

Constructor™



Version 1.1, Build 1

Constructor™

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Constructor™

Introduction

Constructor™ is a powerful multi-instrument, cross platform generic Instrument editor.

Many, if not all, samplers have their own editors presented as interfaces to their playback engines. Sometimes these editors are capable, sometimes not. Since the manufacturers have to focus so strongly on their playback engines, sometimes the creation and editing area isn't as powerful as it can be. Additionally, it is always hardwired in to the sample format and layout it is editing.

Constructor™ looks at Instruments generically. You can design an Instrument from scratch, or edit an existing one. The concept is very similar to a graphics program that has to open and save many different graphics formats - such as TIFF, JPEG, GIF, or PNG. When you are editing a graphic, you mostly don't care what format it is. A picture is a picture. To **Constructor™**, an Instrument is an Instrument.

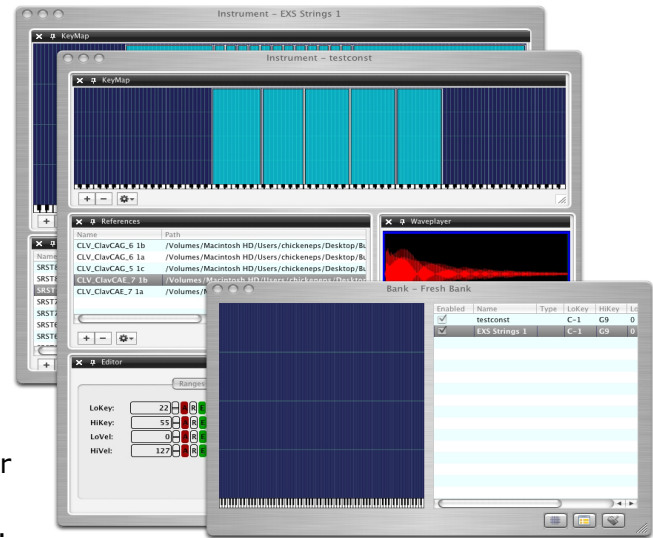
And just like a graphic editor, **Constructor™** uses a superclass format, called a Project, to store all the information that the export format may or may not need. Constructor™ implements some very creative ways to link your output file with your Projects.

Constructor™ supports most professional samplers - hardware and software - made in the past 20 years. Popular and obscure, supported and non-supported. It uses our own time-tested Translator™ technology to read and write a complete set of formats. Constructor™ can resurrect your older-but-loved piece of gear with its ability to create and edit Instruments without having to use the kludgy and archaic interface of the sampler.

Constructor™ is available in both Mac and Windows. Note: In this document, the Mac version is usually pictured, and the term "right-click" can refer to "control-click" on a Mac.

Registered owners are qualified for free updates for the life of the program. Please refer to Update section of this document for information on how to update.

Constructor™ is consistently supported by Chicken Systems, with updates appearing frequently.



Basic Operation

Design Concepts

The absolute, singular, overriding concern of Constructor™ is that it is EASY, SIMPLE, and CLEAR. We hope that if anything else, Constructor™ makes Instrument Creation intuitive, quick and easy.

At every point, we have tried to make operations accessible with a single click or the minimum amount of clicks. Keyboard shortcuts are often used to simplify operations.

Since Constructor™ is a editor that supports a plethora of different import and export formats, complexity threatens to thwart simplicity at many turns. Yet we don't want to offer a impotent program, so special care has been taken to hide complexity, yet provide accessibility.

One way we achieved it through the Constructor™ Multi-Window Docking-Enabled Fully-Sizeable Document Interface. (The CMWDEFSDI for short!)

Despite it's long and complex name, the Instrument Document allows several views to work from. You can close any of them if you need more workflow room, or if you don't care about them at the moment. For the growing number of large monitor/multi-monitor users, the Instrument Document can detach these views into separate dialogs that spread out across your screen(s). You can drag and drop across these views, additionally they are tied into each other so they update each other.

This Document interface strongly improves how "screen real estate" is used. Constructor™ only gives you the information you want to see on your screen, determined BY YOU, not the program. Any additional information is only a click or keypress away. Plus, Constructor™ allows you to save "View Profiles" - a set of views you'd like to work with most on a Instrument-by-Instrument basis, instead of having to live with the interface your sampler gives you.

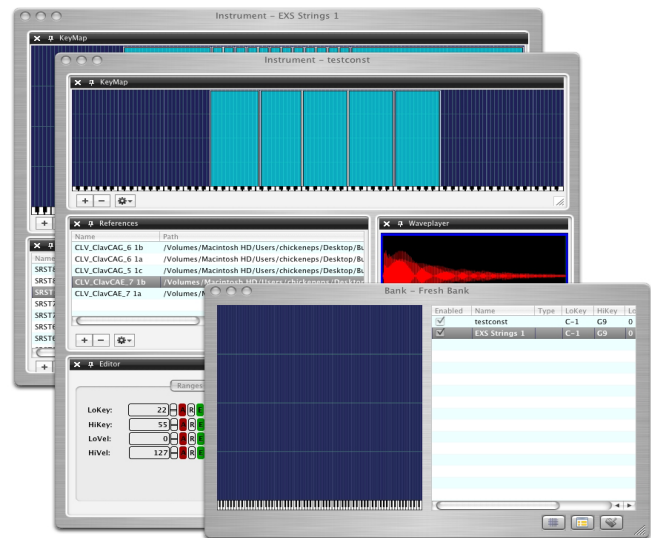
Constructor™ emphasizes ease of use and multiple format support in a complete manner. It is less deep on sample editing then some competing programs, but Constructor™ does not elect to reinvent the wheel. Instead, it allows you to edit samples with external programs by launching them within the Constructor™ framework, and then receiving the results upon closing. This leverages the abilities of the programs that already do a better job, and includes those abilities in Constructor™.

Constructor™ is designed for the "everyman" user. It's industrial strength Instrument composing abilities, user interface flexibility, and support for any format you can imagine make it an essential part of anyone's editing toolbox.

Constructor™ Basics

Constructor™ includes two types of Document interfaces. Most of your work in Constructor™ revolves around a document called an Instrument. This is also called a Preset or a Program in some samplers. You can think of an Instrument as a single Document, like you would a Text file in your computer. There is a another document called a Bank, the purpose of which is to gather Instruments into a Collection and represent them in that manner.

For specific information on Instruments, go to the Instrument section of this document. For specific information on Banks, go to the Bank section of this document.



Instrument Basics

All Constructor™ Instruments are made up of basic building blocks called Sample References. A Sample Reference is simply a mono or stereo sample that the Instrument plays under certain circumstances.

The primary purpose of the Instrument document is to arrange these Sample References in simple or complex ways. When you are done, you can export your work to a file that your sampler can read. For example, with Kontakt, you can save your instrument as an .nki file, which Kontakt can read. If you use an Emu E4 sampler, you can save your Instrument to a Virtual Drive or a Emu formatted hard drive, into an existing Emu Bank or by creating a new one.

You can create new Instruments from scratch, or you can import an existing sampler file to start with, or to merge with existing work.

Again, the whole concept of Constructor™ is to make instrument creation a GENERIC exercise. Just like to a graphics editor, a picture is a picture, to Constructor™ an Instrument is an Instrument, no matter what sampler it comes from.

You might object, saying "an EXS24 Instrument is totally different then an Akai program!" They may be structurally different, sure, but the end result is the same. Both are Instruments, and both are played on keyboard or via MIDI. And when you dig into it, every Akai Program has direct equivalents in a EXS24 structure. (Chicken Systems is the world leader in sampler format structure information and their interchange, largely fleshed out on our popular Translator™ program.)

Constructor™ does is represent these Instruments in the same way, so you see the common way they are structured.

Some formats, especially modern software samplers, are "unlimited", meaning that they have no structural limitations. For example, a single note in Kontakt can have 32 velocity splits, within 8 keyswitches plus release triggers for every sample - that's 32x8x2, that 512 samples for just single note - and that's just an example, you can put an unlimited amount of samples on that note. The only limit is the practical limit, not an arbitrary limit based on the format architecture.

Other formats have some type of structural limitation. For example, IK Multimedia's SampleTank only supports up to 8 velocity splits per note, and only 2 samples can play together simultaneously on a single note. The Yamaha Motif can only layer 4 samples (8 on the XS) at a time, plus a keymap cannot contain more then 128 channels of sound. Akai and Roland have the typical limit of 4 samples per note (although there are creative ways of extending these).

Constructor™ addresses this problem by allowing you to select a Format Limiter for the Instrument you are working with. Once you exceed a certain limit, the program will disallow you from doing that operation. Additionally it often will allow certain interface modifications so the way you organize you instrument is the same way it will be organized on your ultimate destination format.

Instrument Organization

At simplest, Instruments are made up of individual, completely independent, Sample References, which have their own separate set of parameters. However, for various optional or mandatory reasons, you probably will want to organize these in Groups. There are two types of Groups in Constructor™ - View Groups and Parameter Groups.

A View Group is simply a set of Sample References that you want to view at one time, for the purpose of clarity or to edit as one entity. You can have an unlimited amount of View Groups

within an Instrument, and they are saved within the Project File when you save it. View Groups are mostly for your organizational and editing purposes, they are "cheap and disposable".

However, a View Group sometimes has a relationship with how Instruments appear when imported, and how they are organized when exported. When you import a Kontakt Instrument (.nki file), Constructor™ will create a View Group for every Kontakt Group, plus additional View Groups for every velocity split and keyswitches, and so on. When you import a Motif Voice, there will be a View Group for every Element. View Groups created on import are for convenience, but also important when exporting.

For a Motif Voice, those View Groups will dictate which Elements get which Sample References. This is important because that's the basis on how the Sample References create the Waveforms data that the Elements use.

We could go on and on how each format is organized within Constructor, and we won't - instead we refer you to the Format Strategies area of this document. This lists how each format is organized within Constructor™. Once you are familiar with your destination format idiosyncracies, you will feel more comfortable with making more complex Instruments that will be setup and organized more efficiently in your sampler.

Summary: Although Constructor™ is a generic Instrument editor, you still have to pay some attention to any limitations your sampler imposes. Constructor™ seeks, however, to make this as simple and automatic as possible.

The other type of Group is a Parameter Group. Every Sample Reference ultimately has it's own parameter set; that is, it's own envelopes, modulators, pitch, volume, pan, etc. settings. However, you have the option of making a Parameter Group and pointing the Sample Reference to use those parameters. Parameter Groups are "cheap and disposable" - you can make any amount of them and use them or not use them. You can make many versions of parameter sets as Parameter Groups and switch them out whenever you wish.

Like View Groups, Parameter Groups may dictate how destination formats are written out. For example, when a Kontakt file is created, the Parameter Groups become the actual Groups in Kontakt. See Format Strategies for a complete list.

Instrument Document Windows

A Instrument Document window contains a Keymap window, a Sample Reference List, a Group list, a Wavesample viewer and auditioning tool, a Parameter Set Editor, and a Sample Database list.

For complete information on Constructor™ Instruments, Groups, and all other Instrument document information, see the Instrument section in this document.

Banks

Banks are a simple yet powerful way of collecting Instrument and defining them as one unit "of many" or even a single unit.

A Bank in most samplers is a collection Instruments/Programs/Presets and Sample. A GigaStudio .gig file is a Bank - it defines one or more Instruments, and a pool of Samples. The Instruments share those samples among each other. Other Bank structures include SoundFonts, EmulatorX .exb files, Kontakt Multi's and Banks, and SampleCell Banks, and many others. Most samplers have a Bank concept, some don't. (One wishes that EXS24 had a Bank format - it would exponentially improve it's ability.)

In Constructor™, a Bank is not any different - EXCEPT... what you can do with a Constructor™ Bank is very powerful!

At the simplest, a Bank contains one or more Instruments you have made or loaded in Constructor. It does not have to be loaded, it can simply exist as a Project file. You then can export it as a Bank file in a samplers format - a EmulatorX .exb file, a Kontakt Multi .nkm file, a SoundFont or a GigaStudio .gig file.

But that's only the beginning. Let's say you have 4 Instruments that you want to write out as a single Instrument that is split across the keyboard (Bass with the left hand, some hits in the lower middle, and electric piano and brass velocity layered on the top). You can set up a Bank that defines all these Instruments and override ranges, and write it out as a single Instrument!

So a Bank really doesn't have to be "a Bank", you can use them to collect Instruments to provide a "Master Instrument" of sorts.

The key to this sort of operation is that Constructor Banks can dictate which Instruments get merged and which stay as their own entities, plus each entry (we'd like to call it a "Part" like Roland does but we don't want too many terms mixing metaphors) can have it's own Parameter set. Banks can define any number of Parmeter Groups, like Instruments, and you can assign them to any Instrument as overrides to their own Parameter sets.

Using this concept, Banks can also duplicate the operations of a single Instrument document and make them a bit simpler.

For example, a SampleTank Instrument defines a "Region" as a keyrange, which has 2 Oscillators (that is, sample sets) that can have up to 8 velocity splits (not overlapping). You can make 2 Instruments that represent each Oscillator, and use a Bank to link those together. (You could do the same with View Groups in a single Instrument, but you may find this approach better for you.)

Another example is using separate Instruments to define each Keyswitch in a single Instrument. This way, you can focus on a single Instrument at a time and not have it cluttered as one Instrument containing multiple keyswitches. Then, upon export you can merge them all into one another as one Instrument.

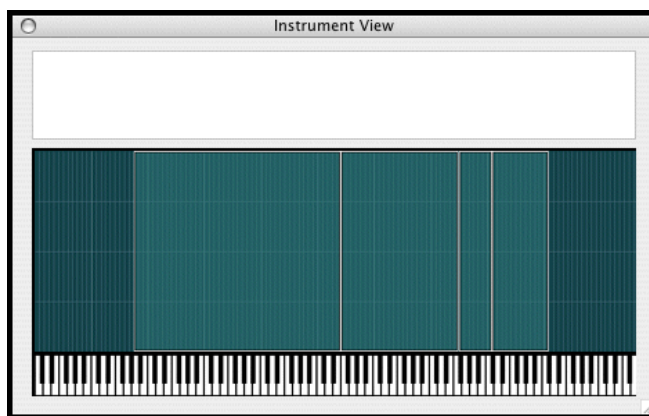
Those are Multiple instrument->Single Instrument applications. You can also use Banks as "collections" of Instruments and output them accordingly for different purposes. For example, lets say you want to start a library of Fantom Patches that rely on external samples. You can have any number of Instruments, which represent Fantom Patches, worked on and store as Constructor project files. You can make any number of Bank Projects to represent a bank of Fantom Patches, and then output that to make one .svd collection, ready to load into your Fantom. (This applies to any Bank format, such as EmulatorX, GigaStudio, SoundFonts, etc.)

For more information on Constructor™ Banks, see the Bank section in this document.

Instruments - Main Screen

Most of your work in Constructor™ revolves around a document called an Instrument. This is called a Preset or a Program in some samplers.

You can think of an Instrument as a single Document, like you would a Text file when you open it in Word, Notepad (Windows), or TextEdit (Mac).



You can have as many Instruments open in Constructor™ as you want. You can close them or minimize them to get them out of the way.

Our long name for the Document interface is the Constructor™ Multi-Window Docking-Enabled Fully-Sizeable Document Interface. (The CMWDEFSDI for short!)

This is a long-winded way of saying that a Document (an Instrument) can be customized to view exactly what you want to see and how much information you want to see.

An Instrument Document contains several areas, called Views, where you view information. All of them can be made invisible, detached into a separate resizable dialog, and resized or moved within the window. This allows full customization of what you see and how you see it.

Keymap

This shows you the present contents of your Instrument in a graphical and editable form, as determined by the View Group(s) you have chosen.

For more information on the Keymap window, please see the Keymap window section in this document.

Sample Reference List

This shows you the present contents of your Instrument in List form, as determined by the View Group(s) you have chosen. You can directly edit this list, and it automatically is updated by other changes in the Instrument.

For more information on the Sample Reference window, please see the Reference List window section in this document.

Groups List

This is a list of your View Groups and Parameter Groups for the Instrument. You can select them and the appropriate Sample References show in the Sample Reference List.

For more information on View Groups, Parameter Groups, and the Group window, please see the Group window section in this document.

Editor

This is an Editor for your Sample References or your Parameter Groups. The parameters that are shown match up to what is selected in the Sample Reference List or the Parameter Group list.

For more information on the Editor window, please see the Editor window section in this document.

Waveplayer

This shows the current Sample Reference that is selected and allows you to play it back. (This is different then the general Instrument playback that is available via MIDI.)

For more information on the Waveplayer, please see the Waveplayer section in this document.

Sample Database

This is the list of Samples that you have in your Database. It is filterable in a variety of ways, and editable from this window.

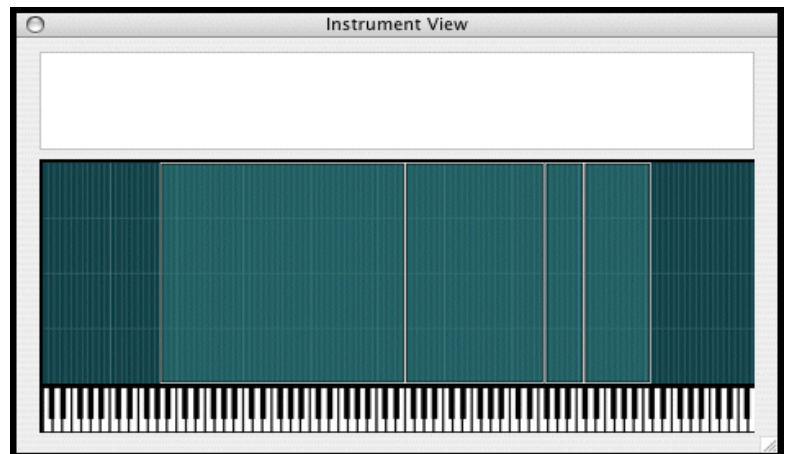
For more information on the Sample Database window, please see the Sample Database section in this document.

Instruments - KeyMap Screen

The Constructor™ Instrument Document KeyMap view shows all the Sample References that are currently selected within the Instrument. You can edit these with your mouse. You can also multi-select them and move them around as you desire.

You can add and delete Sample References by dragging in, dragging out, or selecting and hitting the DEL key on your keyboard.

The KeyMap view is tied into the Reference List and the Group List views.



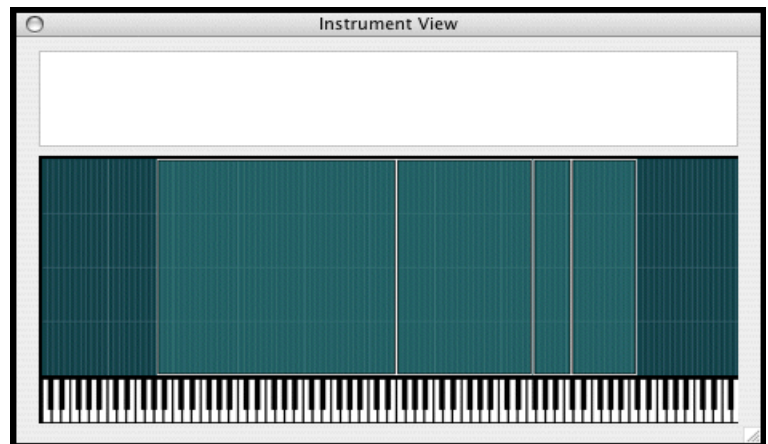
Instruments - Reference List Screen

In Constructor™, all Instruments are made up of basic building blocks that Constructor calls Sample References. A Sample Reference is simply a mono or stereo sample that the Instrument plays under certain circumstances.

For example, if you hit middle C on a keyboard (MIDI note 60) and the Instrument has assigned the sample "dog bark.wav" to that key, that Sample Reference will audibly play.

The conditions in which that Sample Reference will play are called Rules.

Rules can be KeyRanges, Velocity Ranges, KeySwitch numbers, Control Switch numbers, Round Robin numbers, and a host of all sorts of things.



Keep in mind that since Constructor™ supports many different instrument formats, they use often their own terminology. For example, the Kontakt and EXS24 term for Sample Reference is "Zone". The GigaStudio term for Rules is "Dimensions", while Kontakt calls it "Group Start", while EXS24 actually has no term for the concept.

The Constructor™ set of terms is unique, but often represents the most common usage. Most importantly, we believe our terminology helps clarity and gets to the point quicker.

The Reference List shows the currently selected Sample References in your Instrument. The Reference List can be filtered by your own criteria, so you can view AND edit any group of References. These filterings are done by View Groups and Parameter Groups.

The Reference List is tied into the KeyMap view and the Group view. When you change things in the KeyMap view, the Reference List will be changed accordingly. When you select one or more View/Parameter Groups, the Reference List will also change accordingly.

You can also edit Sample References from within the Reference List, as well as add and delete them, using the menus or via drag-drop.

Instruments - Groups

A Constructor™ Instrument Document supports the concept of View Groups. A View Group is simply a collection of Sample References that you want to see at a single time; that is, to filter out what you are seeing in the KeyMap window and the Sample Reference List.

This is a very powerful feature, as you may want to view a single keyrange or velocity range, or a single KeySwitch or Controller switch.

This greatly assists viewing layered references, which hide behind each other in the KeyMap window. It also allows you to edit certain parts of an Instrument while keeping other parts intact and out of sight, out of mind.

View Groups are “cheap and free”, you can create any number of them for later recall and use. A Sample Reference can belong to any number of View Groups.

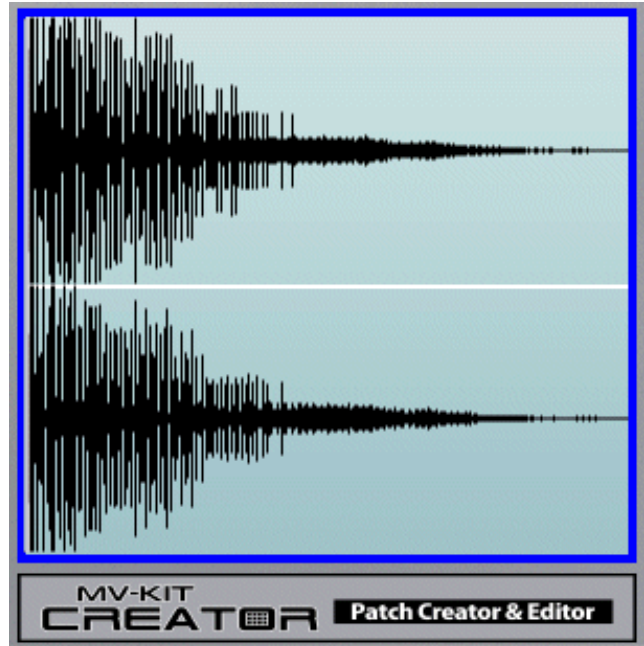
Although View Groups have no direct bearing when you export a Constructor Instrument, you can set them to influence how the exported Instrument will be organized. Some examples of this are a EmulatorX/E4 Voice and the arrangement of Multisamples, or Oscillators in a SampleTank Instrument. Most of the time this is the function of a Parameter Group, but View Groups can be used this way as well.

The “Smart” Setting

Typically you populate a View Group by manually including the Sample References by drag-drop or using the menus in the Reference List or KeyMap Window. The Smart setting allow you to set certain criteria so the Sample References “come to the View Group” instead of having you manually add them.

For example, if you set Smart to include Velocity Range 96-127, any Sample Reference that you include or modify within that setting will automatically include itself in that View Group. This is all done behind the scenes.

See Format Strategies to see if your destination format uses View Groups to organize itself.



Instruments - Editor

The Constructor™ Instrument Document's Editor gives you the ability to edit the parameters of whatever edit context you have selected.

Often you edit a Sample Reference's parameters. However, you may edit a Parameter Group, or the global Instrument parameter set.

There are 8 areas: Ranges, Sample, Pitch, Filter, Amplitude, Modulators, EQ, and Effects.

Ranges

Sample

Pitch

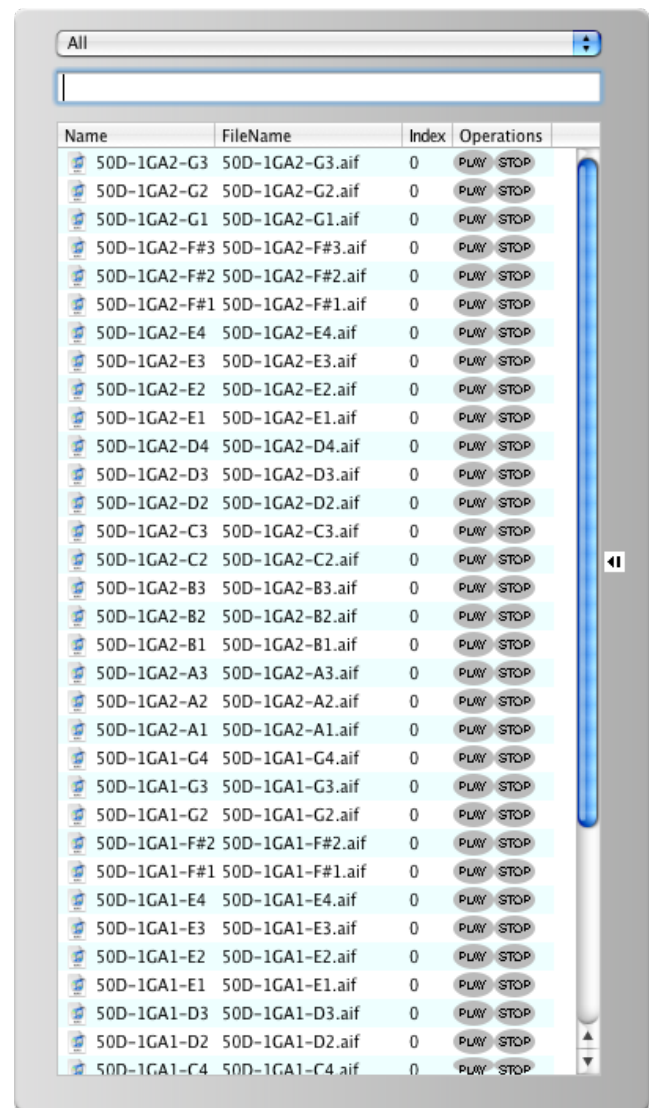
Filter

Amplitude

Modulators

EQ

Effects



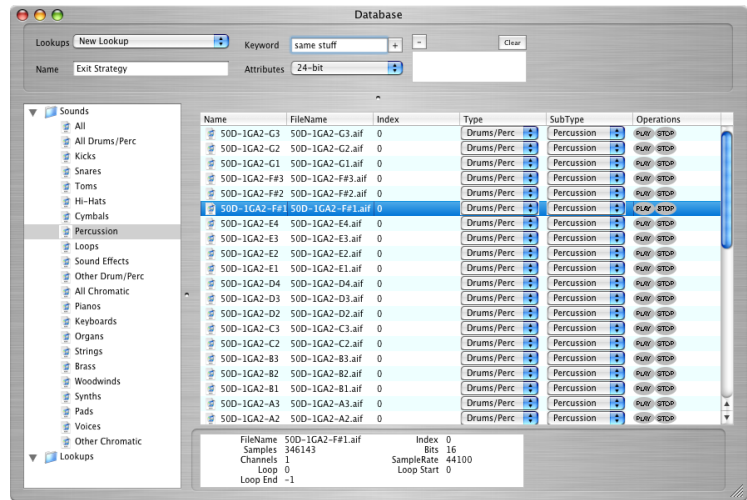
Name	FileName	Index	Operations
50D-1GA2-G3	50D-1GA2-G3.aif	0	PLAY STOP
50D-1GA2-G2	50D-1GA2-G2.aif	0	PLAY STOP
50D-1GA2-G1	50D-1GA2-G1.aif	0	PLAY STOP
50D-1GA2-F#3	50D-1GA2-F#3.aif	0	PLAY STOP
50D-1GA2-F#2	50D-1GA2-F#2.aif	0	PLAY STOP
50D-1GA2-F#1	50D-1GA2-F#1.aif	0	PLAY STOP
50D-1GA2-E4	50D-1GA2-E4.aif	0	PLAY STOP
50D-1GA2-E3	50D-1GA2-E3.aif	0	PLAY STOP
50D-1GA2-E2	50D-1GA2-E2.aif	0	PLAY STOP
50D-1GA2-E1	50D-1GA2-E1.aif	0	PLAY STOP
50D-1GA2-D4	50D-1GA2-D4.aif	0	PLAY STOP
50D-1GA2-D3	50D-1GA2-D3.aif	0	PLAY STOP
50D-1GA2-D2	50D-1GA2-D2.aif	0	PLAY STOP
50D-1GA2-C3	50D-1GA2-C3.aif	0	PLAY STOP
50D-1GA2-C2	50D-1GA2-C2.aif	0	PLAY STOP
50D-1GA2-B3	50D-1GA2-B3.aif	0	PLAY STOP
50D-1GA2-B2	50D-1GA2-B2.aif	0	PLAY STOP
50D-1GA2-B1	50D-1GA2-B1.aif	0	PLAY STOP
50D-1GA2-A3	50D-1GA2-A3.aif	0	PLAY STOP
50D-1GA2-A2	50D-1GA2-A2.aif	0	PLAY STOP
50D-1GA2-A1	50D-1GA2-A1.aif	0	PLAY STOP
50D-1GA1-G4	50D-1GA1-G4.aif	0	PLAY STOP
50D-1GA1-G3	50D-1GA1-G3.aif	0	PLAY STOP
50D-1GA1-G2	50D-1GA1-G2.aif	0	PLAY STOP
50D-1GA1-F#2	50D-1GA1-F#2.aif	0	PLAY STOP
50D-1GA1-F#1	50D-1GA1-F#1.aif	0	PLAY STOP
50D-1GA1-E4	50D-1GA1-E4.aif	0	PLAY STOP
50D-1GA1-E3	50D-1GA1-E3.aif	0	PLAY STOP
50D-1GA1-E2	50D-1GA1-E2.aif	0	PLAY STOP
50D-1GA1-E1	50D-1GA1-E1.aif	0	PLAY STOP
50D-1GA1-D3	50D-1GA1-D3.aif	0	PLAY STOP
50D-1GA1-D2	50D-1GA1-D2.aif	0	PLAY STOP
50D-1GA1-C4	50D-1GA1-C4.aif	0	PLAY STOP

Instruments - Waveplayer

Constructor™ has it's own Waveplayer so you can play any Sample Reference in your Instrument.

(This is separate from the standard Instrument auditioning feature, where you have the Instrument loaded into memory (though it streams samples) and are able to play it via MIDI.)

The Waveplayer shows the waveform of the current Sample Reference selected. This sample data can exist in any location - from a WAVE file, or an Akai CD, or a SoundFont, etc.



Loops are supported and are shown by the shaded area within the view. If there is no shaded area, there is no loop.

You can play it, replay it, rewind or fast-forward it. Plus, you can drag the mouse around the window, moving the cursor, similar to how iTunes works. Most of the time, though, this is unnecessary, since most instrument samples are short.

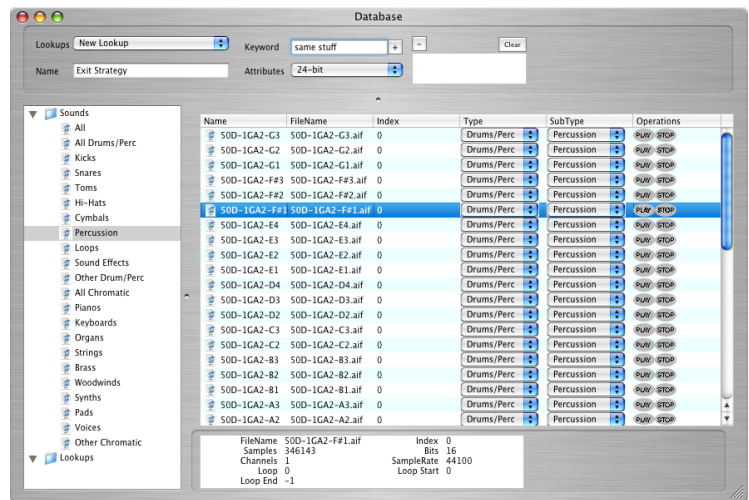
Instruments - Sound Database

Constructor™ has it's own Sample Database where you can list all the samples available on your computer. This is extremely handy when it comes to accessing the sampels that you want to include in your instrument - easily and quickly.

Metatags and keywords are fully supported. You can categorize them in any way you want, in any unlimited fashion.

One powerful, unique and special feature is the ability to access samples from ANY lcoation - whether they are stored within a GigaStudio file or SoundFont, or even a Roland, Akia, or Emu CD, for instance.

A more complete form of this database is included in Chicken Systems SampleMange application. The version inegrated here is a limited version especially designed for Constructor™.



Multisamples - Main Screen

Many times, you will work an Instrument that turns out to be a Multisample.

Constructor™'s definition of a Multisample is a KeyMap that contains Sample References using 2 Rules - KeyRange and Velocity Range, with no overlapping.

Since this is such a common usage, Constructor™ has a special file type and document called a... Multisample!

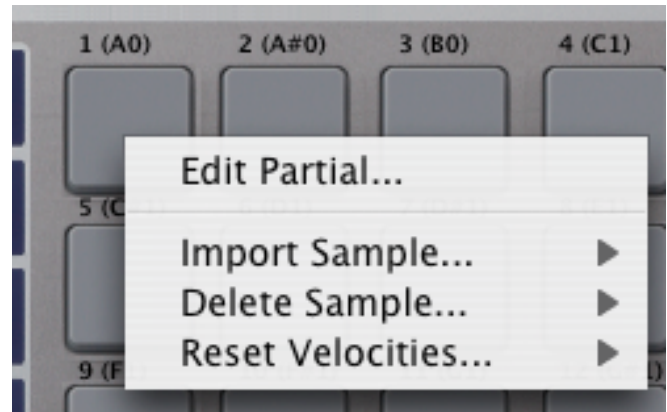
A Multisample is really identical to an Instrument - it's just a limited version of one. It contains the Sample Reference limit described above, plus it contains just one Parameter Group. Each Sample Reference, however keeps its own set of:

- * Tuning
- * Volume
- * Pan
- * Loop Points and Loop Type

Following that paradigm, the Multisample Document is a very limited version of the Instrument document.

You can save Multisamples as .multisample files, which can be loaded into Constructor in various ways. You can merge them into existing Instruments, or open them as their own Instruments. You can reference them in Banks. (This is handy for Motif users. Just make a Bank and load up the Multisamples you want "per Element". The Multisamples Parameter Group serves as the Elements parameter set.)

You may want to develop your library of Multisamples, to use in various future Instruments. You can edit these parameters in the Partial/Patch Editor. Please remember that except for tuning, tuning, and looping, these parameters will not be reflected when playing the pads via MIDI or by clicking on the Pads. The streaming playback engine is has not been developed to that point yet, although we are working toward it.

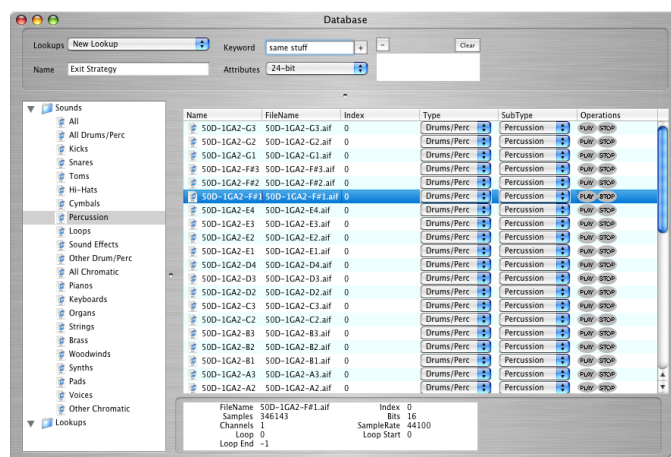


Banks - Main Screen

An important part of Constructor™ is the Bank.

Banks are a simple yet powerful way of collecting Instrument objects and defining them as one unit “of many” or even as a single unit.

At the simplest, a Bank contains one or more Instruments you have made or loaded in Constructor™. It does not have to be loaded, it can simply exist as a Project file or an external file (such as a .nki or .exs file). You then can export the Bank Document as a Bank file in a samplers format - a EmulatorX .exb file, a Kontakt Multi .nkm file, a SoundFont or a GigaStudio .gig file - or...



That's only the beginning. Let's say you have 4 Instruments that you want to write out as a single Instrument that is split across the keyboard.

- * Bass with the left hand
- * Brass Hits in the lower middle
- * Electric piano and pop brass velocity-layered on the top

You can set up a Bank that defines all these Instruments and override ranges, and write it out as a single Instrument! A Bank really doesn't have to be “a Bank”, you can use them to collect Instruments to provide a “Master Instrument” of sorts.

The Bank window has three windows on it; Instrument List, Arrangement Window, and Editor.

Instrument List

These are the Instruments assigned to this Bank. You can dictate under what Rules the entire Instrument gets played. Rules are KeyRange, VelRange, Keyswitch, Controller Switch, Release Trigger, and RoundRobin. You can turn on and off an Instrument, so you can have plenty listed but they will not be included in the exported destination file.

An important Parameter is Bank Number and Preset Number. The terminology comes from the MIDI spec of 128 presets for every bank, with a total of 128 banks total. However, Constructor™ extends this concept - if two Instruments are set to the same Bank and Preset Number, they will be merged. So even if the export format you are aiming at is not a Bank format (like a .gig file or SoundFont), if you set some or all the Bank/Preset Numbers to the same number, you will wind up with a single exported Instrument.

Arrangement Window

This shows you the results of the parameters set in the Instrument List.

Editor

This shows the Parameter Set applied to the selected Instrument(s). You can edit this freely.

Application of Banks

Constructor™ Banks can dictate which Instruments get merged and which stay as their own entities, plus each entry (we'd like to call it a “Part” like Roland does but we don't want too many terms mixing metaphors) can have it's own Parameter set. Banks can define any number

of Parameter Groups, like Instruments, and you can assign them to any Instrument as overrides to their own Parameter sets.

Using this concept, Banks can also duplicate the operations of a single Instrument document and make them a bit simpler.

For example, a SampleTank Instrument defines a "Region" as a keyrange, which has 2 Oscillators (that is, sample sets) that can have up to 8 velocity splits (not overlapping). You can make 2 Instruments that represent each Oscillator, and use a Bank to link those together. (You could do the same with View Groups in a single Instrument, but you may find this approach better for you.)

Another example is using separate Instruments to define each Keyswitch in a single Instrument. This way, you can focus on a single Instrument at a time and not have it cluttered as one Instrument containing multiple keyswitches. Then, upon export you can merge them all into one another as one Instrument.

Those are Multiple instrument->Single Instrument applications. You can also use Banks as "collections" of Instruments and output them accordingly for different purposes. For example, let's say you want to start a library of Fantom Patches that rely on external samples. You can have any number of Instruments, which represent Fantom Patches, worked on and store as Constructor™ project files. You can make any number of Bank Projects to represent a bank of Fantom Patches, and then output that to make one .svd collection, ready to load into your Fantom. (This applies to any Bank format, such as EmulatorX, GigaStudio, SoundFonts, etc.)

Proprietary Dialog

The **Proprietary Dialog** allows viewing, reading, and writing objects on drives, volumes, CD's, or Virtual Drives that are not readable by a computer due to its special file system that is written on the drive. This is how samplers used to save files..

When you open the Proprietary Dialog, it looks for all peripherals attached to your system and sees if any of them have a proprietary format on them. If it does, it adds it to it's list. It also locates all Virtual Drives that are in your Images folder. When it is all done, it sorts them according to format, and populates the two popup menus on the top of the dialog.

Pad Contents	F1
Patch/Partial Editor	F2
Database	F3
Database Editor	F4
Preferences	F5

To access a drive, select the desired format in the Type popup. The drives show in the Drive popup. Select the one you want, and the contents of the root show underneath in the list.

Views

There are 3 Views in which you can browse your drives. The first is a TreeView heirarchial list, where you click on triangles (Mac) or plus-signs (Windows) to expand containers to get to your objects. The second is a single view list, where you double click on folders to get to your objects (or click the one of the first two items to go backwards), and a Column View list where you see your objects from left to right. These are all just like the Finder (Mac) views.

Modes

There are two Modes the Proprietary Dialog can be in, whether you know it or now. One is where you are selecting an object to work with (normally called "opening"), and the other is where you are selecting an area and/or object to Save something. It's just like the Open?Save dialogs in your computer under normal operation. You know which Mode you are in usually by context, but if you are unsure, the words Open or Save are on the Title bar and on the button below.

Modal and Modeless

Unlike the typical computer Open/Save dialogs, you can use the Proprietary Dialog in a Modeless way as well as Modal. Modeless means that you can put the dialog up, and leave it floating while you can still access things underneath. Usually you do this in case you want to drag items off the dialog. Modal means that the you have to select something before any other work in the program can be done. The computer Open/Save dialogs work this way. (Any Save operation is always Modal, however.)

To swtch between Modal and Modeless, go into Preferences-General and select your option.

Usage

In any file system, there are two types of items: Containers and Objects. Containers hold Objects and also other Containers. For example, a "Folder" (also called "Directory") is a Container and a "File" is a Object. Folders contains Files and other Folders. In a very general sense, what you do in the Proprietary Dialog is to either select a Object or save an Object. Aside from a little blurring of the lines, this is what you are doing.

There are a couple exception to this, however, but it is easy to understand. First, there is the concept of Banks and Instruments (just like the two types of documents in Constructor™), or vewing Samples inside Instruments. A Bank is really a Container, but since Constructor™ defines the concept of a Bank being an Object, you can choose this type of a Container as an Object.

Additionally, a Instrument should be an Object, but it actually contains samples, which are the TRUE base object. (In fact, the true base object in every case is a single sample.) To clear this up, we regard Instruments as an Object, since most of the time that is what you are concentrating on.

Reading

To open a Object from a Proprietary Drive, select the "File-Open Proprietary..." menu. This opens the Proprietary Dialog. Select the object you want to load, and either drag it off the dialog (Modeless only) or click the Open button. Note: depending on the type of View, you sometimes can double-click the Object and that validates as a selection; however, many times this simply expands the item.

Upon opening the Object, Constructor™ will create the appropriate Document that represents the object you have selected.

Writing

To write to a Proprietary Drive, select the "File-Save Proprietary..." menu. This again opens the Proprietary Dialog. Select wherever you want to save your document, and Constructor™ will save it. If you select a Container (usually a Folder-type of thing) the document will be saved in that Folder. If you choose a Object/File, that Object/File will be replaced, but only after a customary warning.

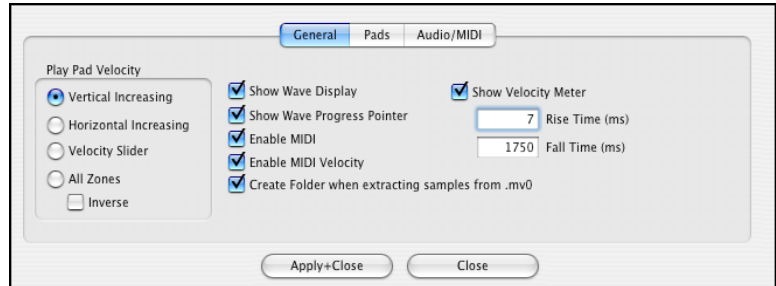
The Proprietary Dialog shows CD's in Save mode, even though its not a writable media. In those cases, if you ask Constructor™ to save your Instrument/Bank to a CD, Constructor™ will ask you if you want to compose a Virtual Drive of that CD. Constructor will make a Virtual Drive of that CD, and then write to it. It will be up to you to "reburn" the Virtual Drive to a CD. It is recommended to make a Virtual Drive first.

Formatting

You can format a proprietary Drive or Virtual Drive by selecting the Special-Format menu. This formats a existing drive or Virtual Drive to your selected format.

Special Features - Proprietary Drives

Constructor™ supports reading and writing of "Proprietary Drives". These are special disk formats that older hardware samplers used to use and are not readable in Mac or Windows computers. (A more specific explanation is below.)



Constructor also supports Virtual Drives. A Virtual Drive is just a raw data image file that you use for reference or for later writing to a CD. Please see the Virtual Drives section for more information on Virtual Drives.

Reading

To read from a Proprietary Drive, select the "File-Open Proprietary..." menu. This opens the Proprietary Drives dialog, which shows all your Proprietary Drives, CD's, or Virtual Drives registered on your computer. Select whatever you want to load, and Constructor will create the appropriate Document that represents the object you have selected.

Writing

To write to a Proprietary Drive, select the "File-Save Proprietary..." menu. This again opens the Proprietary Drives dialog - select wherever you want to save your document, and Constructor will save it.

Since CD's are not a writable format, if you ask Constructor to save your Instrument/Bank to a CD, Constructor will ask you if you want to compose a Virtual Drive of that CD - if you elect to, Constructor will make a Virtual Drive of that CD, and then write to it. It will be up to you to "reburn" the Virtual Drive to a CD, where your sampler can read that.

Formatting

You can format a proprietary Drive or Virtual Drive by selecting the Special-Format menu. This formats a existing drive or Virtual Drive to your selected format.

Details

In the 1980's and 1990's, samplers were made from hardware, which were really specialized non-PC/Mac computers. Even now, hardware sampler workstations like the Motif or Triton are specialized "embedded-system" computers. (A piece of trivia, many of these keyboards are Linux based embedded systems.)

Since the modern day Windows and Mac file systems (FAT, NTFS, and HFS respectively) weren't so established when those samplers were designed, they used their own file systems. So an Akai CD will not show up natively in a Windows or Mac computer, because it cannot read it's file system. If you own one of these samplers, you probably know this already.

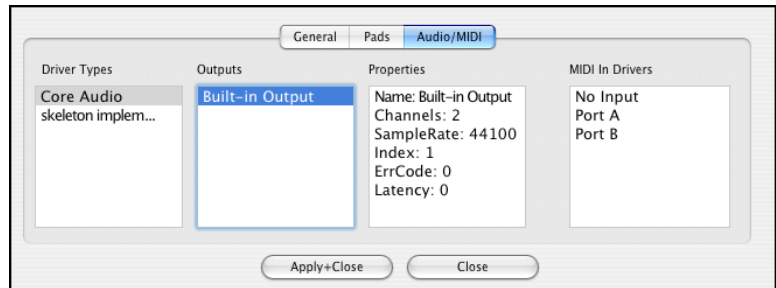
Constructor™ is designed to fully support these disks and file systems, both on the Mac and on Windows. Part of Constructor™'s power is that it can design Instruments and then write them out not just to the files that these older samplers can read, but also that it can write them to the disk that these samplers read.

You can open a proprietary Instrument or Bank by selecting the File-Open Proprietary... menu. You can save an Instrument or Bank to a Proprietary Disk location by selecting the File-Save Proprietary... menu.

Using Constructor with a “proprietary format” Sampler

Your first concern would be what type of SCSI Drive do you use with your sampler. It may be a SCSI CD-ROM Drive, or a removeable SCSI drive like a ZipDrive or Syquest drive, or a fixed SCSI Drive. Or it could be a memory card, if you have purchased a modern SCSI card retrofit.

We do not recomend the use of fixed SCSI drives only, if you can help it, with Constructor™. Probably the only way of doing this correctly is hooking up the SCSI Drive to both the computer and the sampler all the time. This is doable, though it's much easier to use a ZipDrive or removable media (like a CD or memory card), so you can write your Instruments freely and not worry about all the interconnectivity.



For instance, you can use a USB ZipDrive and format and write to that drive. Then eject the ZipDrive and insert it into your SCSI ZipDrive hooked up to your sampler, and load away. Or, if you use a CD-ROM Drive, create a Virtual Drive and write things onto that, and burn them to CD. Then insert that into your SCSI CD-ROM Drive and load away.

The essence of all this is that you use your computer as a Librarian. All your Instruments will be in your computer. Then, use your disks and drives as copies to access in your sampler. When you need a new copy or an updated copy, go to your computer and manufacture it. ZipDisks and memory cards are erasable, and CD-R's are cheap.

Using Proprietary disks with Constructor™

Assuming you do not own (or care about) the sampler, we suggest making Virtual Drives (images) of all your CD's and disks. Once you do that, you can access them within Constructor™, and Constructor™ will remember premantly the item's locations. Then any Instrument you create will reference those without having you to duplicate them - or course, you have to anyway, but at least you'll have the original source in case you need them.

Special Features - Virtual Drives

Constructor™ fully supports Instruments that are stored and will be read by older Akai, Emu, Roland, Ensoniq, and other hardware samplers. These can be CD's or SCSI drives (such as Zip, Jaz, Syquest, or fixed drives).

Due to the removable nature of these systems, Constructor™ needs to address the non-existence of these sounds when "the CD is not in the drive". This is where Virtual Drives come into play.

You can create, read, and write Virtual Drives with Constructor™. Virtual Drives are usually large files you create using Constructor™; they are our term for Images that represent the CD's or SCSI drives/disks.

We advise that you turn your CD's into Virtual Drives, over some time depending on how many you have. This way, your CD's will always be accessible to Constructor™'s databases and Project files. When you create your new Instruments, or edit old ones, the data will always be accessible.

Note: *If you are not working with Akai, Emu, Ensoniq, Roland CD's, drives or samplers, Virtual Drives are no concern to you.*

Adding Virtual Drives

You can add Virtual Drives (that is, raw data disk images) for access into Constructor™ by moving those files, or creating aliases of those files or the folders it resides in, in the Finder/Explorer and putting them into your Images folder, which is located in these areas:

Mac

/Users/[you]/Library/Application Support/Chicken Systems/Constructor

Windows XP/2000

%systemdrive%\Documents and Settings\[you]\Application Data\Chicken Systems\Constructor

Windows 7/Vista

%systemdrive%\Users\[you]\AppData\Roaming\Chicken Systems\Constructor

Special Features - Audio, Instrument and Bank Playback

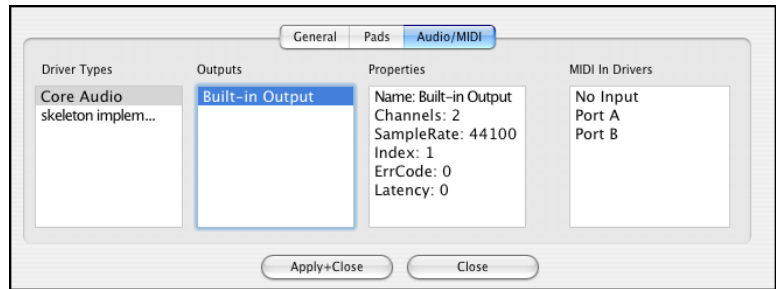
Constructor™ has it's own Instrument and Bank auditioning facility. When an Instrument of Bank is selected (the foremost window), it is loaded into the playback engine and can be played back via MIDI or the onscreen MIDI keyboard.

At this stage, the playback engine does not render the Parameters, such as Envelopes, LFO's, modulators, effects, and the like. it does render Volume, Tune, Pan, and Loops accurately.

The intention at this stage is simply to allow you to hear the samples, what it basically sounds like, and how they are arranged. Future versions of Constructor will improve on this engine.

Preferences

Constructor has a massive amount of optional parameters you can invoke on everything from the dialog view to the specifics of the translations that you perform. It's easy to get intimidated by the sheer amount of preferences, but don't be. They are logically laid out and hopefully intuitive. MOST IMPORTANTLY remember that all of them are optional, they are not necessary for successful basic operation.



And this isn't the only Preference dialog! This is only the general ones. Preferences for specific formats are in the Format Preferences dialog section.

Clicking the top pulldown menu determines what shows in the Preference pane. Click below on what Preferences you want Help for.

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Format Strategies

Constructor uses two modes of operations when building Instruments - Free, and everything else.

Free means that any limits are ignored - you can have as many velocities, layerings, switches, and controllers as you want. No limits. Many software samplers have no limits (they do, just just are so large they are impractical at that stage). These include Kontakt, Independence, EXS24, HALion, MachFive, and many more.

Everything Else means... everything else. Many formats have structural limitations to them, and it's mandatory Constructor builds something within those structural limits.

Just as vital, you want to organize areas so they line up with those structures. For example, a Motif XS Voice has 8 Elements. Each Element can access one "Waveform", which is a KeyMap with no more than 128 channels of samples, variable keyranges and velranges, but no overlapping.

Constructor has certain ways to force your operations to adhere to those structures. Every Instrument you can dictate a "Format Limiter" which imposes a set of rules that your instrument must adhere to. If you attempt an operation that goes beyond the structure, Constructor will abort the operation. Constructor will also create some preset View Groups that will aid you in staying within the structure limits.

In addition to that, the best strategy is for you to know what the limits should be. With that in mind, below is a list of Format Strategies for every format that Constructor supports. Please read the areas you are interested and learn them; it will make your Instrument building experience a lot easier with no guessing.

Akai S-1000, S-3000, S-5000, MPC-4000, MESA, Creamware Pulsar

An Instrument is called a Program. A Program can have up to 99 KeyGroups, which are keyranges that can access up to 4 samples. Note: On the S-5000, they can be stereo samples. "Stereo samples" on the S-1000/3000 are split into two mono files and take up 2 slots in the KeyGroup.

Samples have their own volume, filter cutoff, pan and Sample Start controls. Keygroups handle the Envelopes, LFO's, and other real-time parameters.

Keygroups can overlap each other, which greatly expands the amount of possible velocity splits for example. Programs can be layered as well, so if you run out of 99 KeyGroups, another Program can be created.

Format Strategy: Create

Akai MPC-3000, 2000

An Instrument is called a Program. A Program can have up to 99 KeyGroups, which are keyranges that can access up to 4 samples. Note: On the S-5000, they can be stereo samples. "Stereo samples" on the S-1000/3000 are split into two mono files and take up 2 slots in the KeyGroup.

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Format Strategy: Create

Akai MPC-1000, 2500, 500, 5000

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Format Strategy: Create

Roland S-7x, XV-5080

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Format Strategy: Create

Roland Fantom

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Format Strategy: Create

Roland MV-8000

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Format Strategy: Create

Emu EmulatorX

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Format Strategy: Create

Emu Emulator 4 (EOS)

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Format Strategy: Create

Emu Emulator 3, ESI

An Instrument is called a Program. A Program can have up to 99 KeyGroups, which are keyranges that can access up to 4 samples. Note: On the S-5000, they can be stereo samples. "Stereo samples" on the S-1000/3000 are split into two mono files and take up 2 slots in the KeyGroup.

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Format Strategy: Create

Ensoniq EPS/ASR-10

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Ensoniq ASR-X

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Format Strategy: Create

Kurzweil K-2000, 2500, 2600

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Format Strategy: Create

Yamaha Motif

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Format Strategy: Create

Korg Triton/M3

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Format Strategy: Create

Alesis Fusion

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Format Strategy: Create

Native Instruments Kontakt

An Instrument is called a Program. A Program can have up to 99 KeyGroups, which are keyranges that can access up to 4 samples. Note: On the S-5000, they can be stereo samples. "Stereo samples" on the S-1000/3000 are split into two mono files and take up 2 slots in the KeyGroup.

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Format Strategy: Create

Native Instruments Battery

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Format Strategy: Create

Native Instruments Reaktor

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Format Strategy: Create

Tascam GigaStudio

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Format Strategy: Create

Apple EXS24

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Format Strategy: Create

Yellow Tools Independence

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Format Strategy: Create

Digidesign Structure

An Instrument is called a Program. A Program can have up to 99 KeyGroups, which are keyranges that can access up to 4 samples. Note: On the S-5000, they can be stereo samples. "Stereo samples" on the S-1000/3000 are split into two mono files and take up 2 slots in the KeyGroup.

Samples have their own volume, filter cutoff, pan and Sample Start controls. Keygroups handle the Envelopes, LFO's, and other real-time parameters.

Keygroups can overlap each other, which greatly expands the amount of possible velocity splits for example. Programs can be layered as well, so if you run out of 99 KeyGroups, another Program can be created.

Format Strategy: Create

Cakewalk Dimension (SFZ)

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Format Strategy: Create

CamelAudio Alchemy

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Format Strategy: Create

Propellerheads Reason NN-XT

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Format Strategy: Create

Steinberg HALion 1 and 2

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Format Strategy: Create

SoundFont

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Format Strategy: Create

Digidesign SampleCell

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Format Strategy: Create

IkMultimedia SampleTank

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Format Strategy: Create

Vember Audio ShortCircuit

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Format Strategy: Create

Steinberg LM-4 mrk 1 and mrk II

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Format Strategy: Create

Tutorials

Nothing available yet; however, there are many videos and movies listed at the Chicken Systems Movies site; see www.chickensys.com/movies/constructor

Troubleshooting

Your Constructor™ program should be rock-solid and give you no problems. However, there is always stuff that can go wrong.

You can start from scratch as far as Preferences go by trashing your preferences. You can do that by going to:

Mac

Go to:

/Users/[you]/Library/Preferences, delete **com.chickensys.constructor.plist**

Windows

Go into the Registry and delete **the HKEY_CURRENTUSER/Software/Chicken Systems, Inc/Constructor** key.

Mac and Windows

Press SHIFT when starting the program.

This only trashes your working preferences; it does not trash your registration codes etc.

For all other queries, please contact **Chicken Systems Technical Support** at the contact points listed under Contacting Technical Support in this document.

FAQ

Here's a list common answers to common questions. Past that, feel free to contact Technical Support at the contact points listed under Contacting Technical Support.

There is a online Constructor™ FAQ up on the Chicken Systems Web site:

www.chickensys.com/support/software/constructor/faq

It is extremely **LIKELY** that your question is answered here! **PLEASE** do not contact us until you have read completely through this resource. It probably will answer your question.

If I import an EXS24 (.exs) file in, does Constructor completely rewrite it if I choose to resave it?

Not usually. When Constructor™ imports a file in, it remembers where it came from and it's exact makeup. If you choose to resave it without many modifications - especially added samples or manipulated Groups - it will simply modify the file with the added changes.

If I import a Kontakt file (.nki) file in, there are some parameters that do not appear in the editor Does Constructor completely rewrite it if I choose to resave it, and do I lose those parameters?

As a whole, no. Constructor™ has a more complicated internal system then just saving items generically. If you resave to the same format, in almost all cases the same parameters AND setup will follow. The exceptions when you make numerous changes, in which case Constructor™ will tell you when it loses parameters.

I have a Emu CD-ROM, but it does not show up in Constructor.

Try refreshing the Proprietary Dialog. The dialog usually doesn't update itself based on disk insertions or file changes.

Are floppy disks supported?

Not yet, however, floppy disk images (we call them Virtual Drives too) are supported. To make these, you need a Windows computer with a internal floppy drive and our Translator Free program (Translator works too). On Windows, you need to install the OmniFlop driver, which is special replacement floppy driver that enables Translator to read these floppies. Get it at www.shlock.co.uk/Utils/OmniFlop/OmniFlop.htm. Follow the instructions, then use Constructor™ to view them as Virtual Drives.

Constructor will support reading and writing floppies in a future version, but only on Windows and with a internal floppy drive.

Does Constructor run on Windows Vista or Windows 7?

Yes, it is fully supported on both operating systems.

Constructor crashed when I attempted an operation; what should I do?

Check your work, and if you think you did everything correctly, send the Instrument or Bank Project file that you were trying to operate on to the Chicken Systems Bug Reports page.

How do I update Constructor?

Use the Check for Updates menu under Help when Constructor™ is running, or go to the Update Area at www.chickensys.com/constructor/userupdates. Download the file and follow the instructions.

Bug Reports

Constructor™ should not crash or show errors, but reality insists that all programs do at some point. Constructor™, since it deals with many undocumented formats and files created from many sources, can be especially vunerable.

If you have a problem with a translation, or receive an error within Constructor™ concerning a file, the BEST way to communicate that is to file a Bug Report and send us the source file - the initial file, not the translated file - with a brief description of what the problem is.

To use the Bug Reports system, go to Help-Bug Reports in the program. It connects you to our Bug Reports website, has a form you fill out that gets the information we need from you, and permits you to send us the source file directly from that web page.

We strongly recommend you to use the Bug Reports page first! We do invite you to Email or Chat us or call us with a problem, but most of the time we just direct people to the Bug Reports web site to document the information in writing and for them to send us the file. Constructor™ has many users across the globe, and it is not possible to track all our users particular questions and issues through personal correspondence.

Once you establish an issue with the Bug

Chicken Systems, Inc.
Rubber Chicken Software Co.
Web: 800-455-4555 / 501-225-9796
Fax: 360-438-7485
support@chickensys.com

Translator™ Bug Reports

Thank you!
We are really pleased to hear of bug reports. It helps us pinpoint any problems, and also it helps other Translator users. Please accurately complete all fields on this form.

Please submit a file!
Although a file is not mandatory, please include one so we have the exact file to check. To insure your file gets through to us, always Zip or Stiff the file(s) you submit into a single archive.

Use the latest version of Translator
Before you submit any report, please make sure you are using the latest version and build of Translator. The latest Mac version is 3.9.86 and the latest Windows version is 3.9.124. To update, use the Check-For-Updates function within your program (under Help) or use the URL that is listed in the Manual/Help file under Updating.

Check your Report
This bug report will be entered into our bug database; you will be emailed a copy and an issue number and a link so you can check on the progress at any time.

Issue Number: 4271

Name:

Email Address:

Type Date (see id yyyy):

Submitted Date: Fri, 2 Apr 2010 8:51:1 -0600

Translator Version: Build:

Translator Platform: ☒ Windows ☐ Mac

Source Format:

Destination Format:

Source File (optional, but strongly recommended):

Subject:

Brief Description:

Do not type the file name in; use this Browse button to select your zip/stuffed file from your hard drive.

Reports web site, you will get an email back with a link to your issue that you can consistently check. We try to address issues within 24-48 hours.

BUT, THE IMPORTANT THING IS TO ENABLE US TO EXACTLY REPLICATE YOUR ISSUE ON OUR END! THIS IS WHY WE NEED THE SOURCE FILE IN ALL CASES. PLEASE REMEMBER THIS!

Bug Reports Page: www.chickensys.com/constructor/bugreports

Email: support@chickensys.com

FTP: [ftp.chickensys.com](ftp://ftp.chickensys.com)

(please make sure file names DO NOT have spaces in them!)

User: incoming@chickensys.com

Pass: files2chicken

You Send It: www.yousendit.com

How To Create Files To Send Us

If you are rading or writing a computer-based file such as a SoundFont, than this is easy - just zip up the file and e-mail it.

But, what if, for example, if you are trying to read in an Akai Program, and you get an error, you would want to send the actual Akai program (plus the samples) to us. But the Akai files are on an Akai-formatted disk - how do you send that? The way you can do it is through a DOS Counterpart file. In this Akai case, this would be an .ak1 or a .ak3 file.

You don't have to make counterpart files; Constructor makes them for you in-process. With all proprietary conversions, Constructor dumps the file into this folder: /Users/Shared/Chicken Systems/Constructor

Akai S-1000 Volume or Program	.ak1
Akai S-1000 Volume or Program	.ak3
Roland Performance or Patch	.rol
Emu E3/ESi Bank	.esi
Emu E4 Bank	.eos/.e4b
Ensoniq EPS/EPS 16-Plus Instrument	.efe
Ensoniq ASR-10 Instrument	.efa

Zip that up and send that to us.

Additional Notes

Again, we make a special effort to analyze files and comment or fix the problem with 24 business hours through our Bug Reports page listed above.

Regarding larger files: they are easier to FTP than to e-mail, although our systems can handle either method of any size without problem. The Bug Reports web site can handle any size. Any email limitation is usually on your end. If you FTP a file, make sure that the filename DOES NOT have spaces in it. This is a natural limitation of the Internet and FTP servers in general.

Please give us a brief complete explanation of the problem. We try to answer all emails within 24 hours. Please be patient if the answer does not arrive immediately.

Contacting Technical Support

Chicken Systems Technical Support can be reached in many ways: **Phone**, **Email**, **Chat**, or via our SamplerZone.com **Forum**. Please give us a brief complete explanation of the problem. With Email and Forum questions, we try to respond within 24 hours, Please be patient if the answer does not arrive immediately.

You may Phone or Chat with us also if, after reading and looking at the documentation, you are stumped. Our usual office hours are 8am-6pm Monday-Friday. We are often in the office on weekends and holidays on an infrequent basis.

Phone: 800-877-6377 United States, 320-235-9798 elsewhere. Please do not mind the crabby technical support engineers.

Email: support@chickensys.com

Chat: www.chickensys.com, use the Chat link on the left

Forum: www.samplerzone.com/forums/constructor

Updating

We update Constructor™ as needed, for bug fixes, improvements, and additions to the library.

Constructor™ automatically checks if there is a update available when you start it up. (If desired, you can turn this checking off in Preferences.) You can also check for updates by selecting Check for Updates under the Help menu. (This only works, of course, if you are connected to the Internet on that computer.)

If your Constructor™ computer is not connected to the Internet, or for some reason you can't run Constructor™, you can check for updates at:

www.chickensys.com/constructor/userupdates

You can check what is your Constructor™ version number by checking the About Box (under Help in Windows and under the App Menu on Mac), or by checking Get Info [Mac] or Properties [Windows].

If there is an update available for you, you can download it and then move it to your program's computer (if from a different computer). Run the updater and your program should be updated.

Contact Us

Chicken Systems, Inc.

714 5th Street SE
Willmar, MN 56201

Phone: 800-877-6377 United States, 320-235-9798 elsewhere.

Email: support@chickensys.com

Chat: www.chickensys.com, use the Chat link on the left

Forum: www.samplerzone.com/forums

Credits

Developing software is at the core a one-man process, but making it good requires a team.

Constructor™ really benefitted from good teamwork and solid commitment to quality software.

Garth Hjelte: Project Lead

Jeff Godbloch: Programming and Technical Writer

Mike Acosta at RolandUS for the encouragement

Christian Schmitz and **Joe Strout** for **prompt, clear, and concise technical assistance**