

The Dark Side Virtual Instrument

Users' Manual

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Welcome

Producer: Doug Rogers

With over 30 years experience in the audio industry, EASTWEST founder and producer DOUG ROGERS is the recipient of many industry awards including "Recording Engineer of the Year. "The Art of Digital Music" named him one of "56 Visionary Artists & Insiders" in the book of the same name.

In the late eighties he founded EASTWEST, the most critically acclaimed virtual (software) instrument developer in the world, and recipient of over 60 international industry awards. His uncompromising approach to quality, and innovative ideas has enabled EASTWEST to lead the industry for more than 20 years.



Producers: (left to right) Doug Rogers and David Fridmann

He released the very first commercial Drum Samples CD in 1988, and followed it with the multiple award-winning "Bob Clearmountain Drums." In the years that followed, he practically reinvented the sound-ware industry, introducing loop sample libraries to the market in the early nineties, followed closely by the first MIDI-driven loops collection (Dance/Industrial), the first sample 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:

- Hollywood Strings (co-produced with Nick Phoenix and Thomas Bergersen), engineered by Shawn Murphy (Indiana Jones and the Kingdom of the Crystal Skull, 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, and more)
- Symphonic Orchestra (awarded Keyboard Magazine "Key Buy Award," EQ Magazine "Exceptional Quality Award," Computer Music Magazine "Performance Award," and G.A.N.G. [Game Audio Network Guild] "Best Sound Library Award")
- Symphonic Choirs (awarded Electronic Musician "2006 Editor's Choice Award," G.A.N.G. "Best Sound Library Award," and Keyboard Magazine "Key Buy Award").

Most recently, his productions have included EastWest/Quantum Leap Pianos, the most detailed virtual piano collection ever produced; Fab Four, inspired by the sounds of the Beatles, and M.I.P.A Winner, judged "most innovative virtual instrument" by 100 international music magazines; and now The Dark Side.

Producer: David Fridmann

David Fridmann is an American record producer and musician. He often brings a distinctive, expansive, open sound to the albums he produces. From 1990 onwards, he co-produced all releases by Mercury Rev and The Flaming Lips (with the exception of Transmissions from the Satellite Heart by The Lips). Other bands he has worked with include: Weezer, Saxon Shore, Ammonia, Ed Harcourt, Sparklehorse, Café Tacuba, Elf Power, Mogwai, Thursday, The Delgados, Low, Phantom Planet, Gemma Hayes, Goldrush, Tapes 'n Tapes, Hopewell, Black Moth Super Rainbow, Number Girl, Zazen Boys, Sleater-Kinney, Clap Your Hands Say Yeah, MGMT, OK Go, and Tame Impala.

As a musician, David was the bassist and a founding member of Mercury Rev. He gave up his role as a touring member of the band in 1993 to concentrate on producing other artists. He generally produces, engineers, and mixes his projects. In 2001, Dave was included on MOJO's 100 Sonic Visionaries list and was described as "the Phil Spector of the Alt-Rock era." In 2007, he received a Grammy for The Flaming Lips' At War With The Mystics at the 49th Annual Grammy Awards (Best Engineered Album, Non-Classical). In 2010, three Fridmann-produced albums were listed on the Rolling Stone 100 Best Albums of The Decade: MGMT's Oracular Spectacular, The Flaming Lips' Yoshimi Battles The Pink Robots, and Sleater-Kinney's The Woods.

Numerous albums that David has worked on have received sales certifications: MGMT's Oracular Spectacular (Platinum in the U.K., Gold in the U.S., Canada, and Australia), The Flaming Lips's Yoshimi Battles The Pink Robots (Gold in the U.S. and U.K.), The Flaming Lips' Soft Bulletin (Gold in the U.K.), Mercury Rev's Deserter's Songs (Gold in the U.K.), Jane's Addiction's Kettle Whistle (Gold in the U.S.), Weezer's Pinkerton (Gold in the U.S.) and The Flaming Lips' At War With The Mystics (Silver in the U.K.). In addition, three MGMT singles (Time To Pretend, Kids, and Electric Feel) were all certified Gold in the U.S.

Credits

Created and Produced by

Doug Rogers and David Fridmann

Production Assistance

Rhys Moody

Programming and Editing by

Justin Harris and Michael DiMattia

Art Direction

Steven Gilmore, Doug Rogers, Shaun Ellwood, Julian Ringel

Software

Doug Rogers, Nick Phoenix, Rhys Moody, Klaus Voltmer, Klaus Lebkucher, Julian Ringel, Patrick Stinson, Adam Higerd, Ezra Buchla, David Kendall, Nick Cardinal, Jonathan Kranz

Manual

John Philpit

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 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 such 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%.

The Master Navigation Document

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

For example, if you're reading something in this documentation for The Dark Side library, and need to open the manual for the PLAY System as well, go to any chapter title page and click on the link that says, "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 Dark Side library manual and the PLAY System manual open in separate windows so you can refer to them both.

Online Documentation and Other Resources

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

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

The address is:

http://support.soundsonline.com

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

The address of the forums is:

http://www.soundsonline-forums.com



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The Dark Side, An Overview

The Concept For The Dark Side

From Producer Doug Rogers:

This collection of instruments got its start when I was mentoring a young alternative group about some demos they sent me. To my ears, their tracks didn't sound tough enough for their intended market, so I advised them they needed to toughen up their sound. To that they replied, "Well, what should we use?"

Since they use a lot of virtual instruments in their music, I looked around and found nothing, even in our own vast 1 terabyte collection. Then and there, I decided to make it my next project after recent orchestral projects, a complete aural turn-around.

My first choice as a production partner for The Dark Side was David Fridmann. I had much admired his unconventional work for many years, and I asked him to join me in producing this collection. His "no rules" style of recording and mixing was exactly what I was looking for to help produce The Dark Side instruments.

Many of these instruments have been purposely—and skillfully!—mangled, distorted, or effected out of all recognition. Some individual instruments went through 5 or 6 effects units, including many rare vintage tube units that David and I have collected.

There is also a large selection of dark and eerie sounding instruments and FX you won't find anywhere else, perfect for film, TV, and especially games music production; you probably won't find any collection more suitable for games music production.

Of course, anyone can distort an instrument, but it's not easy to distort it with the right combination of tube processing so it still sounds musical. With today's brick wall limiting to get tracks as loud as possible, distortion may be the only trick left to get an instrument to jump out of a track and gain the listeners' attention: a production tool that Muse, Nine Inch Nails, Radiohead, and many others have used successfully.

In some cases, we used MIDI velocity to specify the playback of different sounds at different velocity ranges. For example, in Chameleon Morpher drum kits, instead of a higher velocity triggering a louder version of the same sound, the sound character changes completely; you get a different sound character depending on how hard you hit the key. This produces unusual (and disturbing) results.

We have also used the Mod Wheel to cross-fade one sound into another. These program names end in "mod" and are really inspiring.

Our objective was to create a large collection of unique instruments that would work for everything from alternative to symphonic rock, and of course, film, TV, and game music production.

Once we got started we were like bulls in a china shop: mass aural destruction was the name of the game, and we had so much fun doing it. We amassed 40 gigabytes of instruments, all organized into instrumental groups for convenience.

Of course, feel free to use these instruments any way you want, but our intent was to have users mix the more distorted and mangled instruments with clean instruments (of which there aren't many included in this library) to make these sounds really stand out—or disturb the senses!

Have fun!

What's Included

The Dark Side library you purchased includes all the following:

- a complete set of sample-based instruments, enumerated later in this manual
- approximately 40 Gigabytes of 24-bit, 88.2 kHz samples
- the EastWest PLAY 2 Sample Engine
- the unique authorization code that identifies the license you bought
- manuals in Adobe Acrobat (.PDF) format for both the EastWest PLAY System and The Dark Side 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 and Quantum Leap products, or you can buy one online at www.soundsonline.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.

The available space on the hard drive required for an installation of The Dark Side is approximately 40 GB (Gigabytes).



3. The Dark Side User Interface

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The Dark Side User Interface

Overview

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. The image at the bottom of the page provides an overview of the entire window in Player View when the current instrument is from The Dark Side library.

Much of this interface is shared by all PLAY System libraries, and the common features are described in the PLAY System manual. The Dark Side-specific controls described later in this section are those listed on the next page. If you don't see a control described in this chapter, look at the PLAY System manual.



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

- Filter
- Artificial Double Tracking (ADT)
- Round Robin Reset
- Stereo Double
- The Master button in the Reverb controls
- The graphical representation of the Envelope

Filter Controls



The Filter controls take the sound of the instrument, and modify it by filtering out some of the sound above a certain frequency. This type of effect is commonly called a Low Pass Filter.

The **Frequency** knob determines where the sound starts to be filtered out. The **Resonance** knob specifies how much the filter "rings" at the dialed frequency. The higher the resonance knob is set, the more focused this ringing becomes.

The graph gives you visual cues about the frequency distribution you are creating with the settings you select.

ADT Controls



Artificial Double Tracking is a technique, invented at Abbey Road when the Beatles were recording there, that approximates the effect of double tracking (recording two nearly identical takes of a vocalist or instrument on the same part and layering one on top of the other) without actually taking the time to record two takes. And some would say ADT improves on actual double tracking even beyond the savings in time. The original ADT process was based on magnetic tape; in the PLAY Engine, the effect is created digitally. The software programmers, however, added a tape simulator to mimic the slight speed variations of the two analog tape machines that created the ADT effect.

The **Delay** knob specifies in milliseconds, the delay between the original signal and the secondary signal. A delay of around 40 ms is typical, so is often a good starting point when crafting a specific effect.

The **Depth** knob specifies the amount by which that delay is modulated. You don't want an exactly consistent delay; the delay of the secondary signal will vary forward and backward in time by this much.

The **Speed** knob varies the speed at which that delay is modulated.

The **Level** knob specifies the relative loudness of the secondary signal. Set it to 0.0 dB to hear the effect at its strongest, with the same level on both signals; higher or lower gives preference to one of the signals. The overall effect depends on their combination.

The **Power** button allows you to kill the ADT effect instantly and then reinstate it with the same settings, as needed.

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.



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, 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.

Most of the instruments in The Dark Side library take advantage of round robin technology, even though, unlike some other EastWest libraries, the instruments do not include "RR" in their names. So be sure to use either this button of the MIDI code for resetting the round robin sequencing if a consistent performance is important to you in the given project.

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.

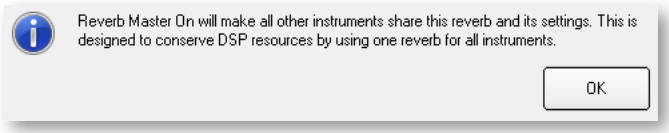


The knob lets the user determine the spread of the signals, how far apart the ear perceives the stereo channels to be. A value of 0% brings the two channels together at the center (unless the Pan knob positions the output differently), and is the equivalent of turning off the controls with the Power button at the right. 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 in the Reverb Controls



In some libraries, including The Dark Side, the Reverb controls in the UI include an extra button called Master. Turning on this feature feeds the audio signals from all the open instruments in this instance of PLAY through a single Reverb. Turning this on can save on processing power by running only one instance of the Reverb software (instead of each instrument processing its own Reverb effect). But if you turn Master on, you then cannot run different reverb spaces for different patches, or different settings for the Pre-Delay and Amount knobs. The parameters for the Reverb space named in the instrument with Master turned on are the space and the values that will apply to all instruments in this instance of PLAY.



Note then when you turn on the Master option, the message above appears to remind you of the consequences of this action.

The Graphical Representation of the Envelope



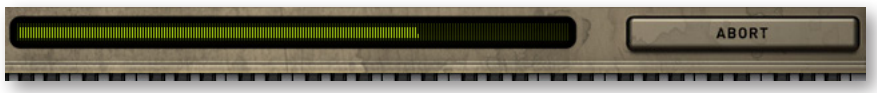
The Envelope Controls are described in the main PLAY System manual because they are common to all PLAY System libraries. Only some libraries include the graph, as shown here, so it is included in the manuals for those libraries only. For more information about the Envelope controls, see that topic in the main PLAY System manual.

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.

There's one difference in The Dark Side Browser, though. When opening an instrument, the Abort button appears in a different place than for other libraries, temporarily replacing the Add and Replace buttons, as shown below. Click on this button to stop the instrument from opening.





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Instruments, Articulations, and Keyswitches

The instruments in The Dark Side library are divided into 9 categories based on the type of physical instrument that was sampled before the distortion was added. These instruments were then grouped into these 6 folders:

- 1 Drums
- 2 Basses
- 3 Guitars
- 4 Keys and Strings
- 5 Ethnic and Choirs
- 7 Miscellaneous and Percussion

These types of instruments form 6 of the 7 folders visible in the PLAY Browser. From these folders you can select the various and diverse instruments created specifically for The Dark Side. (The numbers at the beginning of each folder name are there only to keep them in this order.)



Instruments with Effects

To create the seventh folder, "6 Instruments wFX," the producers collected a selection of instruments from the other folders and applied to each patch one or more of the effects available in the Player view of PLAY. For example, the instrument called "Guitars on Mars wFX" adds to the basic "Guitars on Mars" patch the Live Cathedral convolution reverb and the ADT processing. There are two reasons for including such a folder:

- The inclusion of these effects generates sounds different enough from the basic version and usable enough to be worthy of standing on their own.

- The sounds provide examples of how you can create your own variations on any and all of The Dark Side patches with the controls in the Player view. Feel free to experiment with these controls by adjusting the parameters and/or by layering multiple effects together to achieve new and unique sounds to include in your own compositions. And when you hit upon a combination of patch and effects that you like, save your new sound to the file system as a new instrument with a new name (*i.e.*, as a new .ewi file).

Where these "wFX" instruments appear in the table below, the second column lists the effects applied. These effects include Delay, Artificial Double Tracking (ADT), and any one of the Reverbs (the phrase in quotation marks).

The number that follows the names of the keyswitch files in the table is a hyperlink. Click on this number to be taken to a table that lists the articulations within the file.

For more information about these instruments, see details after the table.

Uses of the Mod Wheel in The Dark Side

There are two ways that The Dark Side library allows you to use the Mod Wheel (also called CC 1 when referred to as a MIDI control code):

- For those instruments in the "_KS and Mod XFD" folder that have MOD in the name, the Mod Wheel allows you to adjust how much of two different instruments in a cross-fade are audible at any time. This feature is described in more detail for the various cross-fade instruments starting on page 23.

- For all other instruments (*i.e.*, those that do not have MOD in the name), the Mod Wheel controls a 2-Pole Low Pass Filter. With the Mod Wheel at the bottom of its range, all frequencies are heard because the filter is all the way open. As you push up the Mod Wheel (or increase CC 1 in a sequencer), the filter closes, cutting off high-end frequencies at a progressively lower and lower point. This feature allows you to do filter sweeps on the fly.

The Table of All The Dark Side Instruments

THE DARK SIDE INSTRUMENTS
1 Drums
Arena Kit
Bone Crunch
Broken Circuit
Chameleon Big Room (Regular & Distorted)
Chameleon Dry (Regular & Distorted 1 & Distorted 2)
Chameleon Morpher
Chameleon Open Mic (Regular & Distorted)
Chameleon Roomy (Regular & Distorted)
Dark Dirt
Demolition
Dungeon
Slamming
Slap Kit (24 inch & 50 inch & 106 inch)
Underground
Verb Kit Dry
Verb Kit Morpher
Verb Kit (Verb 1 – 5)
continued

THE DARK SIDE INSTRUMENTS	
_Keyswitch and Mod Wheel Cross-Fades	
Chameleon Keyswitch C0–G#0	24
Slap Kit Keyswitch C0-D0	25
Verb Kit Keyswitch C0–F0	25
2 Basses	
Bass Hemorrhage Sus	
Bass Snatchers Legato	
Bass Snatchers Slide (Up & Down)	
Bass Snatchers Sus	
Destroyer Bass	
Distorted Attack Bass	
Fuzz Bass	
Mean Synth Bass	
Nuclear Bass	
Perc Bass	
Radioactive	
Rattly Bass	
Relatively Clean Bass FX	
Relatively Clean Bass Harmonics	
Relatively Clean Bass Legato	
Relatively Clean Bass Slide (Up & Down)	
Relatively Clean Bass Sus	
Slightly Dirty Bass	
Slightly Dirty Bass Light	
_Keyswitch and Mod Wheel Cross-Fades	
Fuzz_Rattly Bass MOD	
Hemorrhage_Fuzz Bass MOD	
Rattly_Perc Bass MOD	
Bass Snatchers Keyswitch C0–D#0	25
Relatively Clean Bass Keyswitch C0–F0	25
The Dark Side Basses Keyswitch C0–A0	26

continued

THE DARK SIDE INSTRUMENTS

3 Guitars	
Backwards Distorted Guitar Dry	
Backwards Distorted Guitar wEFX	
Dirt Boy Guitar	
Distorted Lead (Regular & Short)	
Freak Shimmer Combo	
Freak Shimmer Dry	
Freak Shimmer EFX	
Ghost Guitar	
Guitar Orchestra	
Guitars on Mars Down	
Guitars on Mars Up	
Guitars on Mars RR	
Insanity	
Organic Guitar	
Organic Guitar wGlissando	
Relatively Clean Strings	
Tunnel Lead	
Tunnel Lead Clean End	
_Keyswitch and Mod Wheel Cross-Fades	
Freak Shimmer Keyswitch C0–D0	26
The Dark Side Guitar Keyswitch C0–B0	26
4 Keys and Strings	
Amadeus Organ	
Bent Funeral Organ	
Brain Damage	
Broken Jaw Harp	
Chaos	
Chorus Strings	
ClockworkO	
ClockworkO PercAttack	
Demonic	
Dist Org String Thing	

continued

THE DARK SIDE INSTRUMENTS

Distorgan	
Freak Show	
Fuzzy Keys	
Grand Dist Strings	
LFO Strings	
Morse Code	
Psycho	
Psycho Shimmer Keys	
Underwater Piano Short	
Underwater Piano Sustain	
_Keyswitch and Mod Wheel Cross-Fades	
Amadeus Organ_Brain Damage MOD	
Amadeus Organ_Broken Jaw Harp MOD	
Bent Funeral Organ_Brain Damage MOD	
Bent Funeral Organ_Freak Show MOD	
Broken Jaw Harp_Chaos MOD	
ClockworkO PercAttack_Bent Funeral MOD	
ClockworkO PercAttack_Chaos MOD	
The Dark Side Keys Keyswitch C-1 – D#0	27
The Dark Side Strings Keyswitch C0–D#0	27
5 Ethnic and Choirs	
2-Bit Choir (Regular & Wide)	
Eleanor Keys	
Electric Medieval	
Ethnic Dulcimer	
Furry Ethnic Orch	
Granular (Regular & Wide)	
Leslie Choir (Regular & Wide)	
Mandamadness	
Old Bombay	
Snake Charmer	
Toxic Choir 1 (Regular & Wide)	
Toxic Choir 2 (Regular & Wide)	
continued	

THE DARK SIDE INSTRUMENTS		
UFO Choir (Regular & Wide)		
Whirly Keys		
Zitherland		
_Keyswitch and Mod Wheel Cross-Fades		
Eleanor Keys_Electric Medieval MOD		
Eleanor Keys_Old Bombay MOD		
Eleanor Keys_Zitherland MOD		
Furry Orch Guitar_Electric Medieval MOD		
Granular_Leslie Choir MOD (Regular & Wide)		
Granular_Toxic Choir 1 MOD (Regular & Wide)		
Granular_Toxic Choir 2 MOD (Regular & Wide)		
Granular_UFO Choir MOD (Regular & Wide)		
Leslie_Toxic Choir 1 MOD (Regular & Wide)		
Leslie_Toxic Choir 2 MOD (Regular & Wide)		
Leslie_UFO Choir MOD (Regular & Wide)		
Mandamadness_Ethnic Dulcimer MOD		
Whirly Keys_Furry Ethnic Orchestra MOD		
The Dark Side Choirs Keyswitch C-1 – F-1 (Regular & Wide)		28
The Dark Side Ethnic Keyswitch C0–A0		28
6 Instruments wFX		
Basses wFX		
Bass Hemorrhage wFX	ADT, “EW Chamber 2”	
Destroyer Bass wFX	Delay	
Fuzz Bass wFX	ADT, “EW Hall LR”	
Slightly Dirty Bass wFX	ADT, “Hollywood Scoring …”	
Drums wFX		
Bone Crunch wFX	“Fat Drums LR”	
Broken Circuit wFX	Delay	
Dark Dirt wFX	“Fat Drums LR”	
Slap Kit 24 inch wFX	Delay	

continued

THE DARK SIDE INSTRUMENTS	
Ethnic and Choirs wFX	
2-Bit Choir wFX	"Choral Hall 1 LR"
Electric Medieval wFX	Delay, "Hollywood Scoring …"
Ethnic Guitar wFX	"EW Sinatra Chamber"
Leslie Choir wFX	ADT, Delay
Snake Charmer wFX	ADT, "S. Cal Hall Strings …"
UFO Choir wFX	ADT, Delay
Zitherland wFX	"Large Church"
Guitars wFX	
Distorted Lead wFX	"EW Hall RL"
Guitars on Mars wFX	ADT, "Live Cathedral"
Insanity wFX	Delay, "Hollywood Scoring …"
Tunnel Lead wFX	"EW Chamber 2"
Keys and Strings wFX	
Bent Funeral Organ wFX	ADT, "Large Church"
Brain Damage wFX	Delay
Broken Jaw Harp wFX	ADT, Delay
Chorus Strings wFX	"Carlsbad Caverns 6"
Dist Org String Thing wFX	"Choral Hall 1 LR"
Freak Show wFX	"St. Mary LR"
Perc Tonal wFX	
Super Tabla wFX	"HDIR Cathedral 4.0 LR"
7 Misc and Perc	
Backwardspell	
Big Broken Ben	
Big Broken Ben Extreme	
Bumblebee 01 Non-Tonal	
Bumblebee 02 Non-Tonal	
Earthquake	
Ethereal	
FX Madness 01–13	
Horror 01 Non-Tonal	
Horror 02 Non-Tonal	
continued	

THE DARK SIDE INSTRUMENTS	
OC Notes (“OC” refers to the Omnichord)	
OC Notes Kaoss	
Perc Bells	
Perc Sci-Fi	
Static	
SuperTabla	
Timp Explosion	
_Keyswitch and Mod Wheel Cross-Fades	
OC Chords Arp Keyswitch C0–E0	29
OC Chords Kaoss Keyswitch C0–E0	29
OC Chords Arp Kaoss Keyswitch C0–A0	29
The Dark Side Misc FX Keyswitch C1–B1	29
The Dark Side Perc Tonal Keyswitch C0–F0	29

Mod Wheel Cross-Fades

Within the subfolders called “_KS and Mod XFD” are two types of instrument collections. Keyswitches are described in a section below. The other files are cross-fades that open two articulations at once and use the Mod Wheel to modify the sound continuously by adding successively more of a second articulation as you push the Mod Wheel up. These cross-fades always include “MOD” at the end of the name.

The two included instruments are stated in the name of the cross-fade. For example, the cross-fade called “Eleanor Keys_Electric Medieval MOD.ewi” loads both of the named samples:

- Eleanor Keys
- Electric Medieval

Using the Mod Wheel (or CC 1, when using an envelope inside a host) you can control how much of the second sound you want to hear. With the Mod Wheel at its lowest point, only the first named sound (Eleanor Keys) is heard. As you push the Mod Wheel up you hear progressively more of the second-named sound (in this case, Electric Medieval), until at the top of the Mod Wheel’s range both articulations are playing at full volume.

This continuous mixing of the combined sounds can be done at any point, including in the middle of a long-held note.

Note that this approach is a little different than cross-fades in other PLAY libraries where they’re available. Specifically, the volume of the second articulation does not decrease as the Mod Wheel moves up.

Keyswitches

A keyswitch is an instrument that loads into memory the samples for more than one instrument and then responds to the playing of specialized notes, called "keyswitch notes," to change between the loaded instruments. For more information about keyswitches, see page 35, and also the information in the main PLAY System manual.

The Dark Side contains at least one keyswitch file for every category of instruments (except that there is none in the "Instruments wFX" folder). In the table above, the number after the name of the keyswitch is a page number (and clickable hyperlink) where the list of instruments within the keyswitch file is described.

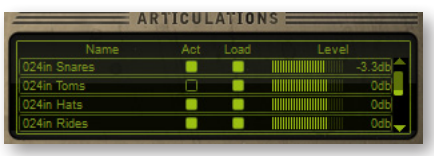
Note that several of the instruments that are not specifically named as keyswitches do, nonetheless, contain a keyswitch. See page 30 for more details on where this occurs.

The tables below list all the instruments within each keyswitch file and the corresponding keyswitch note.

Keyswitches for the Drums

The Drums folder contains 3 separate keyswitches corresponding to 3 types of drum collections.

Chameleon KS C0–G#0	
C0	Dry
C#0	Open Mics
D0	Dry Distorted 1
D#0	Roomy
E0	Big Room
F0	Open Mics Distorted
F#0	Dry Distorted 2
G0	Roomy Distorted
G#0	Big Room Distorted



The Articulation control in the Slap Kit displays the individual component drums instead of only the keyswitches. Use this control to deactivate specific drums, or to change their volumes relative to other drums in the kit. The image at the left shows the toms turned off (deactivated) and the snares lowered in volume by 3.3. dB in the 24-inch drumkit.

See page 31 for a meaning of the distances used in the names of the instruments within the following keyswitch file.

Slap Kit KS C0–D0	
C0	24-inch
C#0	50-inch
D0	106-inch

The Verb Kit Keyswitch includes an entry at the bottom of the Articulations control called "Crash Highs" that do not have the multiple verb effects you hear on the other components, so these sounds remain the same no matter which keyswitch note is selected.

Verb Kit KS C0–F0	
C0	Dry
C#0	Verb 1
D0	Verb 2
D#0	Verb 3
E0	Big Room
F0	Open Mics Distorted

Keyswitches for the Basses

Bass Snatchers KS C0–D#0	
C0	Sustain
C#0	Legato
D0	Slide Up
D#0	Slide Down

Relatively Clean Bass KS C0–F0	
C0	Sustain
C#0	Legato
D0	Slide Up
D#0	Slide Down
E0	Harmonics
F0	FX

In the Dark Side Basses keyswitch file, two of the basses—Fuzz Bass and Perc Bass—are included for both the Sustain and the Short versions. These variants also appear as keyswitch options within the main Fuzz Bass and Perc Bass instruments.

The Dark Side Basses KS C0–A0	
C0	Bass Hemorrhage
C#0	Destroyer Bass
D0	Distorted Attack Bass
D#0	Fuzz Bass Sustain
E0	Fuzz Bass Short
F0	Mean Synth Bass
F#0	Perc Bass Sustain
G0	Perc Bass Short
G#0	Radioactive
A0	Rattly Bass

Keyswitches for the Guitars

The Dark Side Guitars KS C0–B0	
C0	Dirt Boy Guitar
C#0	Distorted Lead
D0	Freak Shimmer Solo
D#0	Freak Shimmer
E0	Freak Full
F0	Guitars on Mars
F#0	Insanity
G0	Organic Guitar
G#0	Relatively Clean String
A0	Synth Guitar wFX
A#0	Tunnel Lead
B0	Guitar Orchestra

Freak Shimmer KS C0–D0	
C0	Freak Shimmer Dry
C#0	Freak Shimmer EFX
D0	Freak Shimmer Combo

Keyswitches for Keyboards and Strings

This Dark Side Keys file uses keyswitches that start below the lowest note on an 88-key MIDI keyboard. You either need to use a control on the MIDI keyboard to shift all notes by an octave or else trigger these keyswitch notes within a sequencer. (Using EastWest's convention of calling Middle C by the name "C3," the lowest note on an 88-key keyboard is A-1.)

The Dark Side Keys KS C-1 – D#0	
C-1	Amadeus Organ
C#-1	Bent Funeral Organ
D-1	Brain Damage
D#-1	Broken Jaw Harp
E-1	Chaos
F-1	ClockworkO Perc Attack
F#-1	ClockworkO
G-1	Demonic
G#-1	Distorgan
A-1	Freak Show
A#-1	Fuzzy Keys
B-1	Morse Code
C0	Psycho Shimmer Keys
C#0	Psycho
D0	Underwater Piano Sustain
D#0	Underwater Piano Short

The Dark Side Strings KS C0–D#0	
C0	Chorus Strings
C#0	Dist Org String Thing
D0	Grand Dist Strings
D#0	LFO Strings

Keyswitches for the Ethnic and Choirs Instruments

The Dark Side Ethnic KS C0–A0	
C0	Eleanor Keys
C#0	Electric Medieval
D0	Ethnic Guitar Sustain
D#0	Ethnic Guitar Short
E0	Funny Orch Guitar
F0	Mandamadness
F#0	Old Bombay
G0	Snake Charmer
G#0	Whirly Keys
A0	Zitherland

Note that the Choirs all contain such a wide range of playable notes that the keyswitch notes are actually below the bottom-most note of a standard 88-key MIDI keyboard. You either need to use a control on the MIDI keyboard to shift all notes by an octave or else trigger these keyswitch notes within a sequencer. (Using EastWest's convention of calling Middle C by the name "C3," the lowest note on an 88-key keyboard is A-1.)

The Dark Side Choirs KS C-1 – F-1	
C-1	Granular
C#-1	Leslie Choir
D-1	Toxic Choir 1
D#-1	Toxic Choir 2
E-1	UFO Choir
F-1	2-Bit Choir

Keyswitches for the Miscellaneous and Percussion Instruments

The first table below applies to any of 3 "Chords" keyswitches in this folder:

- OC Chords Arp Kaoss KS C0–E0
- OC Chords Arp KS C0–E0
- OC Chords Kaoss KS C0–E0

In each case, the keyswitch notes control the chords played by the instrument (instead of the more usual selection of specific distortions).

OC Chords (Arp) (Kaoss) KS C0–A0	
C0	Major
C#0	Minor
D0	Dominant7
D#0	Major7
E0	Minor7

The next table in the Miscellaneous Instruments folder follows the more common pattern of selecting the overall sound.

The Dark Side Misc FX KS C1–B1	
C1	FX Madness Full 01
C#1	FX Madness Full 02
D1	FX Madness Full 03
D#1	FX Madness Full 04
E1	FX Madness Full 05
F1	FX Madness Full 06
F#1	FX Madness Full 07
G1	FX Madness Full 08
G#1	FX Madness Full 09
A1	FX Madness Full 10
A#1	FX Madness Full 11
B1	FX Madness Full 12

While the instruments included within this keyswitch file do include pitched notes, in some cases the distortion adds complexity to the sounds that can modify the pitches to sound different than those in the familiar Western chromatic scale.

The Dark Side Perc Tonal KS C0–F0	
C0	Backwardspell
C#0	Big Broken Ben Extreme
D0	Big Broken Ben
D#0	Ethereal
E0	Perc Bells
F0	Perc Sci-Fi

Descriptions of Selected Instruments

Many of the instruments in The Dark Side library describe themselves fairly well in their names, and no further description is required. And even when the name doesn't immediately invoke a sound in your mind, a description in words wouldn't pin down the sound for you anyway; you just have to audition the sounds and learn what the instruments sound like. Those that require some further information are described below.

Non-KS Files That Contain Keyswitches

A few files that do not name themselves as keyswitch files do, nonetheless, provide a keyswitch for selecting articulations.

Sustain and Short Notes

In each of these cases, the keyswitch selects between a short version and a sustained version of the same instrument. The instruments that give you this control are listed here:

- Fuzz Bass
- Perc Bass

C0 is always the Sustained version and C#0 is the Short version.

String Selection in Slightly Dirty Bass

The two instruments Slightly Dirty Bass.ewi and Slightly Dirty Bass Lite.ewi give you the choice of what string you want to play the note on, as follows:

- C0 on the E-string
- C#0 on the A-string
- D0 on the D-string
- D#0 on the G-string

All notes in the guitar's range can be played when any of the keyswitch notes is active, but the notes are played on the specified string when possible. For example, if you select the A-string with the C#0 keyswitch, the lowest notes are still played on the E-string (as they have to be), but once you get to A, the rest of the notes are played on the A-string. Selecting a lower string (E or A) provides a "fatter" sound, and selecting the higher D- or G-string provides a "thinner" sound.

Slightly Dirty Bass Lite

This patch give you the same control over string selection as is described above, but in an instrument played with less dirt and less aggression. You will hear a lighter and thinner sound.

Choirs

Wide Choirs

All of the instruments in the Choirs folder include both a regular and a "Wide" version (and that includes the Choirs instruments in the "_KS and Mod XFD" folder). In the "Wide" instruments, the Stereo Double control is on by default and the Amount knob is set to a non-zero value (50%). This gives the perception of a large choir that fills the stereo field; in the regular version, the choir seems more localized within the field.

As always, feel free to experiment with this control to achieve the exact effect you want.

Drums

For the most part, the drum instruments include the same range of sounds from a drum kit (bass drum, snare, high hats, etc.), so the difference between the various instruments within The Dark Side is in the distortion that has been applied. But do be aware that some instruments in the Drums folder contain more playable notes than other instruments. You will need to open these patches and play with them to determine which instruments fit best within your style of music and your requirements.

Slap Kits

The "Slap" drum kits come in three variations, labeled:

- 24 inch
- 50 inch
- 106 inch

These distances refer to how far away the microphones were placed from the drums. The greater the distance, the more distortion can be heard.

For those users more accustomed to the metric system, here are those same 3 distances in centimeters (approximately):

- 60 cm
- 125 cm
- 270 cm

Chameleon Morpher.ewi & Verb Kit Morpher.ewi

The term "Morpher" in these two instruments refers to the ability to change the sound of any note using the MIDI Velocity parameter. Usually, Velocity affects the loudness and timbre of a note; that is, hitting the keys of a MIDI keyboard with more force generates the sound of the sampled instrument played louder. However, for these two instruments, Velocity does not affect loudness.

Instead, playing with different Velocities generates sounds that differ in the nature of the sound and of the distortion. For these two drums, you can affect the kind of sound you get by the amount of force you use when playing the keys (of by adjusting the Velocity parameters in your sequencer).

Arena Kit

This drum kit includes a reverb from Acousticas of 2.2 secs. The user can adjust the length of the reverb in the Player view by selecting a different IR from the dropdown list. This instrument does not include multiple velocity layers. That means you're playing the same samples when playing with high or low velocity; the Arena kit is designed for full volume, in the style of Floyd/Muse.

Guitars

Guitars on Mars: Down, Up, and Round Robin

These 3 versions of the Guitars on Mars instrument provide access to:

- all down strokes
- all up strokes
- a round robin alternation between down and up strokes

Use whichever suits the project you're working on.

Note that in the Guitars keyswitch, only the round robin version is included.

Miscellaneous Instruments

Bumblebee (01 & 02) Non-Tonal

These two patches are non-tonal in the sense that the pitches do not conform to any standard chromatic scale. Instead, as you play a scale, the pitches jump around, apparently at random.

In both of these patches, the audio output can modulate significantly over time with some changes happening more than 10 seconds into the playback of the note.

Horror (01 & 02) Non-Tonal

These patches are meant to capture the sounds sometimes heard in horror and sci-fi movies. They are non-tonal in the sense that the pitches do not conform to any standard chromatic scale.

If you play a scale in **Horror 01**, the pitches jump around, apparently at random. If you hold any note for a long time, the pitch and timbre remain generally constant.

In contrast, a scale in **Horror 02** starts out on the played pitch but then each note modulates drastically over time. Even though each MIDI note seems to distort in random ways, the output is repeatable. Be aware that some notes continue unchanged for more than 10 seconds before the weird changes begin.

Omnichord

The Omnichord (abbreviated as "OC" in the instrument names) is an electronic instrument manufactured by Suzuki Musical Instrument Corporation. It allows you to play individual notes as though picking virtual strings and to press buttons to generate chords. (Suzuki has rebranded more recent versions as the "QChord.")

The notes are available in the main Misc folder, and the chords are available in any one of three keyswitch files, where you can select one or both of Kaoss and Arpeggiated. See page 29 for more details about the keyswitches.



5. Using PLAY's Features in The Dark Side

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35 Keyswitch Instruments
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39 Using Cross-Fades
39 Directing the Audio Output

Click on this text to open the Master Navigation Document

Using PLAY's Features in The Dark Side

This chapter discusses ways you can use the features and capabilities within the PLAY software to get a better sound or more efficient playback in your The Dark Side projects.

Opening Multiple Instances of PLAY

With the PLAY 2 software, it's possible to open more than one instrument in each instance you run—and this is true whether running PLAY in standalone mode or within a host. But there are often compelling reasons for spreading instruments across multiple instances. (An "instance" is each open window running PLAY. So, if, for example, you see exactly 3 PLAY windows inside your sequencer—or on your desktop when running standalone—then you have opened 3 instances.)

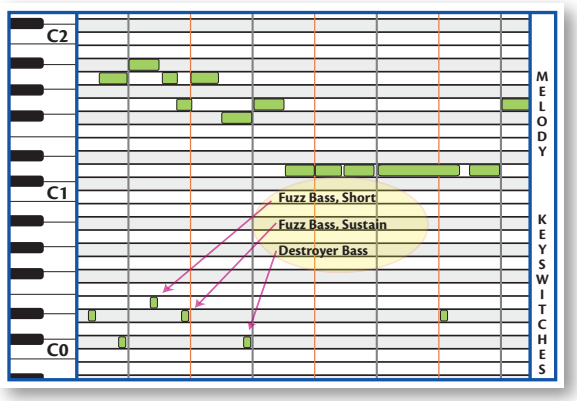
The main reason for opening the PLAY software more than once—especially when using PLAY as a plug-in within a sequencer or other host—is to be able to take full advantage of the multiple cores available in today's high-end computers. If, for example, your computer's CPU has 4 cores, then each of the 4 cores can be independently running separate parts of the software, each part called a "thread."

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.

Keyswitch Instruments

Sometimes one instrument needs to play the sounds of different distortions within a single phrase. For example, some of the notes might sound best with the Destroyer Bass and others with the Fuzz Bass. While it's possible to put all the Destroyer Bass notes in one MIDI track, all the Fuzz Bass notes in another track, and then assign those separate instruments to the separate tracks, there are many reasons that's awkward. Keyswitch instruments can often—though not always—simplify the work.



If you look at The Dark Side Bass Keyswitch, you'll see these notes among the switches:

- C#0 assigned to Destroyer Bass
- D#0 assigned to Fuzz Bass, Sustain
- E0 assigned to Fuzz Bass, Short

Then you can set up your tracks to look like the diagram above. This drawing above is of a Piano Roll, a view available in most sequencers.

The short notes at the bottom are the keyswitches. They sit below the range of the instrument, so they do not make any sound. Notice that these notes are slightly before the note they are intended to affect. The first note in the melody (an A) is preceded by the note that specifies Fuzz Bass, Sustain; that's the very short D#0 near the beginning. Then, before the B-flat plays in the melody, there's a C#0 near the bottom that means: Play the next note(s) with Destroyer Bass. That's followed in the melody by two notes to be played with Fuzz Bass, Short, as indicated by the short E0 keyswitch note.

The second C#0 near the bottom causes not only the G above it to play with the Destroyer Bass, but also the first 4 D's in a row. A keyswitch remains in effect until another keyswitch is set; in this case, the final D#0 stops the Destroyer Bass, and causes the last D and G to play with Fuzz Bass, Sustain.

The exact position in time and the duration of the keyswitches are not important. And their note-off events are ignored. Just make sure the start of the keyswitch is before the first note it is supposed to affect, but after the start of the last note of the previous articulation (if any).

Try to work with these collections when you can, but sometimes you have to break a musical line across two separate MIDI channels, and assign a different instrument to each track.

Creating a Soundscape

Whether listening to a band 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 one common arrangement of the instruments, we might expect the drummer to be in the center with the bass and the keyboard on opposite side of the stereo field. 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 a rhythm guitar and lead guitar are playing notes in the same range, they will stand out from each other better when they seem to be in separate locations in the soundscape that surrounds us.

Panning



To prevent all the instruments from sounding as if they are coming from a single point in space, it's best to pan them to their own separate locations within the stereo field. Most of the instruments sound as if they come from the midpoint of the stereo file before they are panned to one side or the other. The main exception is that in the drum kits the various drums within each kit are already spread out; for example, the kick drum, the snare, and the high hat can each be heard to come from distinct locations.

In the image above, the instrument has been panned about 86% of the way to the left. The levels in the green stereo meters show that the output to the left channel is significantly higher than to the right channel. This difference give listeners the perception of the instrument being played near the left side of the stage.

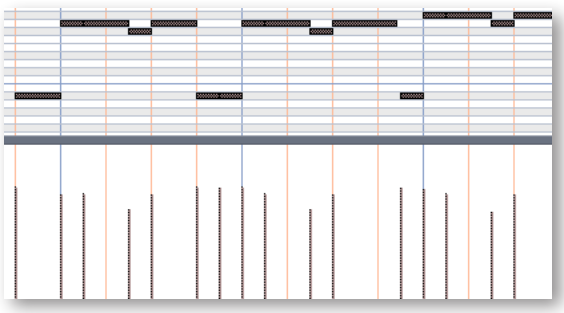
Volume, Velocity, and Expression

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

Volume is just the loudness of the generated sound. Changing volume is basically the same as turning the volume knob on your audio system. The guitar played softly can be cranked up; even when the bass player plays as loud as he can, the sound 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.

And, as with a live band, the various instruments are changing their loudness independently, something you cannot do with the stereo's loudness knob.



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 can also change 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 at the left.

Most modern sample players, PLAY included, can play different samples for different ranges of velocity. For example, the team creating the samples recorded Middle C with any given guitar at ***pp***, ***p***, ***mp***, ***mf***, etc. The team then assigns the ***pp*** samples to, say, velocities 0–25, the ***p*** samples to velocities 26–45, and so on. Because each dynamic level of a guitar has its own timbre, a note's velocity can affect not only its loudness but also its timbre.

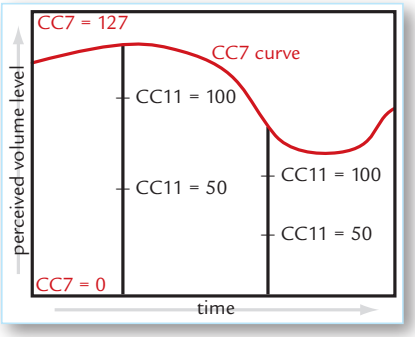
Velocity changes are, therefore, a much better way than volume changes to achieve natural-sounding dynamics. The disadvantage of velocity is that it cannot be changed mid-note. Using loudness and velocity together gives the orchestrator more control over all aspects of dynamics.

In MIDI, velocity is an attribute of the Note-On message; it can only be transmitted at the onset of a note. Volume, in contrast, is a control code (CC7); it can be transmitted at any time.

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 notes 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 of 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.

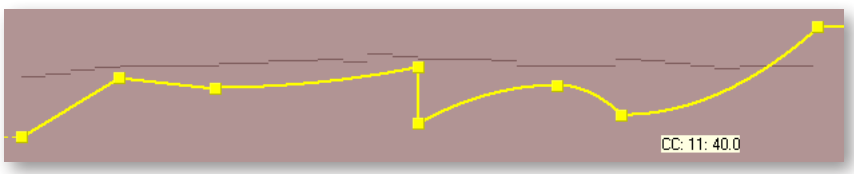
EastWest's choice to use CC11 allows CC7 (volume) to be used in other ways. The usual convention is to use the volume slider in your sequencer to adjust the overall volume level of each track in the mix.



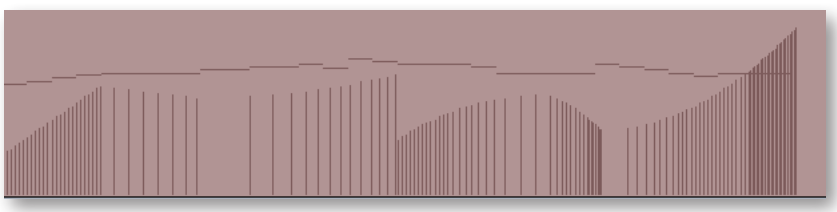
Although the volume and expression controls can be adjusted separately, the volume setting does change how expression affects perceived volume. Think of CC7 as setting an upper limit on the dynamics at any moment. Expression, like most continuously changeable values in MIDI, takes values between 0 and 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 bass player adds musicality and interest to a phrase by changing the the force with which he plays 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. 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 Dark Side makes use of cross-fading in the "Mod XFD" instruments. See the description of these patches starting on page 23.

The basic idea of a cross-fade as used in The Dark Side is that 2 somewhat similar samples—but that differ in the kind of distortion applied—are played back simultaneously. And the mix of how much of each sample makes it into the audio output is controlled by the Mod Wheel. At the bottom of the range you hear only one sound, and at the top of the range only the other sound. In between, you hear gradually less of the first sound and more of the second sound as you push the Mod Wheel up.

Look for these cross-fade instruments in the folders named "_KS and Mod XFD."

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. Outputs that share the same channel are mixed in the PLAY audio engine and written out as a single track. Outputs on different channels are writ-

ten independently to different sequencer tracks, and available to be mixed within the sequencer at a later time.

ADVANCED: Note that the host 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.

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