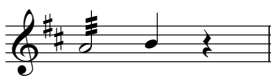
- **Staccatissimo** means "very staccato." See "staccato" below.

- **Staccato** notes are those that are of short duration and not connected to the following note in the phrase. In contrast to on-the-bow staccato (above), the end of the note may be achieved by lifting the bow from the string.
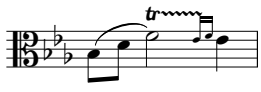


- **Sul ponticello** is a style of playing with the bow very near the bridge; it achieves a more intense sound that features the note's higher harmonics.

- **Tremolo** is the rapid repetition of a note but, in contrast to measured tremolo (above), without a specific rhythmic frequency. Section members may be out of synch with each other, resulting in a more continuous sound.



- **Trills** are the rapid alternation between two notes a minor or major second apart (also called half step and whole step trills).



- Separate **Up** and **Down** patches are provided for many of the instruments. The direction the bow is traveling during the note has a significant effect on the sound the instrument generates. Because string players often alternate the direction of the bow with each note for certain kinds of playing, the library includes several patches that automatically alternate between up and down strokes; these patches include "Up Dn" or "RR" in the name.

String Instruments

The sounds of each instrument are provided in the form of one or more instrument files (with extension .ewi in the Browser view), often representing separate articulations. Within some instrument files may be several articulations that can be selected in one of several ways:

- through the UI
- with keyswitch notes
- by moving the Mod Wheel

Most of the rest of this chapter documents the instruments and articulations for this library.

The String Sections

The Hollywood String orchestra, like most large string ensembles, comprises 5 sections:

- 1st Violins
- 2nd Violins
- Violas
- Celli
- Basses



In the Browser view, you can see 2 folders for each of these sections: for example, both "Violas" and "Violas Divisi." The first of these folders contains the many Violas instruments that are listed on the table later in this chapter. Each instrument provides access to the 5 microphone positions described in a section starting on page 121. The second of these folders contains both a Divisi A and a Divisi B version of the same instruments. These "divisi" instruments capture the sound of only the left chair or the right chair at each shared music stand, and they are only available with the Close mics.

The Quick Start Instruments

Near the bottom of the list of instruments (Violins to Basses) is a folder named "_Quick Start HS." It contains several instruments from each section that are designed to load quickly and use less of the computer resources than many of the other patches. This folder is described in more detail—and the instruments are listed—starting on page 62.

This folder was added in Diamond's version 1.0.6 and Gold's version 1.0.1, both available in March 2011. If you do not see this folder in the Browser, update to the latest version.

The Template PRO Instruments

Near the bottom of the list of instruments (Violins to Basses) is a folder named "_Template PRO." It contains duplicates of several instruments from most of the other folders. This list includes a recommended selection of articulations when first creating a template, especially on a semi-powerful computer. While many users will have other favorites or requirements, this is a good starting point, especially for new users.

Those with a more modest system, or a top-of-the-line computer, may choose to start with instruments more in line with the capabilities of their own hardware.

This folder is described in more detail—and the instruments are listed—starting on page 63.

This folder was added in version 2.0.0, available in June 2011. If you do not see this folder in the Browser, update to the latest version.

The Categories of Strings

For all five sections (from 1st Violins to Basses, but not the Full Strings) the list of instruments is divided into 11 categories. In the Browser, they appear as 11 separate folders:

- 01 Long
- 02 Long Powerful System
- 03 Short Tight
- 04 Short Loose
- 05 Effects
- 06 Keyswitches
- 07 Legato Slur + Portamento
- 08 Legato Bow Change
- 09 Legato Slur + Portamento Powerful System
- 10 Legato Bow Change Powerful System
- 11 Legacy

(The number at the start of each category name is there to make sure this list always appears in this order within the Browser.) These categories appear as section headers within the following table to help you find instrument files in the tables and in the Browser.

For many of these 11 folders, the name clearly describes the kinds of articulations it includes. The terms "Powerful System," "Tight," and "Loose" may not be immediately obvious:

- **Powerful System** refers to instruments that put a heavy load on the computer's resources, such as the amount of RAM memory, access to the hard drive, and use of the central processor(s). These instruments work best on computers with quad processors, at least 8 GB of RAM, and either a solid state drive or a fast hard drive (at least 7200 rpm). They need this extra power because they stream more samples into RAM and play more concurrent voices.

- **Tight** and **Loose** refer to the immediacy of the attack (the start of each note). Those instruments in the 03 Short Tight folder eliminate a few milliseconds from the very start of the recorded note, giving the playback a punchier sound that works well in faster music. Those in the 04 Short Loose folder include the whole recorded attack and, therefore, sound more natural in slower music.

The 11 Legacy folder is described in more detail below, starting on page 34.

A Note on Dynamics in Hollywood Strings Instruments

As discussed in multiple places within EastWest manuals, there are several ways you can affect how loudly an instrument is playing:

- MIDI Velocity
- Volume, CC 7
- Expression, CC 11
- the Mod Wheel, CC 1

Hollywood Strings includes a lot of instruments that rely on cross fading between samples instead of selecting which sample to play based on the MIDI Velocity parameter of each note. And these cross-fades can be controlled by the Mod Wheel, or CC 11, or both at once. Such an approach gives the composer much more in the way of continuous control over both the loudness and the timbre. But this control comes with a price: greater use of the computer's resources, especially the RAM and the processors. As is mentioned in some of the instrument descriptions below, PLAY might be playing up to 14 concurrent samples for each note (not including release trails).

The descriptions below sometimes specify that, for example, the instrument does not respond to MIDI velocity, or that you should use a specific approach when controlling dynamics and timbre. In general, if you find that an instrument is not responding to one of the ways of specifying loudness, even in instruments where it's not mentioned, investigate using other means to get the dynamics you're looking for.

"Niente" Instruments

These instruments have the abbreviation "Ni" near the end of the file name. They exist in all folders except 03 Short Tight and 04 Short Loose. For the Full Strings folders, look for "Niente" instruments in the Long folder, but not the Short folder.

All these instruments allow you to take the loudness down to zero, or, to use the Italian musical term, "*al niente*." The exact behavior of the dynamics in these instruments depends on the size of the instruments.

For those in the Powerful System folders (02, 09 and 10): As is described elsewhere, these patches use CC 11 (Expression) to cross-fade dynamics and CC 1 (the Mod Wheel) to cross-fade the depth of the vibrato. What is different about the "Niente" instruments is that CC 11 not only cross-fades the dynamic layers, but it can also bring the volume all the way to zero when the value of CC 11 approaches zero.

For instruments in other folders (01 and 05–08): Because these instruments are smaller, CC 1 (the Mod Wheel) controls the cross-fade of both vibrato and dynamics at the same time. CC 11 (Expression) performs global volume control. What is different about the "Niente" versions is that CC 1 can bring the volume all the way to zero in addition to cross-fading dynamics and vibrato.

Instead of trying to remember the differences described in the previous 2 paragraphs, remember that in all "Niente" patches the MIDI Control Code that cross-fades between dynamic layers can reduce the volume so that you can play notes at minimal audibility.

Note that patches are not listed as "Ni" in the following tables, because that applies to all instruments in all folders except 03, 04, and Full/Short.

The Legacy Folder

This folder includes earlier versions of some instruments that were the base form before the introduction of the Niente instruments. They are included in the Legacy folder so that those working on older projects still have access to them. But EastWest now recommends using the Niente versions in any new project for their greater dynamic range.

The 11 Legacy folder is not listed in the following tables because it contains only the instruments that correspond to the Niente instruments from other folders, but without the Niente functionality.

Table of the Instruments in Hollywood Strings

The following table, which extends over several pages, lists the instrument files available in each of the 5 string sections. A check mark indicates that the section includes a .ewi file as named at the left of the row.

This table does not explore the articulations available within each instrument file; that level of detail is provided later in this chapter.

When one section does not include an instrument or articulation you're looking for, you may be able to try one of the following approaches to get an approximation of the sound you want:

- Use that same patch from a different section. You may be able to mask differences in timbre with the use of EQ, and/or by doubling with a different patch from the correct section.
- Use a similar patch from the correct instrument. Then experiment with changing the AHDSR envelope and/or other parameters to bring the sound more into line with the sound you want.

You may find that the sound is close enough to what you wanted in the first place that no one will notice, especially in the middle of multi-part writing.

The table below does not include instruments in the Full Strings group. Those patches are described in a separate section following this table. The page numbers in the last column are hyperlinks; click on any number (when viewed on a screen) to jump to that page.

INSTRUMENT OVERVIEW: INDIVIDUAL SECTIONS						Page
01 Long	1st Vns	2nd Vns	Violas	Celli	Basses	40
(Sus) 1 NV NV NV VB RR	✓	✓	✓	✓		40
(Sus) 2 NV NV VB VB RR	✓	✓	✓	✓		
(Sus) 3 NV NV VB MV RR	✓	✓	✓	✓		
(Sus) NV VB RR					✓	
Détaché RR KSFP	✓	✓	✓	✓		39
Détaché RR					✓	
Marcato Sus 9 RR 4th Position	✓	✓	✓	✓		44
Marcato Sus 8 RR					✓	
Sus 6 Down Bow KSFP	✓	✓	✓	✓		40
Sus 6 Down Bow 4th Position	✓	✓	✓	✓		
Sus 9 Down Bow KSFP	✓	✓	✓	✓		
Sus 9 Down Bow 4th Position	✓	✓	✓	✓		
Sus 8 Down Bow					✓	
Sus 6 Up Bow KSFP	✓	✓	✓	✓		
Sus 6 Up Bow 4th Position	✓	✓	✓	✓		
Sus 9 Up Bow KSFP	✓	✓	✓	✓		
Sus 9 Up Bow 4th Position	✓	✓	✓	✓		
Sus 8 Up Bow					✓	
Sus 6 RR KSFP	✓	✓	✓	✓		
continued						

INSTRUMENT OVERVIEW: INDIVIDUAL SECTIONS						Page
Sus 6 RR 4th Position	✓	✓	✓	✓		
Sus 9 RR KSFP	✓	✓	✓	✓		
Sus 9 RR 4th Position	✓	✓	✓	✓		
Sus 8 RR					✓	
Flautando		✓				44
Harmonics		✓				44
02 Long Powerful System	**1st Vns**	**2nd Vns**	**Violas**	**Celli**	**Basses**	**45**
Sus 13 Down Bow KSFP	✓	✓	✓	✓		
Sus 13 Down Bow 4th Position	✓	✓	✓	✓		
Sus 13 Up Bow KSFP	✓	✓	✓	✓		
Sus 13 Up Bow 4th Position	✓	✓	✓	✓		
Sus 13 RR KSFP	✓	✓	✓	✓		
Sus 13 RR 4th Position	✓	✓	✓	✓		
Sus 8 Down Bow					✓	
Sus 8 Up Bow					✓	
Sus 8 RR					✓	
03 Short Tight *and*	**1st Vns**	**2nd Vns**	**Violas**	**Celli**	**Basses**	**45**
04 Short Loose	**1st Vns**	**2nd Vns**	**Violas**	**Celli**	**Basses**	**48**
numbers in cells for the short instruments are the number of samples in the round robins						
Bartók Pizzicato RR	✓ 2		✓ 2	✓ 2	✓ 2	46
Col Legno RR	✓ 4	✓ 2	✓ 4	✓ 4	✓ 4	46
Marcato Long RR		✓ 4			✓ 4	46
Marcato Short RR	✓ 4	✓ 4	✓ 4	✓ 4	✓ 4	46
Pizzicato RR	✓ 4	✓ 4	✓ 4	✓ 4	✓ 4	46
Repetitions	✓	✓	✓	✓	✓	52
Ricochet RR	✓ 2	✓ 2	✓ 2	✓ 2	✓ 2	46
Spiccato RR	✓ 9	✓ 9	✓ 9	✓ 9	✓ 9	46
Staccato RR	✓ 14	✓ 9	✓ 9	✓ 9	✓ 9	47
Staccato Slur (RR for 2nd Violins)	✓	✓ 6				47
Staccato On Bow RR	✓ 9	✓ 9	✓ 9	✓ 9	✓ 9	47
Staccatissimo RR	✓ 9		✓ 16	✓ 16	✓ 9	47
Slur Runs		✓				
Spiccato Runs		✓				

continued

INSTRUMENT OVERVIEW: INDIVIDUAL SECTIONS						Page
in subfolder MOD COMBOS						
> Shorts MOD SPEED	✓ 8	✓ 8	✓ 8	✓ 8	✓ 8	48
> Spiccato Marcato MOD	✓ 8	✓ 8	✓ 8	✓ 8	✓ 8	
> Staccato Marcato MOD	✓ 8	✓ 8	✓ 8	✓ 8	✓ 8	
> Staccato Slur Marcato MOD	✓	✓				
05 Effects	1st Vns	2nd Vns	Violas	Celli	Basses	48
Measured Tremolo Time Stretched	✓	✓	✓	✓	✓	52
Tremolo	✓	✓	✓	✓	✓	52
Repetitions			✓		✓	52
Trill HT WT	✓	✓	✓	✓		52
Trill HT					✓	
Sul Ponticello			✓			53
in subfolder Pre Recorded Runs						48
> 8va Run Down	✓		✓	✓		
> 8va Run Up	✓		✓	✓		
> 8va Run Up Down KS	✓		✓	✓		
> 8va Run Up Down MOD	✓		✓	✓		
> 8va Run Up Down SPLIT	✓		✓	✓		
> Major Run Down	✓		✓	✓		
> Major Run Up	✓		✓	✓		
> Major Run Up Down KS	✓		✓	✓		
> Major Run Up Down MOD	✓		✓	✓		
> Major Run Up Down SPLIT	✓		✓	✓		
> Minor Run Down	✓		✓	✓		
> Minor Run Up	✓		✓	✓		
> Minor Run Up Down KS	✓		✓	✓		
> Minor Run Up Down MOD	✓		✓	✓		
> Minor Run Up Down SPLIT	✓		✓	✓		
> Whole Tone Run Down	✓		✓			
> Whole Tone Run Up	✓		✓			
> Whole Tone Run Up Down KS	✓		✓			
> Whole Tone Run Up Down MOD	✓		✓			
> Whole Tone Run Up Down SPLIT	✓		✓			

continued

INSTRUMENT OVERVIEW: INDIVIDUAL SECTIONS						Page
in subfolder Playable Runs						50
> Staccato Slur Runs	✓	✓				51
> Staccato Rep Runs Script	✓	✓	✓	✓		50
> Spiccato Runs		✓				51
> Spiccato Runs Smooth		✓				
06 Keyswitch	1st Vns	2nd Vns	Violas	Celli	Basses	53
Sustained KS	✓	✓	✓	✓	✓	53
07 Legato Slur + Portamento *	1st Vns	2nd Vns	Violas	Celli	Basses	55
Legato Port LT 12	✓	✓	✓	✓		
Legato Port LT 6	✓1,2	✓1,2	✓1,2	✓1,2		
Legato Slur + Port LT 12	✓	✓	✓	✓		
Legato Slur + Port LT 6	✓1,2	✓1,2	✓1,2	✓1,2		
Legato Slur LT 12	✓	✓	✓	✓		
Legato Slur LT 6	✓1,2	✓1,2	✓1,2	✓1,2		
Legato Slur LT 3	✓	✓	✓	✓		
Legato Slur LT 7					✓1	
Legato Slur Slower LT 7					✓1	
Legato Slur LT 3					✓	
08 Legato Bow Change *	1st Vns	2nd Vns	Violas	Celli	Basses ‡	58
Leg BC+Slur+Port LT 12	✓	✓	✓	✓		
Leg BC + Slur + Port LT 6	✓1,2	✓1,2	✓1,2	✓1,2		
Legato BC + Slur LT 12	✓	✓	✓	✓		
Legato BC + Slur LT 6	✓1,2	✓1,2	✓1,2	✓1,2		
Legato BC LT 12	✓	✓	✓	✓		
Legato BC LT 6	✓1,2	✓1,2	✓1,2	✓1,2		
Legato BC RR LT 12	✓	✓	✓	✓		
Legato BC RR LT 6	✓1,2	✓1,2	✓1,2	✓1,2		
09 Legato Slur + Port Power. Sys.*	1st Vns	2nd Vns	Violas	Celli	Basses †	55
Legato Port	✓1,2	✓	✓1,2 ✓	✓		
Legato Port Fast	✓	✓	✓ ✓			
Legato Slur + Port	✓1,2 ✓	✓1,2 ✓	✓1,2 ✓	✓1,2 ✓		
Legato Slur + Port Fast	✓	✓	✓	✓		
Legato Slur	✓1,2 ✓	✓1,2 ✓	✓1,2 ✓	✓1,2	✓1 ✓	55
Legato Slur Slower				✓	✓1 ✓	56

continued

INSTRUMENT OVERVIEW: INDIVIDUAL SECTIONS										Page
10 Legato Bow Change Power. Sys.*	1st Vns		2nd Vns		Violas		Celli		Basses ‡	
Legato BC + Slur + Port	✓1,2	✓	✓1,2	✓	✓1,2	✓	✓1,2	✓		58
Legato BC + Slur	✓1,2	✓	✓1,2	✓	✓1,2	✓	✓1,2	✓		58
Legato BC	✓1,2	✓	✓1,2	✓	✓1,2	✓	✓1,2	✓		58
Legato BC Slower	✓	✓	✓	✓	✓	✓	✓	✓		

* Abbreviations from the various Legato folders (above):

BC = Bow Change
Port = Portamento
✓ ✓ = both regular and "Smooth" versions are available (see page 57)
✓1 = Marcato attacks are available (see page 57)
✓1,2 = Marcato and Staccato Slur attacks are available (see page 57)
LT = Light (meaning it uses fewer computer resources)
‡ = This folder does not exist for the Basses
† = This folder is called "08 Legato Slur Powerful System" for the Basses instead of "09"

String Instrument Types

The following paragraphs explain some of the various types of instruments (.ewi files) available in Hollywood Strings. The principles described here apply across all sections from 1st Violins to Basses.

01 Long

The instrument types in this folder include:

- Sustain
- Détaché
- Flautando
- Harmonics

The first two are available in all 5 orchestral sections; the last two, only in the 2nd Violins. All of them except for Détaché can be held indefinitely.

Détaché

The musical term Détaché means "detached." Notes played in this style do not have a legato connection to the following note. The samples are longer than staccato notes but come to a well defined end; unlike the Sustain style, they cannot be played indefinitely.

The samples work well whether you play the samples to the end or you end the note before that. But if your notes are short enough to be considered staccato, it's best to use one of the articulations in that style in order to get the real note-ending sounds from one of the various techniques for creating true staccato.

Sustain

All Sustain instruments continue to play a note audibly as long as the note is held; this is achieved by looping the samples. They are a good choice for slow-moving lines that need a consistent sound no matter how long the notes are held.

The Sustain instruments give you a lot of control over several performance parameters:

- bow direction
- depth of vibrato (see page 41)
- choice of string, which affects finger position (see page 42)
- the number of simultaneous voices to play (see page 43)

Each of these parameters is discussed in detail before proceeding to information about the individual instruments.

Bow Direction

There are three bowings in Hollywood Strings for playing Sustain samples:

- Down Bow (abbreviated DB)
- Up Bow (UB)
- Round Robin (RR)

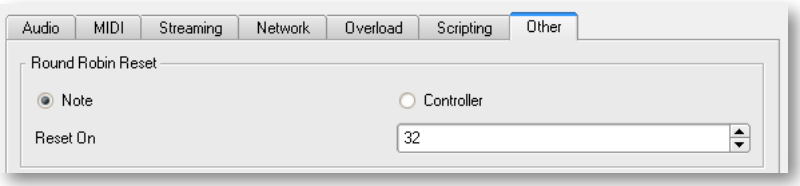
The Round Robin instruments include both the up and down bow samples and alternate between them to achieve the effect of a string player reversing the direction of the bow with each note.

If you know that you'll often be playing notes in some other pattern than alternating between up and down bows, you may want to open the Down Bow and Up Bow instruments as well and use whichever one best serves your purpose in that part of the score. Any Sustain Round Robin instrument uses the same samples as the other two bow directions combined, so you are not loading any extra samples with this approach.

As with any round robin instrument that switches between identifiable alternatives, you may want to have perfect control over which sample plays when. Here are some points to consider:

- The first sample played in a session—or after a round robin reset—is an up bow. If you want to start with a down bow, consider playing a silent note first (with whatever is controlling loudness for that patch all the way down). The first note anyone hears will be a down bow.

- Likewise, if you want two or more notes of the same bow direction, consider adding a silent note to play the alternative you do not want to hear. If you have many instances where you want to bypass the normal alternation, or if you want to hear a legato connection between the two audible notes, then it is probably better to play those notes using an Up Bow patch or a Down Bow patch instead of the Round Robin patch.



- The round robin technology does not know whether you've restarted the same piece. If a piece ends with an up bow, and you restart the piece without reopening PLAY, the next time the playback will start with a down bow, because that's next in the alternation. You can fix this problem—making each playback the same as the last—by doing a round robin reset. You can do that with the button in the Hollywood Strings UI; or, even better, you can assign a round robin reset event to a MIDI note (one out of range for this instrument) and the sequencer will do a reset each time you start playback. The image above shows the interface for setting this value in the Other tab of the Settings Dialog. Note numbers are consecutive with Middle C being number 60. The 32 shown in the image is what EastWest calls A0, a little more than two octaves below Middle C. Note that round robin resets apply only to the instrument(s) assigned to the MIDI channel that contains this MIDI event.

- If you frequently play a sequence from any arbitrary spot in the middle, you may want to place round robin reset events at important positions throughout the sequence to force a reset of which of the alternatives to play next.

If you follow the rules above, you can increase the likelihood of consistent and realistic playback.

Vibrato Depth

The depth of the vibrato in Hollywood Strings is provided in 3 levels:

- non-vibrato (abbreviated NV)
- vibrato (VB)
- molto vibrato (MV)

(The Basses were recorded with only the first 2 levels of vibrato, no molto vibrato.)

There are two different approaches used for controlling the depth of the vibrato during playback:

- The first approach links together loudness and vibrato depth: as the loudness increases, so does the amount of vibrato. And it is the Mod Wheel—not the MIDI velocity—that determines how loud the notes are played and how much vibrato is played. This linking of dynamics and vibrato is common in some styles of playing. The 3 instruments in each section that use this approach have a list of 4 vibrato depths in the name, for example "NV NV VB MV." (In case of the basses, it's 1 instrument with 2 depths, "NV VB.")

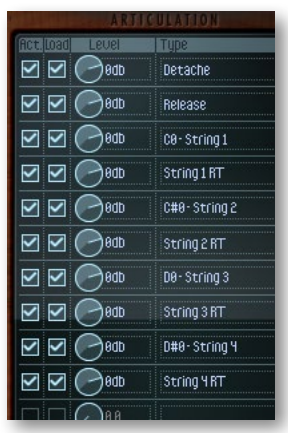
- The other approach allows you to control the dynamics and the vibrato independently. The MIDI velocity and CC 11 control the loudness; the Mod Wheel controls the depth of the vibrato. To give you the extra control, PLAY loads more samples into the computer's memory and plays back more samples at once, as is explained when these instruments are described in more detail later in this chapter. The instruments with "Sus 6," "Sus 9," and "Sus 13" in their names use this approach.

In both approaches, the Mod Wheel allows you to cross-fade among these samples to achieve a continuous spectrum of vibrato depth, from none to a lot. Leaving the Mod Wheel pulled down plays notes with no vibrato. As you push it up you get more and more vibrato. Or, in a sequencer, you can use MIDI Control Code 1 to make the same changes to the sound: a value near zero plays the note with no vibrato, and near 127 you hear the maximum vibrato.

Because vibrato is implemented with a control code (which is what the Mod Wheel sends), and not as separate instrument files, it is possible to change the depth of the vibrato in the middle of a note. If, for example, you want a sustained note to start with no vibrato and then have the vibrato increase at some point—which is a common technique with string players—that's possible with all these instruments (though in the first approach, that will also increase the loudness).

String Choice and Finger Position

The **Détaché** and **Sustain** instruments (except for the Basses) give you access to samples of each note recorded on each of the four strings (where possible). The image on the right shows an example of the Articulation listing in the Player view.



Note that each of the 4 strings is listed separately (along with the release trails from those samples, named with "RT" at the end). Each string also lists its keyswitch note: C0 to D#0. Because this instrument is a keyswitch file, it's possible to select the string on which the note will be played with the keyswitch.

For example, if you want to play C4 (the C that's one octave above Middle C) on a violin, it's possible to play that on any of the first 3 strings (but it's too low to play on the E string). Playing a keyswitch note in advance of the C4 lets you specify whether to play the note on:

- the G string, with the finger position far up the neck (closer to the bridge)
- the D string, with the finger position in the mid range
- the A string, with the finger position near the tuning pegs

The sound becomes warmer and more emotional as the finger position moves up the neck. You can feature this color by encouraging PLAY to sound the notes on string 1 (the G string), or achieve a less emotional sound by encouraging the use of a higher string. When it's not possible to play the note on the requested string, the PLAY engine automatically moves to the next closest string on which the note can be played.

The string can also be selected with the Finger Position knob, but you have more immediate control in real time—whether playing live or through a sequencer—with the use of the keyswitch notes.

If you are not familiar with how to use a keyswitch instrument in PLAY please see the Keyswitches section in the main PLAY System manual. The Finger Position knob is described on page 22.

ADVANCED: In theory, the checkboxes in the Articulations control allow you to de-activate and unload the samples for any string. You are advised not to do that in these instruments unless you have an understanding of how it will affect the audio output.

The instruments that allow you to select the string (via either a keyswitch note or the Finger Position knob) include "KSFP" in the name. Those names that include "4th pos" use the fourth hand position (playing far up the neck) when possible, with no option for selecting the string during playback. This "4th pos" type of playing results in a warmer and more romantic sound than when playing closer to the tuning pegs. (Be aware that the greater number of options with the "KSFP" patches means that you're loading more samples into the computer's memory, which may cause problems for systems with smaller amounts of RAM.)

Simultaneous Voices

Many of the instrument names in this folder include a number: "6" or "9" for most sections or "8" for the Basses section. This digit represents the number of voices to be played concurrently, allowing CC 11 (Expression) to modify the loudness and CC 1 (the Mod Wheel) to modify the depth of the vibrato, both in real time, by cross fading between samples. See the descriptions of these instruments later in this chapter for more details.

Even though 6 or more voices are being played at once, not all of them are audible. The MIDI control codes are cross-fading between voices. For example, you may be hearing a mix of the *pp* and *mf* samples based on CC 11, and only the vibrato samples based on CC 1. If the instrument is playing 6 voices, only 2 (*pp* vibrato and *mf* vibrato) are currently audible and 4 are playing silently. If you have a powerful computer, this inaudible playback of samples should not be a problem. With lesser hardware, you may encounter problems, suggesting you need to use less taxing instruments (or buy more capable hardware).

As a rule, more concurrent voices provide more realistic real-time control over timbre at all dynamic levels and all depths of vibrato. Such real-time control—meaning the ability to change loudness, timbre, and vibrato continuously and mid-note allows you to shape the performance the way a live musician with an acoustic instrument does, breathing life into the musical lines. This capability is most noticeable in slow passages and long-held notes.

Marcato Sustain

This instrument type—there's one in each string section—plays a marcato sample in addition to the multiple sustain samples. The marcato sample ends relatively quickly; the sustain samples are looped so they continue to play as long as the note is held. This combination provides extra power at the start of the note.

For all the sections except the Basses, the name of the instrument is "Marc Sus 9 RR 4th pos." The digit 9 indicates that 9 sustain samples start playing at the beginning:

- 3 dynamic levels for non-vibrato
- 3 dynamic levels for vibrato
- 3 dynamic levels for molto vibrato

In addition, the marcato sample plays for a short while, so, when playing one note, you will see the voices indicator in the UI show 10 voices and quickly drop to 9 where it will stay until the note is released.

For the Basses section, the name is "Marc Sus 8 RR." It behaves the same as what is described above except there are 4 dynamic levels for each of the non-vibrato and vibrato samples—and no molto vibrato. In this case, the UI will show 9 voices, quickly dropping to 8.

Flautando

Only the 2nd Violins include a Flautando patch. You may find, though, that the Sustain patch in other sections, when played ***pp*** with no vibrato (*i.e.*, with the Mod Wheel pulled all the way down), achieves a similar sound.

This is a style of string playing that uses the point of the bow above the fingerboard to create a breathy, ethereal, non-vibrato sound with a flute-like quality.

This instrument does not include control of finger position or vibrato, nor does it include round robin samples, as do the other instruments mentioned earlier in this section.

Harmonics

Only the 2nd Violins include a Harmonics patch. This high and whistling sound is generated when the light touch of a finger at a harmonic node (for example, at exactly half, a third, or a fourth of the sounding length of the string) causes the bowed string to vibrate at a natural harmonic of the fundamental tone.

In Hollywood Strings, all harmonics are two octaves above the fundamental, meaning that the lowest note to sound is G4, two octaves above the open G string, G2.

This instrument does not include control of finger position or vibrato, not does it include round robin samples, as do some instruments mentioned earlier in this section.

02 Long Powerful System

Important Note: Instruments in this folder are designed for computers that meet or exceed the specifications for recommended systems. Some of these instruments can load up to 1 GB of samples per mic position into the computer's memory. In addition, because of their size, these patches may need to be used with fewer other instruments open. If your computer has trouble rendering audio from these instruments, use instruments in the 01 Long folder instead.

The "Sus 13" instruments in this folder use the same mechanism as the "Sus 6" and "Sus 9" instruments in the 01 Long folder except that they play 13 voices simultaneously, which provides more dynamic levels available as CC 11 changes, as follows:

- 5 levels of loudness for non-vibrato
- 5 levels of loudness for vibrato
- 3 levels of loudness for molto vibrato

Of course, you can play at any loudness you like; as the number of sampled levels goes up (in this case, up to as many as 5), the timbre of the string sound changes more often as the dynamics change continuously from ***pp*** to ***ff***, giving you a more realistic sound.

The instruments for the Basses in this folder use an approach similar to that described in the previous paragraph, but they play at most 8 samples at once:

- 4 levels of loudness for non-vibrato
- 4 levels of loudness for vibrato
- (no molto vibrato samples)

03 Short Tight

The 03 Short Tight folder and the 04 Short Loose folder contain exactly the same collections of instruments (though the names in the 04 Short Loose folder include "LS"). The Tight instruments are more appropriate for faster passages because they include a little less of the attack, providing a cleaner start to each note. The Loose instruments include the entire recorded attack, giving them a more natural sound for slower passages in which short notes are needed.

Each of these 2 folders contains a large collection of instruments that encompass the many articulations that string instruments can use to generate short sounds. That includes forms of plucking the strings with the fingers, bouncing the bow off the strings, and just bowing a note of short duration. This section describes these short articulations:

- Plucks: **Pizzicato** and **Bartók Pizzicato**
- Bounces: **Ricochet** and **Col Legno**
- Short Bows: **Marcato**, **Spiccato**, various kinds of **Staccato**
- **Repetitions**

Both of these Short folders include a subfolder called "MOD COMBOS." In here you'll find several instruments that allow you to use the Mod Wheel (or CC1) to affect which type of articulation plays back.

Note that, in general, short articulations do not include release trails.

Pizzicato

Pizzicato is the act of plucking one or more strings at a time to create the characteristic sound. Although the sound is very brief it can have the power to cut through the loudest of orchestrations.

All 5 sections include a Pizzicato instrument. In each case, it is a round robin instrument with either 2 or 4 distinct samples for each note. See the table above or the instrument names (for example "RRx4") to see how many distinct samples are in each round robin.

Bartók Pizzicato

In this articulation, the string is pulled away from the fingerboard and released so that it snaps back and strikes the fingerboard. The sound incorporates pitched as well as non-pitched, percussive elements.

All sections except the 2nd Violins include this instrument. (If you need a Bartók pizzicato sound in the 2nd Violins part, use the instrument from the 1st Violins; the sound is so percussive and short that no one will know which section played the notes.) This is a round robin instrument with 2 distinct samples for each note.

Ricochet

This articulations, also known as Jeté, is played by throwing the bow onto the string in a way that causes it to bounce on and off the string several times. Within a single MIDI note, you can hear the same note played about 3 or 4 times in rapid succession.

This is a Round Robin instrument with 2 sets of alternating samples.

Col Legno

With this style of playing, the bow strikes the string with the wood (instead of the horsehair) and immediately bounces off. This causes a percussive and distinctive sound of short duration. Col Legno is Italian for "with the wood."

This is always a Round Robin instrument with 4 or 2 sets of samples in rotation.

Marcato

When used in a score, the term "marcato" indicates that every note is to be accented. This articulation contains notes of a short duration that begin with a strong accent.

This is a Round Robin instrument with 4 sets of samples in rotation.

Note that the 2nd Violins and the Basses include, in addition, instruments called Marcato Long with the same strong attack but a slightly longer duration.

Spiccato

In this style of playing, notes of very short duration are created by bouncing the bow so that it is in contact with the string for a very short time.

In Hollywood Strings, Spiccato is available in two versions:

- plain Spiccato
- Spiccato in which the Mod Wheel can be used to change to Marcato

In the patch Spiccato Marcato MOD (found in the MOD COMBOS subfolder), PLAY cross-fades between spiccato and marcato samples to achieve a smooth transition: the further up you push the Mod Wheel (or increase the value of Control Code 1), the more the notes have a marcato sound. This feature gives you the ability to control the accent of individual notes within a part, including the use of sounds of an intermediate quality between spiccato and marcato.

This is a Round Robin instrument with 9 sets of samples in rotation for the Spiccato patch. And there are 8 sets of samples for the Spiccato Marcato MOD patch.

Staccato

The term "staccato" refers to any note of short duration that is not connected legato to the following note. In this listing, it is more narrowly used to signify any short, bowed note not included in one of the earlier-listed articulations.

Hollywood Strings includes the following types of Staccato articulations:

- plain Staccato
- Staccato On Bow
- Staccato in which the Mod Wheel can be used to change to Marcato
- Staccatissimo

The instrument named Staccato On Bow captures the sound of short notes in which the bow does not lift off the string at the end of the bow but, instead, comes to a full stop. This creates the distinctive sound of the bow stopping its movement at the end of each note.

Staccatissimo is otherwise like Staccato, but with notes of even shorter duration.

The instrument named Staccato Marcato MOD cross-fades between staccato and marcato samples. It allows the user to increase the strength of the accent on some notes within a part by pushing up the Mod Wheel (or increasing the value of Control Code 1 in a sequencer envelope).

All the staccato patches are Round Robin instruments with in-the-range-of 9–16 sets of samples in rotation.

Shorts MOD SPEED

This instrument, found in the MOD COMBOS subfolder, allows you to use the Mod Wheel to move continuously among several short articulations. As you push the Mod Wheel up from the bottom, the articulations you hear are, in order:

- Staccatissimo
- Staccato
- Staccato on Bow
- Marcato Short

These Shorts MOD SPEED instruments include 8 distinct samples in their round robins.

Repetitions

In this patch the section plays the same note repeatedly about a dozen times in quick succession. For fewer repetitions, end the note before the end of the sample. This sequence of notes is slower than a tremolo. And it's more realistic than just playing the same staccato note multiple times because you get the sound of the bow changing direction between notes.

This is not a Round Robin instrument. If you do repeat a MIDI note—perhaps because you need more repetitions than are recorded in the samples—the listener will hear the last repetition followed by the first one, so there's no concern about mechanically identical notes following each other.

Note: unlike most instruments in the 02 Short folder, this one does include release trails.

04 Short Loose

This folder contains the exact same list of instruments as 03 Short Tight, but with an "LS" in the name. See the first paragraph under the heading 03 Short Tight, starting on page 45, for a description of how the two sets of instruments differ.

05 Effects

The instruments in this folder fall into several types:

- runs, both pre-recorded and playable
- tremolos
- trills
- repetitions
- sul ponticello

Pre-recorded Runs

Only 3 sections include pre-recorded runs:

- 1st Violins
- Violas
- Celli

Use the runs in the 1st Violins if you need them for the 2nd Violin part. And such very fast runs are less characteristic of writing for Basses than for the higher sections.

Hollywood Strings includes a large variety of runs. The various runs in the Pre Recorded Runs subfolder are scales that were played and sampled during the recording sessions; you hear the entire run within a sample. In each case, the length of the run is one octave, but otherwise there is great variety in what was sampled. These various runs can be grouped according to several parameters:

- **direction** – up, down, or both
- **scale** – chromatic, major, minor, or whole tone
- **control** – keyswitch, Mod Wheel, keyboard split, or none

Direction

The name of the instrument includes "Up" or "Dn" or some combination to specify what is included. Those that list both directions in the name include a means for the user to specify Up or Down (see below for details). The MIDI note you play is the lowest note of the run; in the case of downward runs, that means the scale will end on the note you play on the keyboard.

Scale

"Maj," "Min," or "WT" runs are major, minor, or whole-tone scales, respectively. And "8va" specifies a chromatic scale.

Control

Instruments with "KS" in the name use 2 keyswitch notes to control the direction up or down. In each case, the keyswitch notes are C0 to play a downward scale and C#0 to play an upward scale.

When an instrument name includes "MOD," the Mod Wheel controls the direction. Pull the Mod Wheel to the bottom half of its range and a scale runs downward. Push it to the top half and the scale runs upward.

An instrument name with "SPLIT" uses different parts of the keyboard for the 2 directions, as follows.

For the 1st Violins:

- Playing G0 plays an upward scale starting on the usual lowest violin note, G2. And all notes G0 to F3 play upward scales.
- Playing G3 plays a downward scale ending on G2. And all notes G3 to F6 play downward scales.

For the Violas:

- Playing C1 plays an upward scale starting on the usual lowest viola note, C2. And all notes C1 to G3 play upward scales.
- Playing C4 plays a downward scale ending on C2. And all notes C4 to G6 play downward scales.

For the Celli:

- Playing C1 plays an upward scale starting on the usual lowest cello note, C1. And all notes C1 to G3 play upward scales.
- Playing C4 plays a downward scale ending on C1. And all notes C4 to G6 play downward scales.

If you need a run with a range shorter than an octave, limit the length of the MIDI note so that it stops where you want it to.

Playable Runs

Unlike the prerecorded runs, the instruments in this folder allow you to perform runs by playing the notes. The several instrument types use different approaches to achieve the natural sound of a run.

Repetition Runs Script

This type of instrument uses a script to determine:

- whether the run is moving upward or downward and, therefore, direction of the slur
- the time interval between notes (to determine whether the notes should play legato)

The instrument then plays the appropriate sample to create the correct effect for each note.

When playing upward, there's a slur from the lower note, When playing downward, there's a slur from the higher note. For the first note in a run, or after a gap, there's no slur.



The behavior described in the last paragraph simulates the natural sound of a run on an acoustic instrument, and is the result of running a script in PLAY. If, for any reason, you want a different pattern of when to play the upward and downward samples in this instrument, take the following steps:

- Turn off the script in this instrument by clicking on the Other button in the Player view, as shown in the image at the left of the button turned on.
- Invoke MIDI Control Code 14 on the MIDI channel for this instrument (using a slider on a control surface or an envelope in a sequencer).
- Set CC 14 to a value of 66–127 when you want to force the playback of downward samples
- Set CC 14 to a value of exactly 65 to force the playback of repetition samples (neither upward no downward)
- Set CC 14 to a value of 0–64 to force the playback of upward samples.

The notes in this instrument do not respond to MIDI velocity; that is, changing the velocity on any given note will not affect how loudly it is played. Instead, use the "Expression" control code (CC 11) to set the loudness of the notes in the run.

Note that all samples in this patch are "repetitions," that is, the sound of a single note being played multiple times in quick succession (similar to a tremolo). In a fast run, each note in the run is short enough that only the first note in the repetition has time to play, but if the run stops on any note, you will hear the repetition. If you do not want this repetition effect, then you will want to select a different patch for these longer notes.

Slur Runs

These instruments—only available in the 1st and 2nd Violins—generate the sound of a fast-playing scale. Each patch includes all the components needed for every part of the run:

- the fast notes in the run
- the slurs that move the pitch from one note to the next
- the longer notes when you sustain a note in the middle of, or at the end of, the run

The sustained notes are available at 3 levels of vibrato:

- non-vibrato
- vibrato
- molto vibrato

Use the Mod Wheel (CC 1 as a MIDI code) to select among these 3 levels; the further up you push the Mod Wheel the more vibrato you hear. And remember that vibrato can be changed continuously, including in the middle of a note.

The sustained notes are available at 5 dynamic levels (think of them as ***pp***, ***p***, ***mf***, ***f***, and ***ff***) which are controlled by the MIDI "Expression" control code (CC 11). The MIDI Velocity parameter does not control the loudness of the notes in this instrument.

The selection of which string to play the sustained notes on can be controlled with either the Finger Position knob in the Player view or the instrument's keyswitch. For more information on Finger Position within PLAY, see the description starting on page 22.

These instruments are intended for very fast runs. A minimum speed is sixteenth notes (semi-quavers) at about 125 beats per minute. While it is possible to play at a slower tempo, the results will likely be less realistic than at faster speeds.

Spiccato Runs (Normal and Smooth)

Both of these Spiccato Run instruments are available only in the 2nd Violins section. They are intended for playing fast runs with the sound of the spiccato articulation.

As the run moves up or down, PLAY uses the appropriate sample based on the direction and the interval between notes:

- up a whole tone
- up a half tone
- no change (because it's the first note in the run)
- down a half tone
- down a whole tone

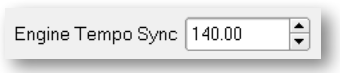
The differences among these 5 samples are subtle but provide a real sense of a run and not just individual spiccato samples played in rapid succession. This instrument cannot play a run in which any consecutive notes are more than a whole tone apart.

In the "Smooth" version, a layer of staccato is layered on top of the transitions between notes. This composite patch achieves a less abrupt but still characteristically spiccato run.

Tremolos

Hollywood Strings includes two types of tremolos: unmeasured (called simply "Tremolo") and measured. In the unmeasured instruments, each player moves his bow without regard to the tempo, creating a sound with no discernible rhythm.

The measured version is aware of the overall piece's current tempo, allowing the patch to pulse in time with that tempo. The "TS" in the name of this instrument means that it uses a feature of the PLAY engine known as "Tempo Sync" to align the speed of the internal beats within the measured tremolo to the overall tempo of the piece. When PLAY runs as a plug-in, it asks the host for the current tempo. When it runs in standalone mode, the tempo is set in the Engine Tempo Sync control, which you can find by opening the Main Menu, selecting Current Instrument, and then opening the Advanced Properties dialog.



Neither of these tremolo instruments responds to the MIDI Velocity parameter. Instead, you need to use CC 11 to change the loudness. This approach permits a continuous change in both dynamics and timbre in the middle of notes instead of having a fixed timbre set at the beginning of each note. This is done because long-held passages—including the possibility of crescendo or decrescendo—are characteristic of tremolo writing.

All 5 orchestral sections include both Tremolo and Measured Tremolo.

Trills

A trill is the rapid alternation between 2 notes either a half tone or a whole tone apart. On a string instrument, the two notes are played on the same string.

All the string sections (except the Basses) include an instrument that allows the user to select between a half tone trill and a whole tone trill with a keyswitch: Play C0 in advance of the trill to get a half tone trill, or C#0 to get a whole tone trill. The Trill instrument for the Basses includes only a half tone trill.

Repetitions

A Repetitions instrument is available in only 2 sections: Violas and Basses.

The sound is that of a single note played over and over again for a little more than one second. The repetition is slower than a tremolo, but fast enough to fit about a dozen pulses in the note. This sound is more realistic than just repeating the same note over and over from some other patch because you hear the continuity of the sound, including the bow reversal, within the sample. See the second paragraph for Tremolos above to

learn more about Tempo Sync. Just as with the Measured Tremolo TS patches, repetitions adjust the speed of the internal beats to the current tempo of the piece.

This instrument uses CC 11 to cross-fade between 3 dynamic levels, which lets you change both loudness and timbre continuously while the note is playing. It does not respond to MIDI Velocity.

Sul Ponticello

This articulation is only available in the Viola section. It's a style of playing with the bow very near the bridge; it achieves a more intense sound than usual that features the notes' higher harmonics.

This instrument does not respond to MIDI Velocity. Use CC 11 to affect the dynamics.

06 Keyswitch

If you are not familiar with how to use a keyswitch instrument in PLAY please see the Keyswitches section in the main PLAY System manual.

Sustain Keyswitches

The lists below specify the articulations available in each section's Sustain Keyswitch files.

1st Violins

- C0 Sustain Down Bow
- C#0 Sustain Up Bow
- D0 Détaché Down Bow
- D#0 Détaché Up Bow
- E0 Tremolo
- F0 Trill Half Tone
- F#0 Trill Whole Tone

2nd Violins

- C0 Sustain Down Bow
- C#0 Sustain Up Bow
- D0 Détaché Down Bow
- D#0 Détaché Up Bow
- E0 Tremolo
- F0 Trill Half Tone

- F#0 Trill Whole Tone
- G0 Flautando
- G#0 Harmonics

Violas

- C0 Sustain Down Bow
- C#0 Sustain Up Bow
- D0 Détaché Down Bow
- D#0 Détaché Up Bow
- E0 Tremolo
- F0 Trill Half Tone
- F#0 Trill Whole Tone
- G0 Sul Ponticello

Celli

- C0 Sustain Down Bow
- C#0 Sustain Up Bow
- D0 Détaché Down Bow
- D#0 Détaché Up Bow
- E0 Tremolo
- F0 Trill Half Tone
- F#0 Trill Whole Tone

Basses

- C4 Sustain Down Bow
- C#4 Sustain Up Bow
- D4 Détaché Down Bow
- D#4 Détaché Up Bow
- E4 Tremolo
- F4 Trill Half Tone

Just as with the Sustain patches in the 01 Long folder, the two Sustain articulations in the keyswitches (C0 and C#0) respond to the Mod Wheel for specifying the depth of the vibrato: the more you push up the Mod Wheel, the more vibrato you will hear. The other articulations within the keyswitch file do not have this variable vibrato.

Note that the Down Bow and Up Bow articulations are on separate keyswitch notes; to effect an alternation between up and down bow notes, you need to use a keyswitch note every time you want the bow direction to change. There is no automatic alternation as there is in the Sus RR and the Détaché RR instruments in the 01 Long folder. If you want that automatic alternation, then you might consider using an individual Round Robin articulation file instead of this keyswitch file. (If you load two instruments that load the same sample files—as do the 1st Violins Sus RR and the 1st Violins KS C0-F#0 files, for example—PLAY is smart enough to load the samples only once, as long as the two instruments are opened in the same instance of PLAY.

Legato Slur and Portamento: 07 (basic) and 09 (Powerful System)

These two folders of instruments include a variety of different types of legato playing. Which type to use in any particular context depends on factors such as tempo, size of the intervals between consecutive notes, and the orchestrator's preferences.

Important Note 1: Instruments in the folder 09 Legato Slur and Portamento Powerful System are designed for computers that meet or exceed the specifications for recommended systems. Some of these instruments can load up to 1 GB of samples per mic position into the computer's memory. In addition, because of their size, these patches may need to be used with fewer other instruments open. If your computer has trouble rendering audio from these instruments, use instruments in the 07 Legato Slur and Portamento folder instead.

Important Note 2: Hollywood Strings divides its legato instruments into two folders based on whether or not bow change legato is included. If you want to include bow change legato, look in folder 08 Legato Bow Change or 10 Legato Bow Change Powerful System. One reason for separating the patches this way is that bow change legato is not included in the Gold Edition.

Note that the Basses include only 2 kinds of legato instruments:

- Legato Slur
- Legato Slur Slower

Therefore, the descriptions of other legato styles below apply to 1st and 2nd Violins, Violas, and Celli only.

The basic types of legato provided in Hollywood Strings are played with:

- Bow Change
- Portamento
- Slur

And some of the instruments include more than one of these techniques, for example:

- Legato Slur + Portamento
- Legato Bow Change + Slur + Portamento

Where faster and slower alternatives are available, consider using the faster version at higher tempos and slower versions at lower tempos. These options let you create lines that mimic what happens naturally with acoustic instruments. Longer legato transitions let slow music breathe more.

Before discussing the varieties of legato playing, note that many of these instruments include many, many samples. For example, the portamento legato samples for just the one note C4 in the 1st Violins are actually 24 different portamento samples: 12 rising to C4 from all notes within an octave below, and another 12 descending. Therefore, it can often take significantly longer on some computers to open one of these instruments from the Browser than other, smaller instruments.

Round Robin Legato Instruments

For every instrument in the folder 07 Legato Slur and Portamento, there is a corresponding version with "RR" in the name. These are Round Robin versions that alternate between an Up Bow sample and a Down Bow sample. (The non-RR versions use only Down Bow samples.)

When using these Round Robin patches, consider using the Round Robin Reset MIDI event to force a Down Bow start to the alternation in each new section of your piece where you use one of these patches. This precaution ensures consistency of playback.

Note that these RR instruments are not listed separately in the table above; just know that every instrument in this folder (as well as the 08 Legato Bow Change folder) also has a Round Robin version.

Monophonic Behavior in Legato Instruments

By default, all legato instruments are monophonic. By allowing only one note to play at a time, PLAY makes sure that there is no ambiguity about what two notes should have a legato transition between them.

It is possible to turn off the monophonic behavior with MIDI Control Code 22. When in the top half of its range, 64–127, the controller preserves the default behavior. But whenever CC 22 is in the range 0–63, polyphonic behavior is turned on. You do need to listen to the output carefully to see whether there are unwanted legato glides between notes in different polyphonic voices. If so, one remedy is to move those two voices to separate MIDI tracks.

Portamento and Slur Legatos

In both portamento legato and slur legato, you hear the pitch start to move in the direction of the next note as the first note is ending. The difference is:

- With portamento legato, the pitch slides all the way up or down to the next note, passing very quickly over all the intervening notes.
- With slur legato, the pitch jumps over most of the intervening notes, with only the start and end of the slide heard in the transition.

Note that Portamento is sometimes available in two speeds: normal and fast. You may decide to use one or the other based on the tempo of the piece or the effect you want to achieve.

Those legato patches with Portamento or Slur in the name include a sampled slide from one note to the next. This slide in pitch between the two notes only occurs to a maximum of one octave. For example, if two consecutive notes in a phrase are A4 and A5, the portamento is played, but from A4 to A#5 it is not.

For any legato patch to generate a slur or portamento, two notes must have no significant time gap between the end of one note and the start of the next. As a consequence of this rule, as expected, the first note of a phrase has no legato effect at the start of the note.

Simple (Non-combination) Legato Instruments

For all Legato instruments that do not combine multiple techniques, the MIDI Velocity parameter controls the speed with which PLAY transitions form one note to the next. The softer you play, the longer and more expressive each legato transition is (good for slower passages). And playing the notes with more force speeds up the transitions (good for fast passages). For expressive and slow legato performances, a velocity of around 50–60 works well. For fast passages, play the string parts with a velocity of 110–127.

In these instruments, velocity does not affect loudness.

Combination Legato Instruments (Slur + Portamento)

This section describes the parameters that PLAY uses to change from one kind of legato to another within a single instrument.

Slur + Portamento: In this patch, the MIDI velocity controls the speed of the interval; the smaller the Velocity (in its range from 1 to 127), the more slowly the pitch moves from one note to the next; faster transitions use more of a slur while slower transitions are a full portamento with a very audible slide in the pitch from one note to the next. Because of that use for Velocity, you cannot use Velocity to affect dynamics; use CC 11 instead. Because CC 11 cross-fades between dynamic layers, you can change loudness and timbre in the middle of a note. In addition, the Mod Wheel (CC 1) controls the vibrato for the sustained portion of the note.

The behaviors described above are the default behaviors in which PLAY is using scripts to decide which samples to use. If you want more control of which notes use Bow Change and which use the Slur or Portamento, then click on the Other button in the Player view to turn it off; then use MIDI Control Code 14 instead. If CC14 is in the range 64–127 you will hear bow change samples; in the range 0–63, the slur or portamento samples. You can create a CC14 envelope in a sequencer or assign that MIDI Control Code to a slider or knob you plan to operate manually.

"Smooth" Instruments

For those instruments with "SM" in the filename, the legato transitions sound more smoothed out, but at the expense of some expressiveness. This sound is achieved with changes to both the start time and the envelope to reduce some of each note's attack. This sound is most useful in slow legato passages.

Legato with Marcato, or with Slur Staccato

These instruments add a Marcato or Slur Staccato accent to notes that do not have a legato connection to the previous note. That is, you can use one of these patches when

you want the first note of each legato phrase to automatically receive a slightly stronger attack.



The difference between the Marcato accent and the Slur Staccato attack is subtle, so audition them both to see which works better in the style you want.

Note that you can change the strength of the accent by adjusting the dynamic level of the various components in the Articulations control in the Player view. The image at the left shows the loudness of the Marcato accent increased by the maximum amount, 12 dB, relative to the other components of the note. Or you can turn it off temporarily with the Active checkbox in order to see whether you like the accent at all.

In the 7 Legato folder for all sections except the Basses, these versions with the start-of-phrase accents are available on the various Legato 6 LT instruments, not on the Legato 12 LT instruments. The Basses have a Marcato accent (but no Slur Staccato accent) on both the Legato Slur LT 7 patch and the Legato Slur Slower LT 7 patch.

In the 8 Legato Powerful System folder for all sections except the basses, these versions with the start-of-phrase accents are available on some of the various Legato instruments, but never the "Smooth" instruments. The Basses have a Marcato accent (but no Slur Staccato accent) on both the Legato Slur patch and the Legato Slur Slower patch.

Legato Bow Change: 08 (basic) and 10 (Powerful System)

These two folders, which are available only in the Diamond Edition, contain the legato patches that include bow change, either on its own or in combination with slur legato and/or portamento legato. In earlier versions of Hollywood Strings, these patches were in the same folder with the other legato patches but were moved into their own folder when the Gold Edition became available.

Bow Change Legato

During a legato passage, string players sometimes have to change the direction out of necessity and sometimes do so for the effect. Hollywood Strings gives you the option of using this articulation at any time it suits your needs. The sound of the bow changing direction has a characteristic sound independent of any slur or portamento.

In the legato instruments that include Bow Change together with Portamento and/or Slur effects, PLAY decides which of the components to play based on the MIDI data, as described in detail in the Combinations section below.

Combination Legato Instruments (with Bow Change)

This section describes the parameters that PLAY uses to change from one kind of legato to another within a single instrument. For combination instruments that do not include bow change legato, see the description above, starting on page 57.

Bow Change + Slur: For this instrument, slower tempos use the bow change samples while faster tempos use the slur samples. And legato transitions are also shorter or longer de-

pending on the speed of the passage. The tempo is detected with a script that calculates the time between consecutive notes. When notes are played with a MIDI Velocity at the high end of its range, close to 127, tempo detection is temporarily turned off and those notes play with the fastest slur possible.

As a general rule, if you're playing eighth notes (quavers) at a tempo of about 70 bpm or higher, you'll hear the slur samples; below that you'll hear the bow change samples.

Bow Change + Slur + Portamento: This instrument is the same as **Bow Change + Slur** above, except that any note with a MIDI velocity 1–50 (within the 1–127 range) is played with the portamento samples instead of the slur samples.

Round Robin Legato Instruments

For every instrument in the folder 08 Legato Bow Change, there is a corresponding version with "RR" in the name. These are Round Robin versions that alternate between an Up Bow sample and a Down Bow sample. (The non-RR versions use only Down Bow samples.)

When using these Round Robin patches, consider using the Round Robin Reset MIDI event to force a Down Bow start to the alternation in each new section of your piece where you use one of these patches. This precaution ensures consistency of playback.

Note that these RR instruments are not listed in the table above; just know that every instrument in this folder (as well as the 07 Legato Slur Portamento folder) also has a Round Robin version.

11 Legacy

When EastWest/Quantum Leap introduced update 1.0.2 to the Hollywood Strings library, a large number of the instruments were created in a second form, with a feature known as "Niente" that permits access to very soft dynamics. This feature is described in detail starting on page 33. In the next release after 1.0.2, the versions of these instruments without Niente were moved to the 11 Legacy folder. They are retained to provide backward compatibility for projects that already include these older instruments, but EastWest recommends using the newer instruments (those ending in "Ni") in all new projects.

Full Strings

Each instrument in this folder covers the full range of the string orchestra in what is, in effect, a single patch. PLAY does this by loading four or more instrument types at once—together called a "multi-instrument," or just "multi"—and assigning the MIDI channel to Omni (which means that they all respond to MIDI data on all channels). This approach allows you to play the full string orchestra from a single MIDI keyboard. If you

want to change all the channels to a specific number, for example, all to channel 3, you can do so.

The table below lists the Full String instruments, which are divided into 2 folders: Long and Short. A checkmark in a cell means that an instrument from the specified section is opened when you choose this multi-instrument. And also:

- "CL" in the cell means that, in addition, the Col Legno patch is opened for this section.
- "Slur" means that a slur is included only for this section.

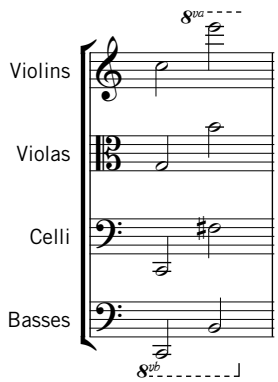
INSTRUMENT OVERVIEW: FULL STRINGS

Long	1st Vns	2nd Vns	Violas	Celli	Basses
(Sus) + 1st Violins Legato	✓		✓	✓	✓
(Sus) + 2nd Violins Legato		✓	✓	✓	✓
(Sus) + Violoncelli Legato		✓		✓	
(Sus) 1 NV NV NV VB RR		✓	✓	✓	✓
(Sus) 2 NV NV VB VB RR		✓	✓	✓	✓
(Sus) 3 NV NV VB MV RR		✓	✓	✓	✓
Tremolo		✓	✓	✓	✓
Trills KS A#-1 B-1		✓	✓	✓	✓
Short	**1st Vns**	**2nd Vns**	**Violas**	**Celli**	**Basses**
Pizzicato		✓	✓	✓	✓
Spiccato Marcato MOD		✓	✓	✓	✓
Spiccato Marcato MOD Col Legno		✓	✓	✓ CL	✓ CL
Staccato Marcato MOD		✓	✓	✓	✓
Staccato Slur Marcato MOD		✓ Slur	✓	✓	✓

Each instrument type is assigned a range of notes, so that instruments do not overlap. The most common ranges are listed here, but the break might occur at a slightly different point:

- C4–E6 Violins
- G2–B3 Violas
- C1–F#2 Celli
- C0–B0 Basses

You can see the exact position of the break by looking at the on-screen keyboard for the component instruments.



Using any of these patches, it's possible to "play" the full ensemble in real time at a keyboard. None of these patches gives you as much control over articulations as the individual instruments from the other folders, but when you want to have the whole string ensemble at your fingertips (literally) these patches provided unparalleled usability.

Notes on the Full Strings Patches

All the component instruments are selected from the individual instruments described elsewhere in this chapter and grouped into these multis. If you want more detail about the instruments and how to use them, look for that information where the individual patches are described.

Be aware that the Full String Trill instruments list a keyswitch with 2 keyswitch notes:

- A#-1 for a half-tone trill
- B-1 for a whole-tone trill

But the Basses include only a half-tone trill, so they do not respond to any keyswitch notes.

The multi called "Full String Spiccato Marcato MOD plus Col Legno" opens not only the Spiccato Marcato MOD patches for all 4 sections but also the Col Legno patches, though only for the Celli and the Basses. And the Celli Col Legno plays for notes up to G4. This layering of the Col Legno sound adds punch to the attacks of these notes.

Special Legato Full String Patches

The first three patches in the Full Strings table above provide a single section with a legato instrument while the rest of the string orchestra plays with the same kind of Sustained patches heard elsewhere in the Long folder for the Full Strings.

The Sustain instruments opened with these Special Full String patches behave in the same way with regard to vibrato depth as those named "NV NV NV VB"; that is, the Mod Wheel controls both loudness and vibrato, but without the use of Molto Vibrato. For information about the "Legato Slur" instruments, see page 56.

The intent of these patches is to provide a range of notes that can play a legato melody with the rest of the string orchestra providing a sustained accompaniment.

(Sus) + 1st Violins Legato

Selecting this patch in the Browser opens a Sustained instrument for the Violas, Celli, and Basses. The 4th instrument is:

- 1st Violins Legato Slur LT 6

(Sus) + 2nd Violins Legato

Selecting this patch opens the same instruments as listed above, except that instead of a legato 1st Violins section, the 4th instrument is:

- 2nd Violins Legato Slur LT 6

(Sus) + Violoncelli Legato

This patch takes a different approach from the other two in this section. In order to give the Celli more of a range, there is no Violas section; the Celli play notes up to B3. And the 2nd Violins start on the next note up: C4. Also, note that there is no Basses instrument in this option; the bottom playable note is the C1 at the bottom of the cello range. The legato instrument is:

- Celli Legato Slur LT 6

The Quick Start Instruments

The Quick Start instruments are a folder of patches from all sections (1st Violins down to Basses) that are designed to load quickly and use less of the Computer resources than the similar patches in the other folders. You might use these instruments:

- If you're using a computer with the minimum of required RAM and you have problems loading the larger instruments.
- If you're doing a quick sketch and are not worried about getting the most perfect orchestral sound, such as when playing with ideas during the composing phase. Your project will load faster and get you into your work right away.

These are mostly patches with only 2 dynamic layers. They all have the Mid microphone loaded by default. There are some instruments that only appear in the "_HS Quick Start" folder, while others are doubles from the library, that differ only in having the Mid mic on by default.

Those instrument names with an asterisk (*) are newly created for this folder. But the principles are the same as in other similarly named patches, so read about how to use them in the appropriate sections. Those with no asterisk are identical to patches in other folders except that the Mid microphone is loaded by default.

The following table lists the instruments in this folder. A check mark means that the instrument is included for the section name at the top of the column.

INSTRUMENT OVERVIEW: QUICK START INSTRUMENTS

	1st Vns	2nd Vns	Violas	Celli	Basses
Legato Slur LT 3 Ni	✓	✓	✓	✓	✓
Pizzicato 3 RRx4 *	✓	✓	✓	✓	✓
Slur Runs LT	✓				
Spiccato Marcato MOD	✓	✓	✓	✓	✓
Staccato Slur	✓				
Sustain 2 NV VB *	✓	✓	✓	✓	✓
Sustain 2 VB VB *	✓	✓	✓	✓	✓
Tremolo 2 *	✓	✓	✓	✓	✓
Trill 2 HT WT *	✓	✓	✓	✓	
Flautando		✓			
Harmonics		✓			
Col Legno RRx4					✓
Trill 2 HT *					✓

The Template PRO Instruments

The Template PRO Instruments are a folder of recommended articulations for a basic Hollywood Strings template. This list is designed for a semi-powerful system, so if your system is either more modest or more capable you may want to select other instruments to match the power of your hardware.

For those working with Hollywood Strings for the first time, this list of instruments is a good starting point. Then, as you find other articulations you need, add those to your template.

The table below specifies which instrument files are in the folder for each orchestral section.

INSTRUMENT OVERVIEW: TEMPLATE PRO INSTRUMENTS

	1st Vns	2nd Vns	Violas	Celli	Basses
1 NV NV NV VB RR Ni	✓	✓	✓	✓	
NV VB RR Ni					✓
Harmonics Ni		✓			
Col Legno RRx4					✓
Legato Slur + Portamento RR LT 12 Ni	✓	✓	✓	✓	
Legato Slur RR LT 12 Ni	✓	✓	✓	✓	
Pizzicato RRx4	✓	✓	✓	✓	✓
Rep Runs Script				✓	
Shorts MOD Speed	✓	✓	✓	✓	✓
Slur Runs	✓	✓	✓		
Spiccato Marcato MOD	✓	✓	✓	✓	✓
Staccato Slur RRx6	✓	✓			
Sul Ponticello Ni			✓		
Sus 9 RR 4th Position Ni	✓	✓	✓	✓	
Sus 8 RR Ni					✓
Tremolo Ni	✓	✓	✓	✓	✓
Trill HT WT Ni	✓	✓	✓	✓	
Trill HT Ni					✓



5. Hollywood Brass

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Instruments, Articulations, and Keyswitches

The EastWest/Quantum Leap Hollywood Brass virtual instrument is a library designed to create brass orchestrations of the kind heard in movie soundtracks—but, of course, it can be used for many other types of brass music, as well. And it mixes well with other virtual instruments from EastWest/Quantum Leap, so feel free to add in strings, guitars, percussion, voices, whatever you can imagine. This library and other libraries in the EastWest/Quantum Leap "Hollywood" series are designed to work together particularly well; they include the same variety of microphone positions and other features that help them blend into a unified sound.

The library contains instruments that cover several groups of brass instruments in various configurations:

- Trumpets — Solo; 2; 3
- Trombones — Solo; section of 2 Trombones plus 1 Bass Trombone
- Cimbasso — Solo
- Tuba — Solo
- French Horns — Solo; 2; 6
- Low Brass — the sound of multiple brass instruments playing, usually in unison

The following pages include a table that lists each instrument in the Hollywood Brass library. You might want to print out the pages containing this table as a reference.

The Tables of the Brass Instruments

The sounds of each instrument are provided in the form of one or more instrument files (with extension .ewi in the Browser view), often representing separate articulations. Within some instrument files may be several articulations that can be selected in one of several ways:

- through the on-screen UI
- with keyswitch notes
- by moving the Mod Wheel

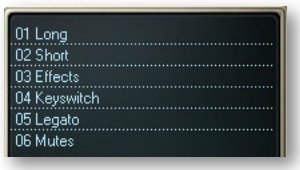
Most of the rest of this chapter documents the instruments and articulations for this library.

The Categories of Brass Instruments

For all 6 sections and all of the 5 solo instruments in this library, the list of instruments is divided into categories. In the Browser, they appear as separate folders:

- 01 Long
- 02 Short
- 03 Effects
- 04 Keyswitches
- 05 Legato
- 06 Mutes

(The number at the start of each category name is there to make sure this list always appears in this order within the Browser.) These categories appear as section headers within the following table to help you find instrument files in the tables and in the Browser.



An Important Note on Dynamics in Hollywood Brass Instructions

As discussed in multiple places within EastWest manuals, there are several ways you can affect with MIDI parameters how loudly an instrument should play:

- MIDI Velocity
- the Mod Wheel, CC 1
- Volume, CC 7
- Expression, CC 11

Volume and Expression work on any and all instruments. Volume should be used to set a loudness level relative to other instruments. And Expression should be used to shape the continually changing dynamics and expressiveness of each instrument. Neither Volume nor Expression change the timbre of the instruments, only the loudness.

Hollywood Brass instruments use either MIDI Velocity or the Mod Wheel—or both—to affect the sound of the instruments when they are played louder or softer. As a general rule, in Hollywood Brass:

- Staccato, Marcato, and Portato: use Velocity
- Sus Accent, Slur accent, Marcato Light Sus, and Shorts Mod Speed: use both Velocity and the Mod Wheel to affect different parts of the sound
- the rest: use the Mod Wheel

For more detail, see the description of specific instruments later in this chapter.

Many Hollywood Brass instruments rely on the Mod Wheel to cross-fade between samples instead of selecting which sample to play based on the MIDI Velocity parameter of each note. This approach gives the composer much more of a continuous control over both the loudness and the timbre. But this control comes with a price: greater use of the computer's resources, especially the RAM and the processors. As is mentioned in some of the instrument descriptions below, PLAY might be playing up to 8 concurrent samples for each note (not including release trails).

Use the guidelines earlier in this section to learn whether to use Velocity, the Mod Wheel, or both, but if you find that an instrument is not responding to one of the ways of specifying loudness, investigate using other means to get the dynamics you're looking for.

Overview of the Instruments in Hollywood Brass

The following 2 tables, each of which extends over several pages, list the instrument files available for each solo instrument or each section. A check mark in a cell indicates that an .ewi file as named at the left of the row is available for that solo instrument or section named at the top of the column.

This table does not explore the articulations available within each instrument file; that level of detail is provided later in this chapter.

When one section does not include an instrument or articulation you're looking for, you may be able to try one of the following approaches to get an approximation of the sound you want:

- Use that same patch from a different section. You may be able to mask differences in timbre with the use of EQ, and/or by doubling with a different patch from the correct section.
- Use a similar patch from the correct instrument. Then experiment with changing the AHDSR envelope and/or other parameters to bring the sound more into line with the sound you want.

You may find that the sound is close enough to what you wanted in the first place that no one will notice, especially in the middle of multi-part writing.

The page numbers in the last column are hyperlinks to descriptions and features available for that instrument file; click on any number (when the manual is viewed on a screen) to jump to that page.

Solo instruments are listed in the first able. Instrumental sections are listed in a following table.

Table of Solo Instruments

BRASS INSTRUMENT OVERVIEW: SOLO INSTRUMENTS						Page
01 Long	Trpt	Trbn	Cimb	Tuba	Horn	
Sus			✓	✓	✓	74
Sus Vibrato	✓					
Sus Non-Vibrato	✓	✓				
Sus Lite	✓	✓	✓	✓	✓	74
Sus Marcato Long	✓	✓		✓	✓	74
Sus Marcato Short			✓			74
Sus Accent	✓	✓	✓	✓	✓	74
continued						

BRASS INSTRUMENT OVERVIEW: SOLO INSTRUMENTS						Page
Expressive Vibrato	✓					
Sus with Pitch Waver					✓	
Portato		✓		✓		75
Portato Short					✓	
Portato Long					✓	
Legato Repetitions RRx4	✓	✓		✓	✓	75
Mariachi Sus	✓					75
02 Short	**Trpt**	**Trbn**	**Cimb**	**Tuba**	**Horn**	
Marcato Long RRx4		✓			✓	76
Marcato Short RRx4		✓	✓	✓	✓	
Marcato Long Double Tongue RRx4	✓			✓		
Marcato Short Double Tongue RRx4	✓					
Repetitions Fast 170	✓	✓		✓	✓	76
Repetitions Medium 145	✓	✓	✓	✓	✓	
Repetitions Slow 120	✓	✓		✓	✓	
Staccato Double Tongue RRx9	✓					76
Staccatissimo Double Tongue RRx9	✓		✓	✓		
Staccato 8va Ped RRx4		✓				
Staccatissimo RRx9					✓	76
Staccatissimo Double Tongue RRx9		✓				
Shorts Mod Speed	✓	✓	✓	✓	✓	76
Sforzando Crescendo		✓		✓	✓	77
03 Effects	**Trpt**	**Trbn**	**Cimb**	**Tuba**	**Horn**	
Crescendo			✓			78
Crescendo Fast	✓	✓		✓	✓	
Crescendo Medium	✓	✓		✓	✓	
Crescendo Slow	✓	✓		✓	✓	
Crescendo Mod Speed	✓	✓		✓	✓	
Trill HT	✓				✓	
Trill WT	✓					
Trill KS	✓					
8va Ped		✓				
Flutter Tongue		✓	✓	✓		
Flutter Crescendo			✓			79

continued

BRASS INSTRUMENT OVERVIEW: SOLO INSTRUMENTS						Page
Shake Fast					✓	
Shake Medium					✓	
Ped Flutter		✓				
Rips					✓	78
Rips RR		✓				
Rip Flutter		✓				
Rip Shake Fast					✓	78
Rip Shake Medium					✓	
Rip Shake Slow					✓	
Rip Trill					✓	
04 Keyswitch	Trpt	Trbn	Cimb	Tuba	Horn	
KS Sus_Short	✓	✓		✓	✓	79
KS Effects	✓	✓	✓	✓	✓	79
05 Legato	Trpt	Trbn	Cimb	Tuba	Horn	
Legato Slur	✓	✓		✓	✓	80
Legato Slur Accent	✓	✓		✓	✓	80
Legato Slur Repetitions	✓			✓	✓	80
Legato Slur Runs	✓			✓	✓	81
Vibrato Legato Slur	✓					
06 Mutes (or 06 Jazz for Trombone)	Trpt	Trbn	Cimb	Tuba	Horn	
Mute Sus	✓			✓		81
Mute Sus Accent	✓			✓		
Stop Sus					✓	
Stop Sus Accent					✓	
Stop Staccato RRx4					✓	
Mute Stac'issimo Dble Tongue RRx9	✓			✓		
5th Slide Crescendo		✓				
Doit RR		✓				
Falls		✓				
Growl		✓				
Growl Crescendo		✓				
Half Tone Slide Crescendo		✓				
Jazz Marcato		✓				
Jazz Shake Medium		✓				

continued

BRASS INSTRUMENT OVERVIEW: SOLO INSTRUMENTS						Page
Jazz Shake Slow		✓				
	Trpt	Trbn	Cimb	Tuba	Horn	
Legato Slide		✓				
Long Falls		✓				
Mute Falls		✓				
Mute Slide Up RR		✓				
Mute Tongue Slur RR		✓				
Mute Cab Slide Up		✓				
Mute Old Timey		✓				
Mute Vibrato Fall		✓				
Old Timey Slide Up		✓				
Old Timey Staccato RRx3		✓				
Plunger Fast Sus		✓				
Plunger Fast		✓				
Plunger Growl		✓				
Plunger Sputter		✓				
Plunger Staccato RRx3		✓				
Plunger Wah-wah		✓				
Plunger Forte		✓				
Slide Up RR		✓				
Staccato Growl		✓				
Sus Vibrato		✓				

Table of the Instrumental Sections

Note that in the Trombones column, the heading "2 + 1B" refers to a section that includes 2 (Tenor) Trombones and 1 Bass Trombone.

INSTRUMENT OVERVIEW: SECTIONS							Page
01 Long	Trumpets		T'bones	Horns		Low	
	2	3	2 + 1B	2	6	Brass	
Sus	✓	✓	✓	✓	✓	✓	74
Sus Lite	✓	✓	✓	✓	✓	✓	74
Sus Accent	✓	✓	✓	✓	✓	✓	74
Sus Marcato Long	✓	✓	✓	✓	✓		74
Portato	✓	✓	✓	✓	✓		75
Legato Repetitions RRx4	✓	✓	✓	✓	✓		75

continued

INSTRUMENT OVERVIEW: SECTIONS							Page
02 Short	Trumpets		T'bones	Horns		Low	
	2	3	2 + 1B	2	6	Brass	
Marcato Long RRx4	✓	✓	✓	✓			76
Marcato Long Double Tongue RRx4					✓		
Marcato Short Double Tongue RRx4	✓	✓	✓	✓	✓		
Repetitions Fast 170	✓	✓	✓	✓	✓		76
Repetitions Medium 145	✓	✓	✓	✓	✓		
Repetitions Slow 120	✓	✓	✓	✓	✓		
Sforzando					✓		
Sforzando Crescendo	✓						77
Staccato RRx9		✓					76
Staccato Double Tongue RRx8					✓		
Staccato Double Tongue RRx8 MOD					✓		
Staccatissimo RRx5						✓	76
Staccatissimo RRx9				✓			
Stacatissimo Double Tongue RRx9	✓	✓	✓				
Triple Perf RRx3		✓					77
Shorts MOD SPEED		✓	✓	✓	✓		76
03 Effects	Trumpets		T'bones	Horns		Low	
	2	3	2 + 1B	2	6	Brass	
Clusters		✓	✓		✓		79
Cluster Bend		✓					
Cluster Dance FX						✓	
Clusters Blast						✓	
Clusters Tight						✓	
Clusters Wide						✓	
Creepy Sustains						✓	
Crescendo Fast	✓	✓	✓	✓	✓	✓	78
Crescendo Medium	✓	✓	✓	✓	✓	✓	
Crescendo Slow	✓	✓	✓	✓	✓		
Crescendo MOD SPEED	✓	✓	✓	✓	✓		
Crescendo Split						✓	
Crescendo Split Slow						✓	
Elephants						✓	

continued

INSTRUMENT OVERVIEW: SECTIONS	Trumpets		T'bones	Horns		Low	Page
	2	3	2 + 1B	2	6	Brass	
Flutter Crescendo Fast						✓	
Flutter 5th						✓	
Fall Long	✓						
Fall Short	✓						
Flutter Tongue	✓	✓	✓		✓	✓	
Flutter Clusters			✓				
Fourth Split						✓	
Rips	✓						78
Rips RR					✓		
Rips 2 RRx3				✓			
Rips ff RRx3		✓					
Rip Flutter	✓				✓		
Rip Shake RR				✓	✓		
Rip Trill	✓	✓		✓	✓		
Shake	✓						78
Sforzando Crescendo		✓					
Trill HT	✓	✓		✓	✓		
Trill WT	✓	✓		✓	✓		
Trills KS	✓	✓		✓	✓		
Run Trill		✓			✓		
Rises and Oddities		✓					79
Sus FX					✓		79
Chaos FX						✓	
Hockey Rise						✓	
Repetition Crescendo Fast						✓	
Repetition Crescendo Slow						✓	
Slow Rise FX						✓	
Stab Cluster RRx3						✓	
Sus Pitch Waver						✓	

continued

INSTRUMENT OVERVIEW: SECTIONS							Page
04 Keyswitch	Trumpets		T'bones	Horns		Low	
	2	3	2 + 1B	2	6	Brass	
KS Effects							
KS Sus_Short	✓	✓	✓	✓	✓	✓	94
05 Legato	Trumpets		T'bones	Horns		Low	
	2	3	2 + 1B	2	6	Brass	
Legato Slur	✓	✓	✓	✓	✓		80
Legato Slur Accent	✓	✓	✓	✓	✓		80
Legato Slur Repetitions	✓	✓	✓	✓	✓		80
Legato Slur Runs	✓	✓		✓	✓		81
Legato Slide			✓				80
06 Mutes	Trumpets		T'bones	Horns		Low	
	2	3	2 + 1B	2	6	Brass	
Mute Sus	✓	✓	✓			✓	81
Stop Sus				✓	✓		81
Mute Sus Accent	✓	✓	✓			✓	
Stop Sus Accent				✓	✓		
Mute Legato Slur		✓					
Mute Staccato RRx3						✓	
Stop Staccato RRx4				✓			
Stop Staccato Double Tongue RRx9					✓		
Mute Staccatissimo Dbl Tongue RRx9	✓	✓	✓				
Mute Cluster Bend		✓					
Mute Cluster Out		✓					
Mute Flutter Crescendo		✓					
Mute Flutter Crescendo Decrescendo		✓					
Mute Short Fall		✓					
Mute Insects		✓					

Instrument Types

The following paragraphs explain many of the various types of instruments (.ewi files) available in Hollywood Brass. The principles described here apply across all sections and all solo instruments.

01 Long

The instrument types in this folder include various types of:

- Sustain, often written as "Sus"
- Portato
- Legato Repetitions

Not all varieties of these articulations (for example, accented attack and non-vibrato) are available for all solo instruments and orchestral sections. All of them can be held indefinitely; this is achieved by looping the samples.

Sustain

All Sustain instruments continue to play a note audibly as long as the note is held. They are a good choice for slow-moving lines that need a consistent sound no matter how long the notes are held.

The dynamics of the Sustain patches are controlled with the Mod Wheel. The further you push it up, the louder the sound. By using the Mod Wheel instead of Velocity to control loudness, you can create a realistic crescendo and/or decrescendo during a held note. When you play any note in one of the patches all 4 dynamic layers start to play simultaneously, but only one or two of them are audible at any one time, as controlled by the Mod Wheel. This approach increases the voice count in PLAY and makes more demands on the computer processor. If you need to reduce these demands, consider using the Sustain Lite patch described below, when available.

Sustain Accent

Most solo instruments and sections include a patch which is sustained but with an accent at the beginning of the note. The MIDI Velocity parameter controls the loudness of the attack. The Mod Wheel controls the loudness of the sustained note. Push up the Mod Wheel (or increase CC 1) to swell the overall volume of this instrument. And strike the keys harder (or increase the velocity in a sequencer) whenever you want a louder accent.

Sustain Lite

The "Sustain Lite" patches behave like the regular Sustain instruments, except that only 2 dynamic layers are available. This approach starts half the number of concurrent voices, compared to the usual Sustain patch.

Sustain Marcato Long and Short

In these patches, each note starts with a marcato attack to add some strength at the beginning, but not as forceful an attack as in the Sustain Accent patch. The "Long" or "Short" in the names specifies the length of this marcato attack.

The velocity with which you play each note affects the cutoff frequency of a low-pass filter on the marcato samples. The harder you play a note on the keyboard, the more of the higher frequencies are included, giving the note a harsher sound during the attack.

Portato

When playing portato, an instrumentalist holds each note its full length—or close to it—but without tying it to the next note. This creates a non-legato effect, but without making the notes sound staccato.

Legato Repetitions

This patch provides retongued repetitions to create the sound of repeated notes within a legato phrase. These same samples are used in the Legato Slur Repetition patches where a script plays them only in the appropriate context within a legato phrase. In this patch, you can determine in which ways you want to use this sound.

Mariachi Sustain

This patch includes a strong attack followed by a sustain with a lot of vibrato, in the style of a mariachi band.

Note that unlike most sustain instruments, this one does not use the Mod Wheel to control dynamics; it uses Velocity instead.

Expressive Vibrato

Available only in the Solo Trumpet, this instrument starts out with no vibrato and adds vibrato as the note progresses. Use this instrument when you want the faster-moving notes to be non-vibrato but the longer notes to add an expressive vibrato.

02 Short

Articulations included in the 02 Short folder include varieties of:

- Staccato and Staccatissimo
- Marcato
- Repetitions
- Sforzando

Important Note on Reverberation and Short Articulations

Note that, in general, short articulations do not include release trails. But there is some reverberation at the end of the main sample, once the note stops playing. This approach allows you to play fast passages without building up a lot of overlapping reverberations. Therefore, when playing a phrase of staccato notes, be sure to play the MIDI notes in a connected fashion so that you do hear the natural reverberation of the recording studio in the short rests between the sounding notes.

Even if there are no rests between short notes, be sure to hold the last note of the phrase long enough to let the reverberation of that last note ring.

Staccato and Staccatissimo

The term "staccato" refers to any note of short duration that is not connected legato to the following note. Staccatissimo is like Staccato, but with notes of even shorter duration.

In Hollywood Brass, staccato notes with the highest velocity include an attack that includes the rougher sound of overblowing, which features more of the higher pitched harmonics.

Marcato

When used in a score, the term "marcato" indicates that every note is to be accented. This articulation contains notes of a short duration that begin with a strong accent. Some 02 Short folders contain both Short and Long versions, differing in how long the note is held after the attack.

These are a Round Robin instruments with 4 sets of samples in rotation.

Shorts MOD SPEED

This instrument allows you to use the Mod Wheel to move continuously among several short articulations. As you push the Mod Wheel up from the bottom, the articulations you hear are, in order:

- Staccatissimo (0–25)
- Staccato (26–51)
- Marcato Short (52–77)
- Marcato Long (78–103)
- Marcato Long with a Sustain (104–127)

The numbers in parentheses represent the Mod Wheel values that trigger each level.

Repetitions

In this patch, the same note is played repeatedly at least a dozen times in quick succession. For fewer repetitions, end the note before the end of the sample. This sequence of notes is more realistic than just playing the same staccato note multiple times.

This is not a Round Robin instrument. If you do repeat a MIDI note—perhaps because you need more repetitions than are recorded in the samples—the listener will hear the last repetition followed by the first one, so there's no concern about mechanically identical notes following each other.

The Mod Wheel affects the loudness, allowing you to increase or decrease the loudness during the repetitions within a single MIDI note.

Repetitions are available in 3 speeds:

- Fast 170
- Medium 145
- Slow 120

The numbers are the base tempos for the repetitions, that is, what was played during the recording session. These instruments all "sync to tempo," which means:

- In standalone mode, the tempo matches the value entered in the Engine Tempo Sync control available in the dialog box from Main Menu > Current Instrument > Advanced Properties.
- When PLAY is hosted in a sequencer, the tempo matches the speed of the MIDI tempo in the sequencer.

Each patch sounds best when the tempo to which it is being synced is close to its base tempo. For example, at a tempo of 160, use the closest patch, Fast 170, for the most lifelike playback.

You may need to adjust the length of the MIDI note a little bit in order to end the sequence between repetitions and not in the middle of one of the repeated notes.

Note: unlike most instruments in the 02 Short folder, this one does include release trails.

Triple Performance

For the 3 Trumpets, there's a patch called "Triple Performance" that repeats the selected note exactly 3 times in quick succession. Unlike the Repetitions patches, this does *not* respond to the Mod Wheel to affect the loudness.

Double Tongue

Some articulation files indicate that they use the technique known as double tonguing. This effect lets the user achieve a faster sequence of notes by stopping the airflow alternately with the tip of the tongue and with the back of the tongue against the palate. The tongue moves in the same pattern as when saying "tiki tiki tiki."

Sforzando Crescendo

The Solo Horn and Solo Tuba include a patch called Sforzando Crescendo. Each note starts with an accented attack (sforzando) which is followed by a strong crescendo.

MIDI Velocity controls the loudness—and the timbre—of the attack as well as the loudness of the crescendo.

When a note is played short enough to end before the crescendo, this patch can act as a sforzando staccato patch.

03 Effects

The instruments in this folder fall into several types:

- trills
- rips and shakes
- crescendos
- flutter tongue
- clusters
- special effects (FX) , rises, and oddities

Trills

A trill is the rapid alternation between two notes either a half tone or a whole tone apart. Any file with "HT" in the name contains a half-tone trill. And with "WT" in the name, it contains a whole-tone trill. With "KS" in the name, it contains both versions of the trill and the user can select which version using a keyswitch note: play C0 in advance of the trill for a half-tone trill or play C#0 in advance for a whole-tone trill.

This instrument responds to the Mod Wheel to control the volume. It does not respond to MIDI Velocity. This approach allows you to increase or decrease the loudness mid-note, that is, during the trill.

Rips and Shakes

Brass instruments (especially the horns, but also the trumpets) can play a characteristic sound called a rip. This is a kind of glissando that works up the scale of harmonics. The effect evokes the sound of a natural hunting horn.

Horns can also perform an effect called a shake: the sound is similar to a short trill but coarser (less controlled).

The shake is sometimes used in jazz performances. And this library includes a few examples with a jazz-specific sound.

These two effects can also be combined into a patch known as a rip shake.

The patch called Rip Flutter Tongue starts with a short rip and then holds the end note with a flutter tongue. The rip at the start has its volume controlled with the Velocity parameter. The the loudness of the sustained flutter tongue is controlled with the Mod Wheel.

Crescendos

The crescendo instruments capture the sound of a single-note crescendo, a common usage in brass music. Using one of these instruments can often be more realistic than using MIDI volume or expression to achieve the effect. In most cases, there are Fast, Medium, and Slow versions available. In an instrument called "Crescendo MOD SPEED," the speed of the crescendo is controlled by the Mod Wheel (CC 1): the further you push up the Mod Wheel, the faster the loudness increases:

- Slow (1–42)
- Medium (43–85)
- Fast (86–127)

The numbers in parentheses specify the Mod Wheel (CC 1) values that trigger each speed. These are 3 discrete levels; so, for example, pushing the Mod Wheel from 50 up to 70 does *not* increase the speed.

These patches do not include release trails.

Flutter Tongue

When a brass player flutters his tongue while playing, similar to the rolled R in some languages, it produces a characteristic sound captured in the several Flutter Tongue files in this library.

The Mod Wheel affects the loudness, allowing a continuous crescendo or decrescendo mid-note. Velocity does not control loudness for this instrument.

Clusters

When the several players in a section play different notes close to each other in pitch, usually a minor or major second apart, the effect is called a cluster.

Use the Mod Wheel to control the loudness, even in the middle of a single note. The Velocity parameter does not influence the dynamics.

Because more than one pitch is being played, you may need to experiment to find the best MIDI note to achieve the sound you want.

Special Effects (FX), Rises, and Oddities

The Hollywood Brass library contains several instrument files with unusual effects. You will get a better idea of what is available by listening than by reading any attempt at descriptions.

04 Keyswitch

If you are not familiar with how to use a keyswitch instrument in PLAY, see more information in chapter three and also the Keyswitches section in the main PLAY System manual.

All the Hollywood Brass keyswitch files follow the same pattern. The list below spells out which articulation is assigned to each keyswitch note. But be aware that not every solo instrument and section includes the same set of articulations. If an articulation is not available in any particular file, using that keyswitch note results in no sound being produced until a working keyswitch note is played.

KEYSWITCH NOTES	
C0	sus
C#0	sus accent
D0	marcato long plus sus (or marcato short if long is not available)
D#0	legato repetitions
E0	staccatissimo
F0	trill half step
F#0	trill whole step
G0	crescendo Mod Wheel

For any instrument that extends down to this range with playable note, such as the Solo Tuba, this pattern of keyswitch notes is transposed up to a higher octave. You can always use the blue notes in PLAY's on-screen keyboard—or the names in the Articulations window—to find the correct octave.

05 Legato

For most brass instruments, a legato sound is created with a slur that joins the two consecutive notes without a fresh attack at the start of the later note. This slur occurs only when there is no significant gap between the end of the earlier note and the start of the later note. In addition, the two notes have to be at most an octave apart. Moving from D3 to D4 generates a legato slur; moving from D3 to D#4 does not.

Trombones, by virtue of their slide mechanism, can generate another kind of legato, one in which there is some amount of portamento connecting the two notes, an audible anticipatory movement of the pitch toward the next note. This effect is known as "slide legato."

Legato Slur

The basic slur legato patch creates a slur between notes as long as there is no delay between the end of the first note and the start of the following note. Plus, the interval between the two notes has to be no more than an octave.

The volume is controlled with the Mod Wheel and not with Velocity. In addition, in the loudest range of dynamics, the Mod Wheel opens a low-pass filter to allow the rougher sound of overblowing to color the notes more and more as the Mod Wheel value gets closer to the maximum of 127.

MIDI Velocity is used to control the speed of the legato transitions. The harder you press on the keys, the faster the slur between notes.

Because these patches always start playing 4 sustain samples (and cross-fade between them based on the Mod Wheel) and also use separate sample to provide the slurs, be aware that the patches use more computer resources than most of the simpler instruments.

Legato Slur Accent

This patch works the same as the basic Legato Slur (described above) except that it includes an accent at the attack. While the volume of the notes is controlled with the Mod Wheel, the strength of the accents is controlled with the Velocity.

Legato Slur Repetitions

This patch is similar to the basic Legato Slur except that it also uses separate samples to handle repeated notes. For example, if in a phrase 3 notes of the same pitch are played consecutively without space between the notes, the second and third occurrences use a retongued version of the note to achieve the correct sound.

Slur Runs

This patch provides a slur legato sound with a lot of portamento that works well in very fast runs. Each note can be held indefinitely, so if you want to, for example, run up to a note and hold it, you can use this patch for both the run and the held note.

The characteristic sound occurs only when the interval between consecutive notes is either a minor second or a major second. Larger intervals do not create the strong slur.

Dynamics for this instrument are controlled with the Mod Wheel, not Velocity. And, as with the basic Legato Slur patch, this one uses a lot of resources because each note uses 4 Voices for the 4 dynamic levels playing concurrently.

Monophonic Behavior in Legato Instruments

By default, all legato instruments are monophonic. By allowing only one note to play at a time, PLAY makes sure that there is no ambiguity about what two notes should have a legato transition between them.

It is possible to turn off the monophonic behavior with MIDI Control Code 22. When in the top half of its range, 64–127, the controller preserves the default behavior. But whenever CC 22 is in the range 0–63, polyphonic behavior is turned on. You do need to listen to the output carefully to see whether there are unwanted legato slurs between notes in different polyphonic voices. If so, one remedy is to move those two voices to separate MIDI tracks.

06 Mutes

The use of mutes provides brass instruments with a wide variety of timbres significantly different from the un-muted sounds. These mutes fit into the flared bell of the instruments, but are fashioned into various shapes to achieve the desired sound. The 06 Mutes folder contains muted instruments performing many of the articulations listed in previous sections, such as staccato, legato slur, crescendo, and clusters. See the tables above for what is available for each section or solo instrument.

Another way to mute a brass instrument is to place one's free hand in the bell. Such a mute is called a "stop." It is most characteristic of the French Horn.

See the descriptions of the unmuted versions of these instruments for details about Mod Wheel usage and other factors.

The Solo Trombone instruments in the 06 Mutes folder include some specialized hardware, such as the plunger mute. You should audition these muted patches to see which ones provide the sounds you're looking for.

In general, it is more effective for you to audition the many varieties of muted articulations than to read about them in a manual.



6. Hollywood Orchestral Woodwinds

84 The Woodwind Instrument Articulations
86 Tables of Instruments
90 01 Long
92 02 Short
93 03 Effects
94 04 Keyswitch
97 05 Legato

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Instruments, Articulations, and Keyswitches

The Hollywood Orchestral Woodwinds virtual instrument is a library designed to create orchestrations of the kind heard in movie soundtracks—but, of course, it can be used for many other types of music, as well. And it mixes well with other virtual instruments from EastWest, so feel free to add in strings, guitars, percussion, voices, whatever you can imagine. This library and all other libraries in the same EastWest "Hollywood" series are designed to work together particularly well; they include the same variety of microphone positions and other features that help them blend into a unified sound.

For the purpose of the tables in this chapter, the library can be grouped into three sets of instruments based on how the sound is generated:

- Flutes (no reed)
  - › Flute
  - › Flute 2
  - › Piccolo Flute
  - › Alto Flute
  - › Bass Flute
- Clarinets (single reed)
  - › Clarinet
  - › E♭ Clarinet
  - › Bass Clarinet
  - › Contrabass Clarinet
- Double reeds
  - › Oboe
  - › English Horn
  - › Bassoon
  - › Contrabassoon

The various articulations of these 13 instruments are enumerated in the three tables that follow. You might want to print out the pages containing these tables as a reference.

The characteristics of these orchestral instruments are not described in this manual because they are members of standard instrumental families. A few, such as the Bass Flute and Contrabass Clarinet, are uncommon, though their usage can be easily extrapolated from the more common members of the family.

The one instrument that needs some explanation is the one called "Flute 2." It is a standard transverse flute, just like "Flute," but it was played by a different flautist who sat in a slightly different position on stage. In other words, no samples are shared between "Flute" and "Flute 2," so if played together in unison, they will not collapse into a single performance.

The Tables of the Woodwind Instruments

The sounds of each instrument are provided in the form of one or more instrument files (with extension .ewi in the Browser view), often representing separate articulations. Within some instrument files may be several articulations that can be selected in one of several ways:

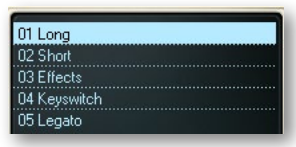
- through the on-screen UI
- with keyswitch notes
- by moving the Mod Wheel

The Categories of Articulations

For all instruments in this library, the list of instruments is divided into categories. In the Browser, they appear as separate folders:

- 01 Long
- 02 Short
- 03 Effects
- 04 Keyswitch
- 05 Legato

(The number at the start of each category name is there to make sure this list always appears in this order within the Browser.) These categories appear as section headers within the following table to help you find instrument files in the tables and in the Browser.



Note that not every instrument has articulations files in every folder. It is especially for the less common instruments where you may find missing folders. And the E-flat Clarinet and Contrabass Clarinet actually use no subfolders, collecting all the articulation files in a single folder each.

A Note on Dynamics in Hollywood Orchestral Woodwinds Instruments

As discussed in multiple places within EastWest manuals, there are several ways you can affect with MIDI parameters how loudly an instrument should play:

- MIDI Velocity
- the Mod Wheel, CC 1
- Volume, CC 7
- Expression, CC 11

Volume and Expression work on any and all instruments. Volume should be used to set a loudness level relative to other instruments. And Expression should be used to shape the continually changing dynamics, timbre, and expressiveness of each instrument. Neither Volume nor Expression change the timbre of the instruments, only the loudness.

Hollywood Orchestral Woodwinds instruments use either MIDI Velocity or the Mod Wheel—or occasionally both—to affect the sound of the instruments when they are played louder or softer. As a general rule, in this library:

- Staccato and Marcato: use Velocity
- Sus Accent: uses both Velocity and the Mod Wheel to affect different parts of the sound
- the rest: use the Mod Wheel

For more detail, see the description of specific instruments later in this chapter.

Many Hollywood Orchestral Woodwinds instruments rely on the Mod Wheel to cross-fade between samples instead of selecting which sample to play based on the MIDI Velocity parameter of each note. This approach gives the composer much more in the way of continuous control over both the loudness and the timbre. But this control comes with a price: greater use of the computer's resources, especially the RAM and the processors. As is mentioned in some of the instrument descriptions below, PLAY might be playing up to 6 concurrent samples for each note (not including release trails).

Use the guidelines elsewhere in this section to learn whether to use Velocity, the Mod Wheel, or both, but if you find that an instrument is not responding to one of the ways of specifying loudness, investigate using other means to get the dynamics you're looking for.

Overview of the Instruments in Hollywood Orchestral Woodwinds

The following 3 tables, which extend over several pages, list the instrument files available for each instrument. A check mark in a cell indicates that an .ewi file as named at the left of the row is available for the solo instrument named at the top of the column.

These tables do not explore the articulations available within each instrument file; that level of detail is provided later in this chapter.

When one orchestral instrument (for example, the Alto Flute) does not include an articulation you're looking for, you may be able to try one of the following approaches to get an approximation of the sound you want:

- Use that same patch from a different section. You may be able to mask differences in timbre with the use of EQ, and/or by doubling with a different patch from the correct section.
- Use a similar patch from the correct instrument. Then experiment with changing the AHDSR envelope and/or other parameters to bring the sound more into line with the sound you want.

You may find that the sound is close enough to what you wanted in the first place that no one will notice, especially in the middle of multi-part writing.

The page numbers in the last column are hyperlinks to descriptions and features available for that instrument file; click on any number (when the manual is viewed on a screen) to jump to that page.

Tables of Instruments

INSTRUMENT OVERVIEW: FLUTES						Page
01 Long	Flute	Flute 2	Piccolo	Alto Fl	Bass Fl	90
Sus Vibrato	✓	✓	✓	✓	✓	90
Sus Non-Vibrato	✓	✓	✓	✓		
Sus Expressive	✓	✓		✓	✓	
Sus Accent	✓	✓	✓	✓	✓	
Sus NV VB	✓	✓	✓	✓		
Sus NV VB Full	✓	✓	✓	✓		
Sus NV VB Full Niente	✓	✓	✓	✓		
Legato Repetitions RRx4	✓	✓	✓	✓	✓	91
02 Short	Flute	Flute 2	Piccolo	Alto Fl	Bass Fl	92
Marcato Short Double Tongue RRx4	✓	✓				92
Staccato RRx4				✓		92
Staccato Double Tongue RRx5					✓	
Staccato Double Tongue RRx9	✓	✓	✓			
Staccatissimo Double Tongue RRx9	✓	✓	✓			
Shorts MOD SPEED	✓	✓				92
03 Effects	Flute	Flute 2	Piccolo	Alto Fl	Bass Fl	93
Run Up Octave Chromatic	✓	✓	✓			93
Run Down Octave Chromatic	✓	✓	✓			
Run Up Major Scale	✓	✓	✓			
Run Down Major Scale	✓	✓	✓			
Run Up Minor Scale	✓	✓	✓			
Run Down Minor Scale	✓	✓	✓			
Run Up Whole Tone Scale	✓	✓	✓			
Run Down Whole Tone Scale	✓	✓	✓			
Trill HT	✓	✓	✓			93
Trill WT	✓	✓	✓			
Flutter Tongue	✓	✓	✓			93
Repetitions Fast	✓	✓	✓			94
Repetitions Medium	✓	✓	✓			
Repetitions Slow	✓	✓	✓			
Sing RR	✓					94

continued

INSTRUMENT OVERVIEW: FLUTES						Page
Effects (FX)			✓			94
Effects (FX) Long	✓					
Effects (FX) Short	✓					
04 Keyswitch	Flute	Flute 2	Piccolo	Alto Fl	Bass Fl	94
Keyswitch Sus Short	C0–C#1	C0–C1	C0–C1	C0–F#0	C0–E0	
Keyswitch Runs FX	C0–G0	C0–G0	C0–G0			
05 Legato	Flute	Flute 2	Piccolo	Alto Fl	Bass Fl	97
Legato Slur					✓	97
Legato Slur Auto-Tempo	✓	✓	✓	✓		
Legato Slur Auto-Tempo Full	✓	✓	✓	✓		
Legato Slur Auto-Tempo Full Niente	✓	✓	✓	✓		
Legato Slur Velocity-Speed Full	✓	✓	✓	✓	✓	
Legato Slur Velocity-Speed Full Niente	✓	✓	✓	✓		
Legato Slur Velocity-Speed	✓	✓	✓	✓		
Legato Slur Accent	✓	✓	✓	✓	✓	
Legato Slur Accent Full	✓	✓	✓	✓		
Legato Slur Accent Full Niente	✓	✓	✓	✓		
Legato Slur Runs	✓	✓	✓			98
Legato Slur Staccato Runs	✓	✓				

INSTRUMENT OVERVIEW: CLARINETS					Page
01 Long	Clarinet	E♭ Clar	Bass Clar	Cbs Clar	90
Sus Non-Vibrato	✓	✓	✓	✓	91
Sus Expressive	✓		✓		
Sus Accent	✓	✓	✓	✓	
Legato Repetitions RRx4	✓		✓		91
02 Short	Clarinet	E♭ Clar	Bass Clar	Cbs Clar	92
Marcato Short Double Tongue RRx4	✓		✓		92
Staccato RRx5			✓		92
Staccato Double Tongue RRx5				✓	
Staccato Double Tongue RRx9	✓	✓			

continued

INSTRUMENT OVERVIEW: CLARINETS					Page
Staccatissimo Double Tongue RRx5			✓		
Staccatissimo Double Tongue RRx9	✓				
Shorts MOD SPEED	✓		✓		92
03 Effects	Clarinet	E♭ Clar	Bass Clar	Cbs Clar	93
Run Up Octave Chromatic	✓				93
Run Down Octave Chromatic	✓				
Run Up Major Scale	✓				
Run Down Major Scale	✓				
Run Up Minor Scale	✓				
Run Down Minor Scale	✓				
Run Up Whole Tone Scale	✓				
Run Down Whole Tone Scale	✓				
Trill HT	✓		✓		93
Trill WT	✓		✓		
Repetitions Slow	✓				94
Effects (FX) Long	✓		✓		94
Effects (FX) Short	✓				
04 Keyswitch	Clarinet	E♭ Clar	Bass Clar	Cbs Clar	94
Keyswitch Sus Short	C0–A#0		C0–A0		
Keyswitch Runs FX	C0–G0				
05 Legato	Clarinet	E♭ Clar	Bass Clar	Cbs Clar	97
Legato Slur Auto-Tempo	✓	✓	✓	✓	
Legato Slur Velocity-Speed	✓	✓	✓	✓	
Legato Slur Accent	✓	✓	✓	✓	
Legato Slur Runs	✓		✓		98
Legato Slur Staccato Runs	✓		✓		

INSTRUMENT OVERVIEW: DOUBLE REEDS					Page
01 Long	Oboe	Eng Hrn	Bassoon	Cbassoon	90
Sus Vibrato	✓	✓	✓	✓	91
Sus Non-Vibrato	✓	✓	✓	✓	
Sus Expressive	✓	✓	✓	✓	
Sus NV VB	✓	✓	✓	✓	
Sus NV VB Full	✓	✓	✓	✓	
Sus NV VB Full Niente	✓	✓	✓	✓	
Sus Accent	✓	✓	✓	✓	
Legato Repetitions RRx4	✓	✓	✓	✓	91
02 Short	Oboe	Eng Hrn	Bassoon	Cbassoon	92
Marcato Short Double Tongue RRx4	✓	✓	✓	✓	92
Staccato Double Tongue RRx5				✓	92
Staccato Double Tongue RRx9	✓	✓	✓		
Staccatissimo Double Tongue RRx5				✓	
Staccatissimo Double Tongue RRx9	✓	✓	✓		
Shorts MOD SPEED	✓	✓	✓	✓	92
03 Effects	Oboe	Eng Hrn	Bassoon	Cbassoon	93
Run Up Octave Chromatic	✓		✓		93
Run Down Octave Chromatic	✓		✓		
Run Up Major Scale	✓		✓		
Run Down Major Scale	✓		✓		
Run Up Minor Scale	✓		✓		
Run Down Minor Scale	✓		✓		
Run Up Whole Tone Scale	✓		✓		
Run Down Whole Tone Scale	✓		✓		
Trill HT	✓	✓	✓		93
Trill WT	✓	✓	✓		
Repetitions Medium	✓		✓		94
Repetitions Slow	✓		✓		
04 Keyswitch	Oboe	Eng Hrn	Bassoon	Cbassoon	94
Keyswitch Sus Short	C0–A#0	C0–A#0	C0–G#0	C3–G#3	
Keyswitch Runs FX	C0–G0		C0–G0		

continued

INSTRUMENT OVERVIEW: DOUBLE REEDS					Page
05 Legato	Oboe	Eng Hrn	Bassoon	Cbassoon	97
Legato Slur				✓	98
Legato Slur Auto-Tempo	✓	✓	✓	✓	
Legato Slur Auto-Tempo Full	✓	✓	✓	✓	
Legato Slur Auto-Tempo Full Niente	✓	✓	✓	✓	
Legato Slur Velocity-Speed	✓	✓	✓	✓	
Legato Slur Velocity-Speed Full	✓	✓	✓	✓	
Legato Slur Velocity-Speed Full Niente	✓	✓	✓	✓	
Legato Slur Accent	✓	✓	✓	✓	
Legato Slur Accent Full	✓	✓	✓	✓	
Legato Slur Accent Full Niente	✓	✓	✓	✓	
Legato Slur Runs	✓			✓	98
Legato Staccato Runs	✓	✓	✓	✓	

Instrument Types

The following paragraphs explain many of the various types of instruments (.ewi files) available in Hollywood Orchestral Woodwinds. The principles described here apply across all instruments where the described articulation is available.

01 Long

The instrument types in this folder include various types of:

- Sustain, abbreviated “Sus”
- Legato Repetitions, abbreviated “LegRep”

Sustain

All Sustain instruments continue to play audibly as long as the note is held. They are a good choice for slow-moving lines that need a consistent sound no matter how long the notes are held.

The dynamics of the Sustain patches are controlled with the Mod Wheel. The further you push it up, the louder the sound. By using the Mod Wheel instead of Velocity to control loudness, you can create a realistic crescendo and/or decrescendo during a held note.

When you play any note in one of the patches, all 3 dynamic layers start to play simultaneously, but only one or two of them are audible at any one time, as controlled by the Mod Wheel. This approach increases the voice count in PLAY and makes more demands on the computer processor, but produces much more realistic dynamics.

There are several variants for the Sustain patches, described below:

Vibrato, Non-Vibrato, "NV VB"

You have a choice between using vibrato (a subtle wavering of the pitch that provides extra warmth) or not. If you intend to use one or the other approach consistently, then the Vibrato or Non-Vibrato patch provides the right sound. If you need the ability to control the amount of vibrato in a line (even changing mid-note), the various "NV VB" patches let you use the Mod Wheel to control how much vibrato is heard. Note that the "NV VB" patches with "Full" in the name work a little differently from those that do not have "Full" in the name.

Without "Full": When the Mod Wheel is in about the bottom half of its range, the sound moves from ***pp*** up to ***mf*** and always with no vibrato. Then at about the midpoint of the range, while the volume continues to increase toward ***f***, the sound uses more and more vibrato. That is, vibrato is heard only in the louder half of the dynamic range.

With "Full": In these patches, the vibrato and loudness are controlled independently. Vibrato is still controlled with the Mod Wheel (CC 1), but the loudness is controlled with the MIDI "Expression" controller (CC 11). Pushing the Mod Wheel to a higher value gives you more vibrato. Pushing the CC 11 controller to a higher value gives you a higher volume.

Niente

Some of the "Full" patches include "Ni" in the name, which is short for the Italian phrase "al niente," meaning "to nothing," indicating that the loudness can be reduced to very, very soft.

Sus Expressive

This patch adds an expressive feel to the notes with a slower attack and a gently increasing vibrato.

Sus Accent

In this patch, each note starts with a separately controlled attack, giving each note the sound of being accented. Like other Sus patches, The Mod Wheel controls the loudness of the sustain, but here the Velocity of the MIDI note controls the strength of the attack.

Legato Repetitions

This patch provides retongued repetitions to create the sound of repeated notes within a sustained phrase. For each note, this patch plays both a sustained non-vibrato note and a short note to act as the retongued attack. It is this start of each note that participates in the 4-way round robin (as indicated by "RRx4" in the name). This patch is designed for repeated notes within an otherwise legato phrase, but you may find other circumstances in which it works in your compositions

02 Short

Articulations included in the 02 Short folder include varieties of:

- Staccato
- Staccatissimo
- Marcato

Important Note on Reverberation and Short Articulations

Be aware that, in general, short articulations do not include release trails. But there is some reverberation at the end of the main sample once the instrument stops playing. This approach allows you to play fast passages without building up a lot of overlapping reverberations. Therefore, when playing a phrase of staccato notes, be sure to hold the MIDI notes long enough to hear the natural reverberation of the recording studio in the short rests between the sounding notes (if your tempo allows it).

Even when there are no rests between short notes, be sure to hold the last note of the phrase long enough to let the reverberation of that last note ring.

Staccato and Staccatissimo

The term "staccato" refers to any note of short duration that is not connected legato to the following note. Staccatissimo is like Staccato, but with notes of even shorter duration. In the names of the articulation files, Staccatissimo is abbreviated "StacSs."

Double Tongue

Some short articulation files indicate that they use the technique known as double tonguing. This lets the instrumentalist achieve a faster sequence of notes by stopping the airflow alternately with the tip of the tongue and with the back of the tongue against the palate. The tongue moves in the same pattern as when saying "tiki tiki tiki."

Marcato

When used in a score, the term "marcato" indicates that every note is to be accented. This articulation contains notes of a short duration that begin with a strong accent.

These are Round Robin instruments with 4 sets of samples in rotation.

Shorts MOD SPEED

Each one of these instruments allows you to use the Mod Wheel to move continuously among several short articulations. As you push the Mod Wheel up from the bottom, the articulations you hear proceed from the shortest (staccatissimo) to longer to marcato. Near the top of the Mod Wheel's range, the generated notes play a short attack and a sustained note. Use this patch when you need a variety of note lengths, most of which are short.

Each of the four included articulations sits in about a quarter of the Mod Wheel's 128-value range. As you move from 0 to 127, you pass through:

- Staccatissimo
- Staccato
- Marcato Short
- Marcato Short played simultaneously with a Sustain

03 Effects

The instruments in this folder fall into several types:

- runs on several different scales
- trills
- flutter tongue
- repetitions
- special effects (FX)

Runs

These patches are scales recorded to a single MIDI note. Four different scales are included:

- Chromatic
- Major
- Minor
- Whole Tone

All of these runs cover a full octave and are available in two directions: upward and downward. Note that the MIDI note always specified the lowest note in the scale, whether going up or down. The speed of the scale is fixed, so if you need a scale at a specific tempo, it's best to use one of the other patches and play the scale note by note.

Trills

A trill is the rapid alternation between two notes either a half tone or a whole tone apart. Any file with "HT" in the name contains a half-tone trill. And with "WT" in the name, it contains a whole-tone trill.

This instrument responds to the Mod Wheel to control the volume. It does not respond to MIDI Velocity. When you play a MIDI note, the samples for all three dynamic layers start playing, with the Mod Wheel controlling whether, and how much of, each layer is audible. This approach allows you to increase or decrease the loudness during the trill.

Flutter Tongue

When a flautist flutters his tongue while playing, similar to the rolled R in some languages, it produces a characteristic sound captured in the several Flutter Tongue files in this library.

The Mod Wheel affects the loudness, allowing a continuous crescendo or decrescendo mid-note. Velocity does not control loudness for these instruments.

Repetitions

Each MIDI note in these patches is the sound of the instrument playing a single note repeatedly. If you need fewer repetitions than available in the whole sample, then end the MIDI note after the number of repetitions you're looking for. In some cases, the repeated notes are available at different speeds: slow, medium, and fast. The advantage of using one of these patches over just repeated MIDI notes, is that the transitions between repetitions are exactly correct for the sampled instrument.

Starting with update 1.0.1 of the instruments, repetitions synch with the host tempo.

Effects (FX)

A few 03 Effects folders contain patches that feature recordings of the instrument playing sounds beyond the usual diatonic notes, including squawks, breathy sounds, glissandi, and the like. It's best just to listen to the range of sounds and see whether you can use any of them. In some cases, these effects are divided into separate files for sounds or phrases of long and short duration.

Sing

The Flute contains an articulation called Sing RR. This is the sound of the flautist vocalizing into the flute while also blowing across the mouthpiece. This creates a sound which is a mixture of the human voice and the usual flute timbre.

04 Keyswitch

If you are not familiar with how to use a keyswitch instrument in PLAY, see more information in the main PLAY System manual.

The three tables below spell out which articulation is assigned to each keyswitch note. If no articulation is available on a specific note, using that keyswitch note results in no sound being produced until a working keyswitch note is played.

There are two types of keyswitches in the Hollywood Orchestral Woodwinds library, though some instruments may have only one, or even none, available. Those with "Sus_Short" in the name provide a selection of the most commonly used articulations from the 01 Long, 02 Short, and 03 Effects folders. Each instrument has different useful articulations (for example, the contrabassoon is rarely called on to play trills); therefore, the Sus_Short keyswitch files for different instruments feature different articulations. See the tables below for specifics.

The range at the top of each column, such as "C0–E0," specifies the range of pitches used as keyswitch notes.

KEYSWITCHES: FLUTES

	Flute	Flute 2	Piccolo	Alto Fl	Bass Fl
KS Sustain Short	**C0–C#1**	**C0–C1**	**C0–C1**	**C0–F#0**	**C0–E0**
Sustain Non-Vibrato	C0	C0	C0	C0	
Sustain Vibrato	C#0	C#0	C#0	C#0	C0
Sustain Expressive Vibrato	D0	D0		D0	C#0
Sus NV VB				D#0	
Sustain Accent			D0	E0	D0
Legato Repetitions RRx4	D#0	D#0	D#0	F0	D#0
Staccato RRx4				F#0	
Staccatissimo Double Tongue	E0	E0	E0		
Staccato Double Tongue	F0	F0	F0		E0
Marcato Short Double Tongue	F#0	F#0			
Sing RR	G0				
Flutter Tongue	G#0	G0	F#0		
Trill HT	A0	G#0	G0		
Trill WT	A#0	A0	G#0		
Repetitions Fast	B0	A#0	A0		
Repetitions Medium	C1	B0	A#0		
Repetitions Slow	C#1	C1	B0		
Effects (FX)			C1		
	Flute	**Flute 2**	**Piccolo**	**Alto Fl**	**Bass Fl**
KS Runs FX	**C0–G0**	**C0–G0**	**C0–G0**		
Run Down Octave Chromatic	C0	C0	C0		
Run Up Octave Chromatic	C#0	C#0	C#0		
Run Down Major Scale	D0	D0	D0		
Run Up Major Scale	D#0	D#0	D#0		
Run Down Minor Scale	E0	E0	E0		
Run Up Minor Scale	F0	F0	F0		
Run Down Whole Tone Scale	F#0	F#0	F#0		
Run Up Whole Tone Scale	G0	G0	G0		

KEYSWITCHES: CLARINETS

	Clarinet	E♭ Clar	Bass Clar	Cbs Clar
KS Sustain Short	**C0–A#0**		**C0–A0**	
Sustain Non-Vibrato	C0		C0	
Sustain Expressive	C#0		C#0	
Sustain Accent	D0		D0	
Legato Repetitions RRx4	D#0		D#0	
Staccatissimo Double Tongue	E0		E0	
Staccato Double Tongue	F0		F0	
Marcato Short Double Tongue	F#0		F#0	
Trill HT	G0		G0	
Trill WT	G#0		G#0	
Effects (FX) Long	A0		A0	
Effects (FX) Short	A#0			
	Clarinet	**E♭ Clar**	**Bass Clar**	**Cbs Clar**
KS Runs FX	**C0–G0**			
Run Down Octave Chromatic	C0			
Run Up Octave Chromatic	C#0			
Run Down Major Scale	D0			
Run Up Major Scale	D#0			
Run Down Minor Scale	E0			
Run Up Minor Scale	F0			
Run Down Whole Tone Scale	F#0			
Run Up Whole Tone Scale	G0			

KEYSWITCHES: DOUBLE REEDS				
	Oboe	**Eng Hrn**	**Bassoon**	**Cbassoon**
KS Sustain Short	**C0–A#0**	**C0–A#0**	**C0–G#0**	**C3–G#3**
Sustain Non-Vibrato	C0	C0	C0	C3
Sustain Vibrato	C#0	C#0	C#0	C#3
Sustain Expressive Vibrato	D0	D0	D0	D3
Sustain NV VB		D#0		D#3
Sustain Accent		E0		E3
Legato Repetitions RRx4	D#0	F0	D#0	F3
Staccatissimo Double Tongue	E0	F#0	E0	F#3
Staccato Double Tongue	F0	G0	F0	G3
Marcato Short Double Tongue	F#0	G#0	F#0	G#3
Trill HT	G0	A0	G0	
Trill WT	G#0	A#0	G#0	
Repetitions Medium	A0			
Repetitions Slow	A#0			
	Oboe	**Eng Hrn**	**Bassoon**	**Cbassoon**
KS Runs FX	**C0–G0**		**C0–G0**	
Run Down Octave Chromatic	C0		C0	
Run Up Octave Chromatic	C#0		C#0	
Run Down Major Scale	D0		D0	
Run Up Major Scale	D#0		D#0	
Run Down Minor Scale	E0		E0	
Run Up Minor Scale	F0		F0	
Run Down Whole Tone Scale	F#0		F#0	
Run Up Whole Tone Scale	G0		G0	

Because the Contrabassoon extends down below C1, the keyswitch notes are situated at a higher octave, starting at C3. Even when you do not have these tables open, you can always use the blue notes in PLAY's on-screen keyboard—or the names in the Articulations window—to find the correct octave.

05 Legato

For most woodwind instruments, a legato sound is created with a slur that joins the two consecutive notes without a fresh attack at the start of the later note. This slur occurs only when there is no significant gap between the end of the earlier note and the start of the later note. In addition, the two notes have to be at most an octave apart. Moving from D3 to D4 generates a legato slur; moving from D3 to D#4 does not.

Legato Slur

The basic slur legato patch creates a slur between notes as long as there is no delay between the end of the first note and the start of the following note. Plus, the interval between the two notes has to be no more than an octave.

Because these patches always start playing 3 sustain samples (in addition to cross-fade between them based on the Mod Wheel) and also use separate samples to provide the slurs, be aware that the patches use more computer resources than most of the simpler instruments.

Some Legato Slur articulations include the text "Auto-Tempo" or "Velocity-Speed" in the name. These names refer to the two different ways mono-legato scripts can work. Auto-Tempo adjusts interval start times and envelopes based on how fast notes are played. In contrast, Velocity-Speed adjusts these parameters based on the MIDI Velocity parameter of the notes. Depending on which one you use, either the higher the note's velocity or the faster the speed of the passage, the further the interval start times get pushed in and, therefore, the shorter the envelope attack setting becomes.

Full and Full Niente Patches

Those patches with "Full" in the name include independent control over vibrato and loudness. The higher the value of the Mod Wheel (CC 1), the more vibrato is heard. The higher the value of MIDI Expression (CC 11), the louder the sound of the instrument. (This behavior is similar to what's available with the Sus "Full" patches in the 01 Long folder.)

In the "Full Niente" patches, it's possible to reduce the loudness down to almost silence (the phrase "al niente" in Italian).

Legato Slur Repetitions

This patch is similar to the basic Legato Slur except that it also uses separate samples to handle repeated notes. For example, if in a phrase 3 notes of the same pitch are played consecutively without space between the notes, the second and third occurrences use a retongued version of the note to achieve the correct sound.

Slur Runs

These patches provide a slur legato sound with a lot of portamento that works well in very fast runs. Each note can be held indefinitely, so if you want to, for example, run up to a last note and hold it, you can use this patch for both the run and the held note.

The characteristic sound occurs only when the interval between consecutive notes is either a minor second or a major second. Larger intervals do not create the strong slur.

Dynamics for this instrument are controlled with the Mod Wheel, not Velocity. And, as with the basic Legato Slur patch, this one uses a lot of resources because each note uses 3 voices for the 3 dynamic levels playing concurrently, plus another 3 voices for the samples of the slurs. When playing a fast run, the voice count can easily exceed 40 for only this one patch.

Monophonic Behavior in Legato Instruments

By default, all legato instruments in this library are monophonic. By allowing only one note to play at a time, PLAY makes sure that there is no ambiguity about what two notes should have a legato transition between them.

It is possible to turn off the monophonic behavior with MIDI Control Code 22. When in the top half of its range, 64–127, the controller preserves the default behavior. But whenever CC 22 is in the range 0–63, polyphonic behavior is turned on. You do need to listen to the output carefully to see whether there are unwanted legato slurs between notes in different polyphonic voices. If so, one remedy is to move those two voices to separate MIDI tracks.



7. Hollywood Orchestral Percussion

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Instruments, Articulations, and Keyswitches

The Hollywood Orchestral Percussion library contains a wide variety of instruments typical in an orchestral movie soundtrack—and, of course, it can be used for many other types of music, as well. It mixes well with other virtual instruments from EastWest, so feel free to add in strings, guitars, ethnic instruments, voices, whatever you can imagine. This library and the other libraries in the same EastWest "Hollywood" series are designed to work together particularly well; they include the same variety of microphone positions and other features that help them blend into a unified sound.

For the purpose of the tables in this chapter, the library can be grouped into four sets of instruments based on how the sound is generated. Here are some examples:

- Cymbals
  - › Tam Tams
  - › Cymbal crashes
  - › Cymbal rolls
- Drums
  - › Concert Toms
  - › Field Drums
  - › Snare Drums
  - › Bass Drums
  - › Timpani
- Metals
  - › Crotales
  - › Chimes and Bells
  - › Triangle
  - › Vibraphone
- Woods
  - › Castanets
  - › Celesta
  - › Marimba
  - › Wood Blocks
  - › Xylophone

All these instruments with their various articulations are enumerated in the four tables that follow. You might want to print out the pages containing these tables as a reference.

In addition, there are "Combo Kits" that collect a variety of these sounds into a single .ewi file.

The Tables of the Percussion Instruments

The sounds of each instrument are provided in the form of one or more instrument files (with extension .ewi in the Browser view), sometimes representing separate articulations. Or, within some instrument files you may find several articulations that can be selected in one of several ways:

- through the on-screen UI
- with keyswitch notes
- by moving the Mod Wheel

A Note on Dynamics in Hollywood Orchestral Percussion Instruments

As discussed in multiple places within EastWest manuals, there are several ways you can affect with MIDI parameters how loudly an instrument should play:

- MIDI Velocity
- the Mod Wheel, CC 1
- Volume, CC 7
- Expression, CC 11

In the list above, "CC" refers to MIDI Control Codes. Read the section Volume, Velocity, Expression and the Mod Wheel, starting on page 116, for more information on this topic.

Volume and Expression work on any and all instruments. Volume should be used to set a loudness level relative to other instruments. And Expression should be used to shape the continually changing dynamics, timbre, and expressiveness of each instrument. Neither Volume nor Expression change the timbre of the instruments, only the loudness.

Hollywood Orchestral Percussion instruments use either MIDI Velocity or the Mod Wheel to affect the sound of the instruments when they are played louder or softer. As a general rule, in this library:

- Unless it is specifically stated otherwise, Velocity is used.
- The Mod Wheel is used on rolls where the table of instruments below states that it uses a DXF (Dynamic Cross Fade).

Overview of the Instruments in Hollywood Orchestral Percussion

The following 5 tables, which extend over several pages, list the instrument files available for each category of instruments.

- The left-most column is the name of the instruments.
- The second column lists the lowest playable note (usually C1 or C3).
- Next is the number of playable notes available within that instrument file.
- The fourth column specifies how many distinct samples are included in the Round Robin; a value of 1 means that it is not a Round Robin instrument.
- The last column provides general information. When separate articulations are assigned to separate MIDI notes, the mapping is specified in this column.

As is stated in many places in EastWest manuals, the naming of MIDI notes, such as "C1," can vary with different vendors. EastWest uses the convention that Middle C (MIDI note 60) is called "C3" in all of its documentation. So when you see that the lowest playable note is "C1" that name refers to the C two octaves below Middle C (two ledger lines below the bass staff).

Unless otherwise noted, only the white keys are used for generating sounds. For example, if an instrument uses 3 MIDI notes starting on C3, the playable notes are C3, D3, and E3. The notes C#3, D#3, and other black keys are skipped. The only exceptions to this rule (in this library) are the pitched instruments, such as the Xylophone or the Orchestral Chimes, where a complete chromatic scale is provided.

Some descriptions of an articulation use the abbreviation DXF, which stands for Dynamic Cross Fade." In a DXF, the Mod Wheel (MIDI Control Code 1) affects the loudness. Push the wheel up to increase the loudness, and down to make the sound softer. That approach happens in rolls, where you may want to adjust the loudness in the middle of the note's duration.

Where a round robin instrument includes both hits and rolls among its articulations, it is most likely that only the hits are represented by multiple samples in the round robin pattern. The rolls are unlikely to participate in the round robin feature.

Tables of Instruments

These five tables provide details about the instruments you find in the five top-level folders of .ewi files in the PLAY Browser. It is not always possible to describe in text the differences between the sounds of separate articulations, so use your ear to determine which ones to use for your own requirements.

Table of Combo Kits

These two kits take a sampling of the individual instruments listed later in this manual, and combine multiple physical instruments into a single instrument file. This approach allows the user to place a whole variety of percussion instruments in a single MIDI track and select which ones to sound based on the notes played.

The layout of this first table is different than the others: Under the name of each kit, you can see the indented names of the included instruments, with each instrument's range of articulations to the right.

COMBO KITS

Basic Kit 1				
Timpani Felt Long	C0	18	2	C0–E1; a chromatic scale of long hits, alternating LH and RH
32" Bass Drum	F1	4	2	F1=short hit; G1=long hit; A1=roll; B1=cresc (1 sec)
40" Bass Drum	C2	4	2	C2=short hit; D2=long hit; E2=roll; F2=cresc (1 sec)
6x14 Brass Calf Head Ludwig Snare Drum	G2	6	2	G2–A2=center hit LH, RH; B2=flam; C3=rim shot; D3=bounce; E3=roll
5x14 Brass Ludwig Snare Drum	F3	6	2	F3–G3=center hit LH, RH; A3=flam; B3=rim shot; C4=bounce; D4=roll
12x15 Slingerland Field Drum	E4	6	2	E4–F4=center hit LH, RH; G4=flam; A4=rim shot; B4=bounce; C5=roll
15" Old Italian Crash Cymbal	D5	2	2	D5=long hit; E5=short hit
19" Sabian Crash Cymbal	F5	2	2	F5=long hit; G5=short hit
20" Zildian Crash Cymbal	A5	2	2	A5=long hit; B5=short hit
38" Large Tam Tam	C6	3	2	C6=long hit; D6=short hit; E6=cresc
18" Zildian Sus Cymbal Cres	F6	3	2	F6–A6=crescendo sustain
Basic Kit 2				
36" Ludwig Bass Drum Felt	C0	4	2	C0=short hit; D0=long hit; E0=roll; F0=cresc (1 sec)
6x14 Pearl Philharmonic Snare Drum	G0	6	2	G0–A0=center hit LH, RH; B0=flam; C1=rim shot; D1=bounce; E1=roll
10x14 Black Swamp Field Drum	F1	6	2	F1–G1=center hit LH, RH; A1=flam; B1=rim shot; C2=bounce; D2=roll
Black Swamp Tambourine	E2	3	2	E2–F2=hits; G2=rolls
16" Sabian Crash Cymbal	A2	2	2	A2=long crash; B2=short crash
19" Zildian A Crash Cymbal	C3	2	2	C3=long crash; D3=short crash
22" Zillidian Crash Cymbal	E3	2	2	E3=long crash; F3=short crash
20" Zildian Sus Cymbal Cres	G3	3	2	G3–B3=crescendo sustain (G3=fastest to B3=slowest)
32" Medium Tam Tam	C4	3	2	C4=long; D4=short; E4= crescendo
Puilli Sticks	F4	2	2	F4–G4=hits
Shakers	A4	2	2	A4–B4=short shakes

continued

COMBO KITS				
Castanets	C5	4	2	C5–D5=Castanet LH, RH; E5=Castanet flam; F5=Castanet roll
Anvils	G5	6	1	G5=anvil; A5=Carol Sound anvil; B5=Carol Sound anvil mute; C6=railroad track; D6–E6=railroad track mute
Triangle	F6	3	2	F6–G6=triangle hits; A6=triangle roll

Table of Cymbals

CYMBALS				
Cymbal Pairs folder				
12in Old Zildjian K Crash	C3	3	3	C3=long; D3=short; E3=even shorter
14in Old Zildjian K Crash	C3	3	3	C3=long; D3=short; E3=even shorter
15in Old Italian Crash	C3	3	3	C3=long; D3=short; E3=even shorter
16in Sabian Crash	C3	3	3	C3=long; D3=short; E3=even shorter
17in Istanbul Crash	C3	3	3	C3=long; D3=short; E3=even shorter
19in Sabian Crash	C3	3	3	C3=long; D3=short; E3=even shorter
19in Zildjian A Crash	C3	3	3	C3=long; D3=short; E3=even shorter
19in Zildjian Crash	C3	3	3	C3=long; D3=short; E3=even shorter
20in Constantinople Crash	C3	3	3	C3=long; D3=short; E3=even shorter
20in Zildjian Crash	C3	3	3	C3=long; D3=short; E3=even shorter
22in Zildjian K Crash	C3	3	3	C3=long; D3=short; E3=even shorter
28in Small Tam Tam	C1	5	2	C1=long; D1=short; E1= fastest crescendo; F1=medium fast crescendo; G1=slowest crescendo
32in Med Tam Tam	C1	5	2	C1=long; D1=short; E1= fastest crescendo; F1=medium fast crescendo; G1=slowest crescendo
38in Large Tam Tam	C1	21	2	C1=long; D1=short; E1–G1=crescendo (E1=fastest to G1=slowest); and some FX patches: A1–E3=bowed; F3–B3=scraped
Sus Cymbals folder				
14in Paiste Sus Cymbal Cresc	C3	8	2	C3–F3=crescendo sustain; G3–B3=crescendo stopped
18in Wuhan Sus Cymbal Cresc	C3	8	2	C3–F3=crescendo sustain; G3–B3=crescendo stopped
18in Zildjian Sus Cymbal Cresc	C3	8	2	C3–F3=crescendo sustain; G3–B3=crescendo stopped

continued

CYMBALS				
20in Zildjian w Cutouts Sus Cymbal Cresc	C3	8	2	C3–F3=crescendo sustain (C3=fastest to F3=slowest); G3–B3= crescendo stopped (G3=fastest to B3=slowest)
22in Dream Sus Cymbal Cresc	C3	8	2	C3–F3=crescendo sustain (C3=fastest to F3=slowest); G3–B3= crescendo stopped (G3=fastest to B3=slowest)
Large Sizzle Sus Cymbal Cresc	C3	8	2	C3–F3=cresc sus; G3–C4=cresc stopped

Table of Drums

DRUMS				
10in x 14in Black Swamp Field Drum	C1	11	4	C1–D1=center hit LH, RH; E1–F1=edge hit LH, RH; G1=flam; A1=rim shot; B1=bounce; C2=roll; D2=roll with DXF; E2–F2=roll cresc (2 versions)
10in x 14in Ludwig Field Drum	C1	12	4	C1–D1=center hit LH, RH; E1–F1=edge hit LH, RH; G1=flam; A1=rim shot; B1=bounce; C2=roll; D2=roll with DXF; E2–G2=roll cresc (3 versions)
12in Lefima Tambourine	C1	7	8	C1=hits; D1=slow roll; E1=slow rolls with DXF; F1=tight rolls; G1=tight rolls with DXF; A1=cresc long; B1=cresc short
12in x 15in Slingerland Field Drum	C1	11	4	C1–D1=center hit LH, RH; E1–F1=edge hit LH, RH; G1=flam; A1=rim shot; B1=bounce; C2=roll; D2=roll with DXF; E2–F2=roll cresc (2 versions)
16in x 16in Antique Field Drum	C1	12	4	C1–D1=center hit LH, RH; E1–F1=edge hit LH, RH; G1=flam; A1=rim shot; B1=bounce; C2=roll; D2=roll with DXF; E2–G2=roll cresc (3 versions)
32in Gretsch Bass Drum	C1	20	4	C1=felt short; D1=felt long; E1=felt roll; F1=felt roll with DXF; G1–E2=felt cresc (2 versions at 1 sec, then 2 at 2 sec, and 2 at 3 sec). C3–E4 are the same pattern, but with hard mallet.
36in Ludwig Bass Drum	C1	20	4	C1=felt short; D1=felt long; E1=felt roll; F1=felt roll with DXF; G1–E2=felt cresc (2 versions at 1 sec, then 2 at 2 sec, and 2 at 3 sec). C3–E4 are the same pattern, but with hard mallet.
40in Ludwig Bass Drum	C1	20	4	C1=felt short; D1=felt long; E1=felt roll; F1=felt roll with DXF; G1–E2=felt cresc (2 versions at 1 sec, then 2 at 2 sec, and 2 at 3 sec). C3–E4 are the same pattern, but with hard mallet.

continued

DRUMS

5in x 14in Brass Ludwig Snare	C1	12	4	C1–D1=center hit LH, RH; E1–F1=edge hit LH, RH; G1=flam; A1=rim shot; B1=bounce; C2=roll; D2=roll with DXF; E2–G2=roll cresc (3 versions)
5in x 14in Mahogany Ludwig Snare	C1	11	4	C1–D1=center hit LH, RH; E1–F1=edge hit LH, RH; G1=flam; A1=rim shot; B1=bounce; C2=roll; D2=roll with DXF; E2–F2=roll cresc (2 versions)
5in x 14in Pearl Philharmonic Snare	C1	11	4	C1–D1=center hit LH, RH; E1–F1=edge hit LH, RH; G1=flam; A1=rim shot; B1=bounce; C2=roll; D2=roll with DXF; E2–F2=roll cresc (2 versions)
6in x 14in Brass Calf Head Ludwig Snare	C1	11	4	C1–D1=center hit LH, RH; E1–F1=edge hit LH, RH; G1=flam; A1=rim shot; B1=bounce; C2=roll; D2=roll with DXF; E2–F2=roll cresc (2 versions)
6in x 14in Pearl Philharmonic Snare	C1	11	4	C1–D1=center hit LH, RH; E1–F1=edge hit LH, RH; G1=flam; A1=rim shot; B1=bounce; C2=roll; D2=roll with DXF; E2–F2=roll cresc (2 versions)
8in Concert Tom	C1	3	4	C1=LH; D1=RH; E1=flam
Black Swamp Tambourine	C1	7	8	C1=hits; D1=slow roll; E1=slow roll with DXF; F1=tight roll; G1=tight roll with DXF; A1=cresc; B1=roll then hit
Concert Toms Combo	C1	24	4	2 different floor toms: C1=LH; D1=RH; E1=flam is first floor tom, and F1=LH; G1=RH; A1=flam is another floor tom. Then 6 different concert toms in the same 3-note pattern starting at C2, F2, C3, F3, C4, F4.
Ludwig Headless Tambourine	C1	2	4	C1–D1=hits; E1=slow roll; F1=slow roll with DXF
Marching Drum Ensemble	C1	4	2	C1–F1=hits
Taos Drum with Mallet	C1	2	4	C1–D1=2 hits with different mallets
Timpani folder				
Timpani Felt Cresc	C1	66	1	3 separate 22-note chromatic scales played with a felt mallet, each scale (C1–A2, C3–A4, C5–A6) has a different speed for the crescendo
Timpani Felt Flam	C1	22	2	scale of 22 chromatic notes played as a flam with a felt mallet
Timpani Felt KS				*See note below this table.*
Timpani Felt Long	C1	44	2	scale of 22 long-held hits played with a felt mallet: C1–A2=LH; C3–A4=RH
Timpani Felt Rolls	C1	22	1	scale of 22 rolls played with felt mallets; loudness is controlled with DXF *(i.e.*, with the Mod Wheel)

continued

DRUMS				
Timpani Felt Short	C1	44	2	scale of 22 hits played with a felt mallet and muted quickly: C1–A2=LH; C3–A4=RH
Timpani Felt Sus Pedal	C1	44	2	C1–H2=LH; C3–A4=RH with felt mallet; pedal CC64 changes between short (when off) and long (when on)
Timpani Hard Cresc	C1	66	1	3 separate 22-note chromatic scales played with a hard mallet, each scale (C1–A2, C3–A4, C5–A6) has a different speed for the crescendo
Timpani Hard Flam	C1	22	2	scale of 22 chromatic notes played as a flam with a hard mallet
Timpani Hard KS				*See note below this table.*
Timpani Hard Long	C1	44	2	scale of 22 long-held hits played with a hard mallet: C1–A2=LH; C3–A4=RH
Timpani Hard Rolls	C1	22	1	scale of 22 rolls played with hard mallets; loudness is controlled with DXF *(i.e.*, with the Mod Wheel)
Timpani Hard Short	C1	44	2	scale of 22 hits played with a hard mallet and muted quickly: C1–A2=LH; C3–A4=RH
Timpani Hard Sus Pedal	C1	44	2	C1–H2=LH; C3–A4=RH with hard mallet; pedal CC64 changes between short (when off) and long (when on)

A Note on the 2 Keywsitches for the Timpani

Each keyswitch for the instrument provides access to 5 different articulations:

- Long Hit: C0
- Short Hit: C#0
- Flam: D0
- Roll: D#0
- Crescendo: E0

If you are unfamiliar with the way keyswitch instruments work, read about the topic in the main PLAY System manual.

Note that the information in the above table for each of the 5 articulations also applies when that articulation is selected in the keyswitch instrument. That rule applies to the number of playable notes, the number of round robin samples, and the text in the right-most column. If you plan to use only one timpani articulation at a time, then this instrument allows you to easily include all the articulations in a single MIDI channel. (And if you don't plan to use all 5 in your piece, you can unload the samples using the Articulations control in the Player view for any you won't play.)

Table of Metals

METALS				
Brake Drum and Anvils Hits	A-1	47	1	A-1–D0=brake drum; E0–D1= brake drum mute; G1–D2=anvil; E2–C3=anvil mute; E3–F4=Carol Sound anvil; G4–C5=Carol Sound anvil mute; F5–D6=railroad track; E6–C7=railroad track mute
Crotales Hard	C3	25	1	C3–C5=scale of 2 chromatic octaves
Crotales Soft	C3	25	1	C3–C5=scale of 2 chromatic octaves
Finger Cymbals	C1	4	4	C1–F1
Glockenspiel	G3	30	1	G3–C6=chromatic scale of 2½ octaves; release trails are include
Orchestral Chimes	C3	18	1	C3–F4=chromatic scale of 1½ octaves; release trails are included
Sleigh Bells	C1	3	4	C1=lower pitched sleigh bell; D1=higher pitched sleigh bell; E1=both played together
Spectrasound Mark Tree 1 Dbl Length	C1	21	1	each MIDI note is a different glissando across the bar chimes
Spectrasound Mark Tree 2	C1	18	1	each MIDI note is a different glissando across the bar chimes
Triangles	C1	18	2	6 different triangles, each set using C, D, and E in a different octave; C and D are each a single hit; E is a roll
Vibraphone	F2	37	2	F2–F5=chromatic scale of 3 octaves; *see note below this table.*

Note on the Vibraphone

The sound of the Vibraphone changes to reflect the way the user plays it. Hitting notes when the Sustain pedal (MIDI Control Code 64) is off plays back short notes. Engage the Sustain pedal and the notes ring longer. There is also a script running in PLAY which affects how notes sound when a note is struck twice within a short time span; because the bar is already vibrating at the time of the second strike, a somewhat different sound is generated by the second hit, as on a real Vibraphone. All these features provide for a very realistic reproduction of the Vibraphone sound.

Table of Woods

WOODS				
Castanets	C1	8	6	C1–D1=Castanet 1 LH, RH; E1=Castanet 1 flam; F1=Castanet 1 roll; C2–D2=Castanet 2 LH, RH; E2=Castanet 2 flam; F2=Castanet 2 roll
Celesta FX	C2	4	1	C2–F2=4 different glissando effects
Celesta Sus	C2	49	1	C2–C6=chromatic scale of 4 octaves
Celesta	C3	49	1	C3–C7=chromatic scale of 4 octaves
Claves	C1	3	4	C1=lowest pitch; D1=medium; E1=highest
Mahler Hammer	C1	5	1	C1–G1=5 different hits
Marimba Rolls	A1	52		A1–C6=chromatic scale of rolls; loudness is controlled with DXF *(i.e.*, with the Mod Wheel)
Marimba	A1	52	2	A1–C6=chromatic scale
Puilli Sticks	C1	4	4	C1–D1=lower pitched hits; E1–F1=higher pitched hits
Ratchet	C1	9	1	C1–G1=short ratchet sounds (under 1 second); C2–F2=ratchet rolls (several seconds long)
Shakers	C0	21	8	7 different shakers, each set using C, D, and E in a different octave; C and D are each a single shake; E is a roll
Slapsticks	C1	2	4	C1=lower pitched slap; D1=higher pitched slap
Temple Blocks	C1	9	4	3 different temple blocks, each set using C, D, and E in a different octave; C=hit; D=flam; E=roll
Wood Blocks Piccolo	C1	15	4	3 different high pitched wood blocks, each set using C–G in a different octave; C=hit (with RRx4); D=LH hit; E=RH hit; F=flam (with RRx4); G=roll
Wood Blocks	C1	30	4	6 different wood blocks, each set using C–G in a different octave; C=hit (with RRx4); D=LH hit; E=RH hit; F=flam (with RRx4); G=roll
Xylophone DXF	F2	44	2	F2–C6=chromatic scale, loudness is controlled with DXF (*i.e.*, with the Mod Wheel)
Xylophone Rolls	F2	44	1	F2–C6=chromatic scale of rolls; loudness is controlled with DXF *(i.e.*, with the Mod Wheel)
Xylophone Sus	F2	44	2	F2–C6=chromatic scale



8. Programming Technique in the Hollywood Orchestra

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Programming Technique in the Hollywood Orchestra

This chapter discusses ways to use the Hollywood Orchestra to achieve the traditional sound of instruments in a live orchestra. The information in this chapter applies equally well to all the various EastWest libraries. But note that some information, especially how to achieve legato playing, is more relevant to strings, woodwinds, and brass than to the shorter sounds of much of the percussion section.

Setting Up Templates

The simplest way to work with any large orchestral ensemble is to set up templates once you have gotten to know the sounds and how all the features of PLAY work. You might, for instance, have a comedy template that has a lot of staccato articulations, effects, and crescendos; and/or an epic template that includes a lot of legato patches. Obviously, the more computers you have and/or the more capable the computers, the bigger your templates can be.

Once you have decided what patches will go inside each template and have made sure they will all fit into your available RAM, you should load everything and save the setup for each instance of PLAY to its own .ewi file or, if you have multiple instances of PLAY loaded inside a sequencing program or VST host, it is as simple as saving the sequence or VST host file. This will remember everything inside. If you are using multiple computers, make sure you have created a track in your sequence for every program on every computer.

One last thing to consider when deciding which computer will load which sounds is the amount of work each computer will have to do. Make sure to spread the sounds that you use most onto different computers so one computer doesn't end up carrying a majority of the load.

Remember that if you're running any of the Hollywood Orchestral libraries on more than one computer concurrently, you will need an iLok security key and a license for each computer.

The next stage is crucial and highly subjective. All PLAY libraries responds to three different volume controllers: CC7 (volume), CC11 (expression), and the Mod Wheel (CC1). It is highly recommended you record a CC7 message at the beginning of every track. Spend some time to set the initial volume of every track at a level in natural balance with the rest of the ensemble. This is tricky and will never be perfect, but the more time you spend on the setup the more time you'll save later. If, for example, you're using the Hollywood Orchestra in combination with other EastWest libraries then start by playing

the french horns, some big string ensembles, and your noisiest percussion really loud and at the same time; that will give you a reference of what the loudest passages will be like. Together, they should be at least 3 dB below 0. Then adjust the other instruments to blend with these loudest instruments.

It's recommended you not use MIDI volume (CC7) for any other purpose than this volume setting at the start of each track. Use CC11—or the Mod Wheel when appropriate—to change volume and breathe life into your compositions. This way, CC7 acts as a limiter and keeps everything from getting out of whack. Also, at a later time you can easily change the prominence of an entire track in the mix by adjusting this single CC7 level at the start of the track.

You should save the sequence before moving on. Then go to your matrix editor (or whatever it's called in your sequencer) to set up windows that display CC7, CC11, and CC1 (Mod Wheel) information. You will be editing these last two a lot, so it's a good idea to make these windows easy to access. Label your saved templates and you're ready to go.

Opening Multiple Instances of PLAY

With the PLAY 4 software, it's possible to open more than one instrument in each instance you run in a sequencer or other host—but that's not true when running PLAY in standalone mode. But there are often compelling reasons for spreading instruments across multiple instances. (An "instance" is each open window running PLAY. If, for example, you see exactly 5 PLAY windows inside your sequencer, then you have opened 5 instances.)

The main reason for opening the PLAY software more than once is to be able to take full advantage of the multiple cores available in today's high-end computers. If, for example, your computer's CPU has 4 cores, then each of the 4 cores can be independently running separate instances.

Sequencers typically assign all the processing in any given instance of a plug-in to a single core. So, in one case, if you load all your instruments into a single instance of PLAY, the work of running all those instruments will be restricted to a single core, which is less efficient than spreading the work across all the cores. But, in another case, if you create at least as many instances of PLAY as there are cores in the CPU, the sequencer can assign the instances across all the cores, which most likely means you can open more instruments and play them back without problems.

As a general rule, if you're using more PLAY instruments than you have cores in your computer, then it's best to open at least as many instances as you have cores. Let's say you have a 4-core computer and are planning to open 10 PLAY instruments. You could open 4 instances of PLAY and spread out the patches 3, 3, 2, and 2 per instance. Or you could open 10 instances with one instrument each. Or some arrangement in between. The exact arrangement that's best for you depends on which instruments, how consistently each is heard through the piece, the complexity of the instruments (cross-fades are often using more CPU resources at once than other patches), and other factors. If you come up with an arrangement in which each instance is using about the same number of voices as the other instances, then you're likely using your instances efficiently.

Prepping the MIDI Controllers

It is recommended that you tell PLAY what MIDI Control Codes to look for by sending some Control Code messages after loading the patches and before the first notes are played. When playing live, that can mean tweaking each of the knobs, sliders, and wheels enough to send some data to PLAY. In a sequencer, you can draw a short sloped envelope for each controller before the first notes. This advice applies to the Mod Wheel (CC 1), CC 7, CC 11, and any other Control Codes in your project.

Creating a Soundscape

Whether listening to an orchestra live on a stage or from a stereo recording, we're all used to hearing the sounds of the various instruments coming at us from different directions. In a traditional symphonic layout for an entire orchestra, for example, we expect the violins to be on our left, and the cellos and basses on our right. There are two reasons we might want to continue this practice. The first is to trick the listener's ear into perceiving a recording of a live performance. Even when everyone understands that the piece was created inside a computer, emulating a traditional sound can have its benefits. The second reason is that it's easier for the human ear to hear two similar sounds as separate when it perceives them as arriving from different locations. If the trumpets and the trombones are doubled, or even playing an octave apart, they will stand out from each other better when they seem to be in separate locations in the soundscape that surrounds us.

Panning

For most of the Hollywood Orchestral series, the left-right postion of instruments is different from most other collections of orchestral samples in that the panning of the various instruments to the traditional locations on the sound stage is built in to the stereo samples. The French Horns, for example, are already louder in the left channel. Therefore, one can leave the panning level at "center" for all instruments and they will be correctly placed on the stage in the final mix. Feel free to pan them left or right to achieve whatever effect you want, including spreading a large section across the entire width of the stage to make each one more discernible from the others in the mix.

ADVANCED: The previous paragraph has one exception: the Close microphones. These samples were recorded with the stereo mics directly in front of each instrumental section. The Close mic articulations use the Pan control to move the playback of those samples to the same perceived space as the Main, Mid, and Surround samples. The image at the right shows the 4 microphone-specific Pan controls for one of the Clarinet articulations in Hollywood Orchestral Woodwinds. (The percussion instruments in this library are all centered.) The clarinet player sits on stage to the audience's left. This image shows the way the file opens with no user changes. Note that the Main, Mid, and Surround Pan controls are in the center because those samples were recorded with the stereo mics centered at the center of the studio; no panning adjustment is necessary.



Note that the natural panning within all the samples in the whole EastWest Hollywood series has one subtle feature that reverb plug-ins do not offer: correctly timed reflections from all surfaces. To understand this concept, consider a double bass player who is 5 meters from the wall to our right and 45 meters from the wall to our left. We are seated half way between the walls. The reflection from the right wall, which will be louder in our right ear, travels 30 meters (5 plus 25); the reflection from the left wall, louder in our left ear, travels 70 meters (45 plus 25). That 40-meter difference means that the reflection arrives in our right ear approximately one-ninth of a second sooner than in our left ear, a significant difference. And the other instruments all have their characteristic left/right delay based on where they sit on the stage. It is impossible for a single digital reverb to achieve that level of realism.

Proximity Clues

Panning left or right is not the only way to separate instruments. It is also possible to move them forward and backward. This can be achieved in three ways:

1. Dynamics relative to timbre
2. Delay
3. Presence (Diamond Edition only)

1. When most musical instruments change from being played louder to softer the timbre of the sound changes. Even if you let someone else adjust the volume control on your stereo, you can still tell whether the trumpet you're hearing was played loud or soft based on the instrument's tone; most instruments have a harsher sound when played louder. So, in an orchestral mix, if the trumpets seem to be played loud, but the volume level of that instrument compared to others is softer, then the ear assumes the trumpets are farther away. Adjusting independently the timbre—with velocity parameters and/or a cross fade using the Mod Wheel—and the volume of the sound, you can move individual instruments forward or backward.

2. Because sound travels at a fixed speed of approximately 340 meters per second (1100 feet per second), the ear uses very small time delays to judge relative distance. If two oboes play staccato notes simultaneously, and one is 15 meters (50 feet) further away, the note from the more distant oboe arrives 0.044 seconds later. That's about

one twenty-third of a second, a short time but noticeable to the ear. It's very easy in a sequencer to delay a track by a specific time—either with a Delay plug-in or by shifting the notes in the sequencer's Piano Roll view—and thereby achieve this effect.

3. As discussed in the section covering the 5 mic positions (not available in the Gold Edition), the farther you are from an instrument in a concert hall the more the natural reverberation of the hall contributes to what you notice. (You still hear the echoes from the walls when you're close by; you notice them less because of how loud the instrument is. It's harder to hear the crinkle of a cough drop wrapper standing near a roaring jet engine than in a hushed concert hall, even though the wrapper makes the same sound.) This "presence" of the sound is another distance clue. Mixing in more of the Close samples for an instrument makes it seem closer to the listener.

By combining all three principles, you can achieve quite convincing front/back positioning in your orchestral mix. Giving the ear contradictory signals can confuse it, achieving either a good or bad effect, depending on your intentions.

And then, of course, there's multi-channel surround sound, but that discussion is out of scope in this section.

Volume, Velocity, Expression, and the Mod Wheel

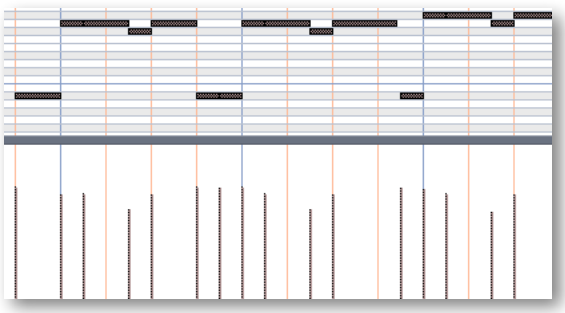
There are at least three ways to make any given sampled instrument sound louder, or at least make the real instrument seem to have been played louder. The skilled MIDI orchestrator uses all three.

Volume (CC7) is simply the increase or decrease in loudness of the audio output. Changing volume is the same as turning the volume knob on your stereo system. The horns played softly can be cranked up; a loud trumpet section can be turned way down.

Volume can be adjusted mid-note; that is, the listener can experience a crescendo or diminuendo for a held note. Even un-natural sounds can be created, such as a quick crescendo for a single hit on a drum.

One limitation of using only Volume is that in a live orchestra, the various instruments are changing their loudness independently, something you cannot do with the stereo's loudness knob.

But, as was mentioned in the section on setting up templates on page 112, it is not recommended that the MIDI volume parameter be used in this way. It is recommended that there be one Volume MIDI event on each track to set the starting loudness for the whole track.



Velocity, a term based on how strongly a keyboard player hits the keys, controls how forcefully the note is played. Adding force changes not only the loudness of the notes, but usually also changes the notes' timbre. With a piano's action, the velocity cannot affect what happens to the sound after the hammers hit and leave the strings, and velocity works the same way here. In the current implementation of MIDI, velocity is usually designated by a number between 0 and 127. Many software sequencers display velocity as vertical bars, something like those at the bottom of the image above.

Most modern sample players, PLAY included, can select different samples for different ranges of velocity. For example, the team creating the samples recorded Middle C on the snare drum patch at ***p***, ***mp***, and ***f***. The team then assigns the ***p*** samples to, say, velocities 0–74, the ***mf*** samples to velocities 75–109, and so on. Because each dynamic level of a snare drum has its own timbre, a note's velocity can affect not only its loudness but also its timbre, from gentle to angry.

Velocity changes are, therefore, a much better way than volume changes to achieve natural-sounding dynamics. The disadvantage of velocity is that it cannot be changed mid-note. Using loudness and velocity together gives the orchestrator more control over all aspects of dynamics.

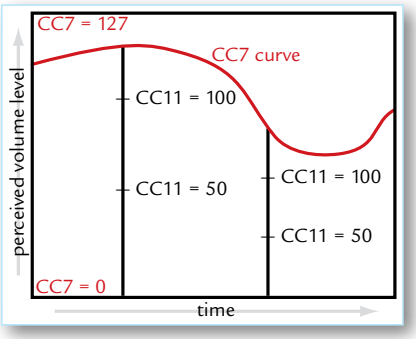
The Mod Wheel (CC1) replaces Velocity for a few instruments in the Hollywood Orchestra library, specifically several instruments with long rolls; that is, those articulation files do not respond to the Velocity parameter of a MIDI note at all. In the other libraries you will find that it crossfades between different velocity samples, instead of simply lowering the volume. Once you learn to use the Mod Wheel—whether playing live or in a sequencer—you will find it to be an excellent means of controlling the continuous dynamics of the notes.

Expression is represented by another MIDI control code: CC11. The usual way to use CC11 is for continuous control of the loudness. That is, while Velocity cannot change mid-note, and it is recommended that CC7 be set only once at the beginning of the piece—or at least only at the start of major sections—CC11 can provide the kind of dynamic shaping of phrases that give music its expressive life (hence the name "Expression" for this Control Code). Use it to create swells in the middle of a note or a phrase. With CC11, you create the crescendos and fluid dynamics of expressive music.

It is possible to shape the dynamics of a line either by "playing" a CC11 controller in real time, or by drawing an envelope in a sequencer. Most MIDI keyboards and control surfaces have programmable knobs and/or sliders that can be set to send CC11 messages to a specific MIDI channel. (Sliders are generally more sensitive for real-time control.) If your sequencer supports automation, it can record the movements of the knob or slider and save them as part of the project. Such manual and real-time control over the shape

of an instrumental line is usually more efficient than drawing in an envelope, and often achieves more convincing results.

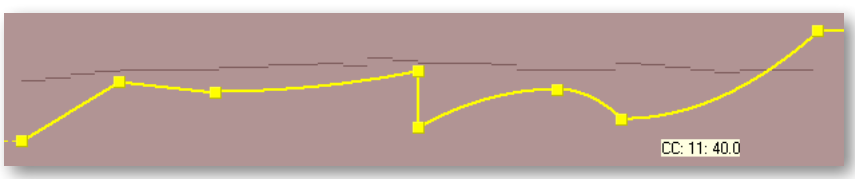
The Mod Wheel and the Expression control achieve similar mid-note dynamic results. But do remember that only some instruments respond to the Mod Wheel. Expression works for all instruments in PLAY, and may therefore be a better choice for changing dynamics over the length of a phrase or whole piece. You should decide which dynamic controls work best for your style and become accustomed to using them consistently.



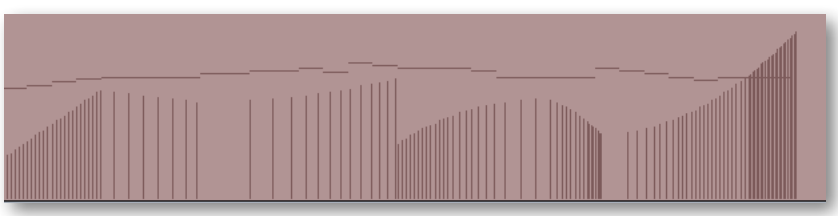
Although the volume and expression controls can be adjusted separately, the volume setting does change how expression affects perceived volume. Think of CC7 as setting an upper limit on the dynamics at any moment. Expression, like most continuously changeable values in MIDI, takes values between 0 and 127. CC7 specifies how loud a sound to generate for the maximum expression, 127. The diagram seen here shows that when volume decreases the fixed changes in expression represent smaller changes in perceived loudness. Changing from an expression level of 50 up to 100 represents a smaller change in loudness when the volume control (CC7) is reduced.

MIDI Envelopes and Control Data

Most modern sequencers let you draw an envelope for MIDI control codes. The diagram below with the yellow curve is an example of an envelope for CC11. Notice how the values are constantly changing, the same way a marimba player adds musicality and interest to a phrase by changing the strength of the hits moment to moment. (The dark horizontal lines near the top are the notes.)



When saved as MIDI data, this same envelope appears as a finite set of commands, as in the next image. In a sequencer track, these often appear as vertical lines, each line being a command to change the value—in this case to change CC11.



The other way—and many say it's the better way—to send CC11 events to the sample player is with a MIDI controller, either a keyboard or a control surface. As long as you or your group has an extra hand—or foot, if you use a pedal—you can enter these control codes while playing the notes into the sequencer. This allows you to hear the interchange

among the notes, their velocities (how hard you're hitting the keys), and the expression being added with CC11.

This process can also be done in two passes—notes first, then control data—if your setup allows you to record automation data to a track that already contains other MIDI data.

Everything written about CC11 in this section also applies to CC1 (Mod Wheel) and all other MIDI control codes. Learning to shape musical lines the same way an instrumentalist does will give your work a more natural musicality. By combining velocity control, expression, Mod Wheel, and volume, you change digital samples into real, living music.

Using Cross-Fades

The EastWest Hollywood libraries make extensive use of cross-fading, more than any EastWest library that was created before this series.

The basic idea of a cross-fade is that 2 or more samples of the same instrument—but that differ in some aspect, such as loudness, timbre, and/or vibrato—are played back simultaneously. And the mix of how much of each sample makes it into the audio output is controlled by Control Code 1 (the Mod Wheel).

For example, when the Mod Wheel is at the bottom of its range, only the ***p*** sample is audible, and as you push the Mod Wheel up the sound of the ***p*** is reduced while the sound of the ***mp*** sample is increased. Eventually, the ***p*** drops to inaudibility while the ***f*** samples begin to be heard.

Part of the reason for using more cross-fades is that they provide a more continuous and gradual change from one sound to another. Also, they modify timbre along with loudness, even mid-note, just like an acoustic instrument. And a third reason for using more cross-fades in this library is that recent improvements in hardware and software make this much more realistic approach possible.

The only real reason not to use cross-fade instruments as often as they'd be useful in your projects is that they use significantly more of your computer's resources.

Achieving a Legato Sound

There are two different technologies available in Hollywood Orchestra for achieving a legato sound:

- the instruments in any of the Legato folders
- the Legato and Portamento scripts

The Legato instruments in Hollywood Orchestral Strings, Brass, and Woodwinds include recordings of live musicians playing true legato transitions of up to an octave, both upward and downward. The PLAY engine combines these seamlessly with other notes to create very convincing legato passages. These legato transitions are heard not only in instruments you might use for flowing legato phrases, but also in the playable runs that are intended for very fast passage work. Use the true legato instruments when you want a convincing legato sound in your phrases and you don't need some other articulation to predominate.

The Legato and Portamento scripts can simulate legato transitions with scripts. Therefore, they are useful when you want a touch of legato sound between notes for some other articulation, such as between consecutive trills or marcato notes.

See more about these scripts where Performance scripts are described, on page 20.

Directing the Audio Output

The output from PLAY is one or more stereo audio signals. The image at the right shows 9 stereo pairs of outputs in the drop-down list from the Master Output control. Each instance of PLAY has its own outputs separate from those of every other instance.





If you are using PLAY as a plug-in in a host, you can usually specify whether you want the output audio to be captured in a single track or maintained as separate tracks. The image at the left shows how one sequencer (Sonar) gives you a choice. The first checkbox creates a single track to hold all the audio output (with the assumption it will be the first stereo pair: "1-2"). The second checkbox creates 9 audio tracks, one for each of the stereo pairs in the drop-down list shown at the right. The third creates 18 mono tracks, in case you want to keep the left and right tracks separate. See the documentation for your sequencer to learn how that selection is made in the host software you use.

If you've selected to set up a single track to hold all the audio output from one instance of PLAY, and you open multiple instruments in this instance, then all the instruments will be mixed in the PLAY audio engine and written to the track as a single stereo signal.

If, instead, you've selected to set up multiple tracks, then you can select the track for each individual instrument and possibly each individual microphone position. Outputs that share the same channel are mixed in the PLAY audio engine and written out as a single pair of tracks. Outputs on different channels are written independently to different sequencer tracks, and available to be mixed within the sequencer at a later time.

ADVANCED: Note that the sequencer may be able to generate a monophonic track from the stereo output, but that will happen in the sequencer; PLAY always outputs a stereo signal. See the sequencer's documentation if you want to generate a monophonic track.

The 5 Microphone Positions in Hollywood Orchestra



Hollywood Orchestra contains 5 mic positions that can be controlled from the Player view, as shown in the image at the right.

All the instruments in Hollywood Orchestra were recorded simultaneously from multiple locations in the studio. The photograph below gives you an idea of the number of different positions the sound of the orchestra was captured from, including:

- at the front of the room and high above (using a Decca tree)
- other locations at the front of the ensemble
- directly in front of each section
- away from the instrumentalists (to capture the room's natural ambience)

All the recorded samples are "phase-locked," meaning that when two or more of them are mixed into a stereo recording they are necessarily in-phase and there will be no destructive interference.

The ability to combine the multiple auditory perspectives gives you the same kind of control that a recording engineer enjoys when recording a live concert performance from multiple microphone feeds.

The preceding image shows the PLAY System interface that allows you to mix the various samples. With the available knobs, sliders, and buttons, you pan each mic separately, change its dynamics to suit your needs, load/unload the samples from RAM, mute and solo each mic to achieve the sound you want—both while composing and when mixing the final output. And, as shown in the drop-down menu at the bottom of the image, you can assign the audio output from each set of microphones to its own output channel.



The photo above, taken during the setup at EastWest Studios in Hollywood, California, gives you some idea of how many microphones were capturing the sound simultaneously. The controls in the Player view allow you to turn on or off the various mics, adjust their relative volume, and pan them however you want.

You do need to be aware that the samples for each microphone occupy their own space in RAM memory. If your computer doesn't have enough RAM to load all the samples you need at once, you may want to use only one set of mics—most likely the Main mics—when composing. You can then add in any other mics when you're ready to work on the sound of the performance.

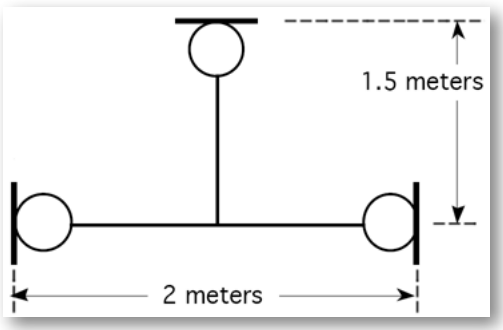
Understanding the Five Microphone Positions

To understand how the five mic positions can help you, let's perform a quick *thought experiment*. Imagine yourself in a concert hall with an orchestra on the stage. (We'll use a hall instead of a recording studio to make the various locations relative to the instruments easier to write about.)

First, you're invited to sit directly in front of the xylophone player player who plays a melody. What you hear approximates the sound recorded in the **Close** mic position. The sound coming directly from the instruments is so much louder than the reflections off the walls and other surfaces that these reverberations make up a very small part of what you hear.

Next, you're placed in a seat in the fifth row of the house and you listen to the same xylophone melody. Now you hear more of the natural reverberation of the hall because your ears are not so overpowered by the sound coming directly from the instrument. This sound is captured by the **Main** mics, a cluster of microphones called a Decca Tree above the front of the whole orchestra. Note that the Decca tree, together with its outriggers, is in an ideal position to balance the sound from all the sections for a big and unified sound.

ADVANCED: A "Decca tree"—for those interested—is an arrangement of three microphones originally designed at the English Decca Records, and still used for orchestra recordings, especially when recording movie scores. The mics are arranged as in the diagram at the right. Because of the 2-meter spacing between the left and right mics, the audio provides the intensity cues necessary for detailed stereo imaging while including sufficient phase information to produce an open and spacious sound. In addition, the middle microphone generates a solid central image.



For the next position, you are seated right at the edge of the stage, approximately at the midpoint of the first row. What you hear is similar to what's captured by the **Mid** mics. You get a little more individual definition than in the Main mics but without the effect of the proximity achieved with the Close mics.

Finally, you're asked to sit anywhere closer to the back of the house and high up, perhaps in the balcony. The same xylophone melody is played again. From this perspective, the full acoustics of the hall are most evident because you hear clearly the sound bouncing off the ceiling, the walls, all the reflective surfaces, in front of you and even behind. It can be a very lush sound, though perhaps lacking in the immediacy of a closer position; however, adding in a little of this sound (either in a stereo mix or in the rear speakers of a surround-sound recording) can add dimension to the recording. This mic position was used to create the **Surround** samples.

Leaving the thought experiment, there is still another sets of microphones to discuss. The **Vintage** mics are an alternative to the Surround mics. They capture basically the same perspective, but use RCA44 "ribbon" mics similar to what was used when making soundtracks for classic Hollywood movies. The switch to the right of the Surround button in the PLAY interface lets you select whether to use the more modern mics (pushed up) or the vintage mics (pushed down).



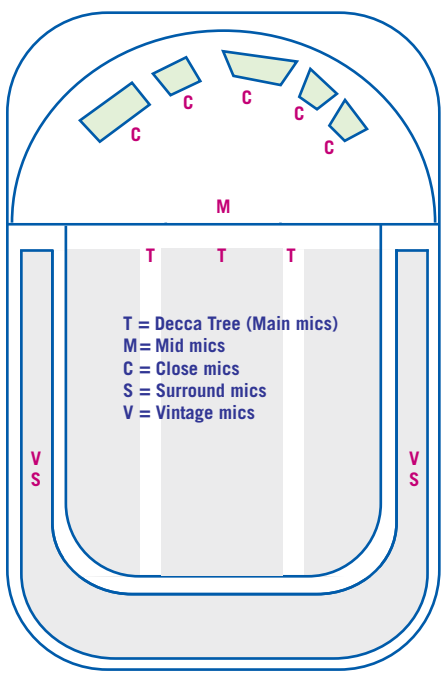
Microphone Placement

The schematic below gives you an idea of where the various mics captured their sound in the recording studio, but this is a diagram of a typical concert hall so that it corresponds to the description above. The semicircular area at the top is where the orchestra sits. The rest of the diagram is where the audience would sit (but is not there in the actual EastWest Studio where Hollywood Orchestral libraries were recorded). Note that this is not an accurate map of where the mics actually stood; the diagram's goal is to help you understand what each mic is intended to capture. A photo of the actual studio and its mics is on page 2.

All the C's in the diagram represent the various positions of the Close mics in front of each instrumentalist. The mics were near enough to capture the presence of the instrument, but far enough away to allow the sound of the instrument to breathe.

The center T represents the approximate position of the Decca Tree, a cluster of mics at the front of the ensemble. These "Main" mics are positioned high enough and far enough forward to capture a well balanced sound. Note that these Main mics also include a pair of outriggers, which are the left and right T's in the diagram.

The M is the location of the Mid mics, which are a smaller version of a Decca tree, positioned a little closer to the instruments so that more definition is captured without creating a "close" sound.



The V's and S's have been placed in the auditorium in this diagram to convey that they capture the full ambient sound of the room. In the recording studio (which has no auditorium), they are placed around the studio at a distance from the instruments.

Two separate sets of Surround mic samples were created for the Hollywood Orchestra library. You can switch between them with the use of the Vintage button in the lower right of the Microphones controls.

Adjusting the Delays

Because all three sets of samples were recorded simultaneously for each note in the library, there are predictable and natural delays in the time it takes the music to reach each set of more distant mics. This latency is part of the natural reverb of the hall and it produces a pleasing fullness to the sound when the samples are mixed correctly. If you want to tighten up the reverb from the Surround (or Vintage) samples, it is possible with modern sequencers and mixers to adjust the audio track from the Surround samples a little forward in time. Either perform a calculation using the speed of sound at sea level (approximately 340 meters/second; 1100 feet/second, if you prefer) or let your ears decide what works best.

If you do plan to micro-adjust the audio as in the previous paragraph, be aware that you will need to record the output from the individual mics to separate audio tracks. You cannot have the PLAY engine mix the audio tracks in a single plug-in instance or standalone instance. That is, you need to record one track with, for example, only Main mics and a different track with only Surround mics.

The Close mics, of course, have virtually no latency: only a small amount necessary to retain the sonic perspective of the instrumental sections in the concert hall. If you don't use the Close mics, and you play something that requires very quick and punchy attacks, you may notice some small delay, which can be cured by adding in some of the Close mics. In most cases you would want to use the Close mics to add definition to an instrument or section. The idea is to experiment until you find a combination that works.

Microphone Positions, Release Trails, and Digital Reverb

All three of these technologies can be used to control the apparent ambience of your audio output. It is important to understand the effect of each and to use them wisely.

Microphone Positions

The way you choose to mix the microphones in your project can result in a sound that varies from small and "dry" to large and "wet." What you are adding in or leaving out (to some degree) is the natural ambience of the room exactly as it occurred during the recording sessions. This ambience is heard as long as the samples are playing (and that includes the release trail samples), but cannot extend past the end of the samples.

Release Trails

These are samples that begin at the moment the instrumentalist stopped playing each note and capture the sound that continues to "ring" in the natural reverberation of the recording studio.

It is possible to turn off release trails for any instrument, but doing so only removes the room's ambience after the note ends, not while it is being played. Turning them off can result in unnaturally abrupt endings to the notes, but that can be effectively hidden by turning on the Reverb effect.

Note that staccato and other short articulations do not, as a rule, include release trails.

Digital Reverb

Convolution Reverb is a digital effect that simulates the sound of a room's ambience through a set of mathematical algorithms that use known reflection times of a set of test tones and apply that data to generate artificial reflections in real time. PLAY includes such a reverb and the data (called impulse responses, or IRs) with which to recreate many different sizes of rooms. The IRs built into Hollywood Orchestra include the exact "EW Studio 1" in which the Hollywood series recording sessions took place (as well as the (different) hall in which the Symphonic Orchestra library was recorded, for those who want to use the two libraries together).

You will have to decide in what way to use each of these technologies for each project. As long as you understand how each of these three components contributes to the sound you are hearing—and the limitations of each technology—you can use your ear to determine how to get exactly the sound you want.

Mixing Microphones From Separately Bounced Tracks versus Mixing in PLAY

Because mixing 2 or 3 of the mic positions in the right proportions can add dimension to a stereo or surround sound recording, you need to understand the various approaches to combining them into the final mix.

The following three cases describe some basic setups to show how you can use the Output controls, with emphasis on the individual microphone positions. When considering the possibilities of multiple instruments, each with its own microphone positions, the ways of setting up the outputs are too numerous to list here. Use the principles described here to define your own approach.

1. Creating separate audio tracks for each microphone, one at a time

In this approach, you can set up one or more instruments with a single mic position and the output going to one or more audio tracks in the sequencer. Usually, you will work with either the Mid or the Main mics during the composition phase, especially if it is the mic position that will dominate in the final mix. Once you're ready to commit the composition to the audio track(s), you can bounce down the track(s) to create a final single-mic recording.

Then go into every instrument in PLAY that contributed to those audio tracks so you can unload the Main mics and replace them with a different set, for example, the Close mics. Bounce down new audio track(s), making sure you name your tracks to indicate which mic position was used. Don't worry about the loudness of this track relative to the first audio track; you will adjust that in the final mix-down.

If you're using more than 2 mic positions, repeat the process to create the rest of the tracks.

Once you have all the tracks, you can mix them into a single track, adjusting the relative volumes to achieve the sound you want.

There are two principal advantages to this approach. First, it requires a smaller computer system (or network) than trying to load multiple sets of samples into RAM at once. Second, you have separate audio tracks for the three mic positions which you can use to create a wetter or drier remix—or to create a surround-sound version—either right away or at a later time. And you can do so with the confidence that you will have no phasing issues to contend with.

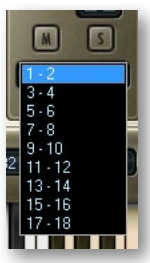
2. Creating ready-mixed audio tracks, all at once

It is also possible to work with more than one mic position at a time, though this requires a more capable computer setup to handle the extra samples in RAM and the extra concurrent processing. In this approach, before bouncing down to audio tracks, you can load multiple mic positions in all instruments. You will need to adjust the individual volume sliders for the various microphone positions at this time to achieve the balance you want.

This approach works best when you want to get a final mix quickly without working through multiple mix-downs.

3. Creating parallel audio tracks from a single instrument file

If you want to create the separate audio files described in the first approach and have a very capable computer system that will allow you to process multiple mic positions simultaneously, then you can use this approach. Set up your instruments as in case 2 (above), but use the individual output controls for the mic positions you're using to send the audio to separate tracks (instead of mixing them within the PLAY audio engine).



The image above shows the output control open to reveal the drop-down list of possible audio outputs. Using these controls, you can direct the audio to separate tracks in the sequencer (or separate tracks in the sound card when running in standalone mode). Selecting "Default" sends the audio to whichever track is selected in the Master controls; selecting anything different sends the audio to that stereo pair of outputs. In the sequencer (or sound card) you can specify which outputs should be captured in each audio track. See the documentation for your sequencer or sound card to learn how to do that.

Note that it is possible to send multiple instruments (and even mic positions) to the same track and the PLAY engine will mix them. For example, you can send the Close mics from the Timpani Felt Long, the Sleigh Bells, and as many more as you want, to the "3-4" outputs, and they will all get bounced down to the same audio track.

This approach gives you the ability to spread out your audio outputs any way you want (up to the maximum number of outputs your system can handle).

Note that when run as a plug-in, each instance of PLAY has its own set of outputs. That means that if the Timpani Felt Long and the Sleigh Bells are running in separate instances of PLAY and they are both assigned to outputs "3-4" they will end up in separate audio tracks in the sequencer.

It is certainly possible to create a piece with only a single microphone position. Usually, the Main mics are a good choice, though in some cases the Close or Mid mics might be the right choice. It's unlikely—but not impossible—you will want to use exclusively the Surround or Vintage mics, because they give such weight to the hall's ambience.

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