



ASSIMIL8OR v2.0

Multi-Timbral Phase
Modulation Sampler

New Features Guide

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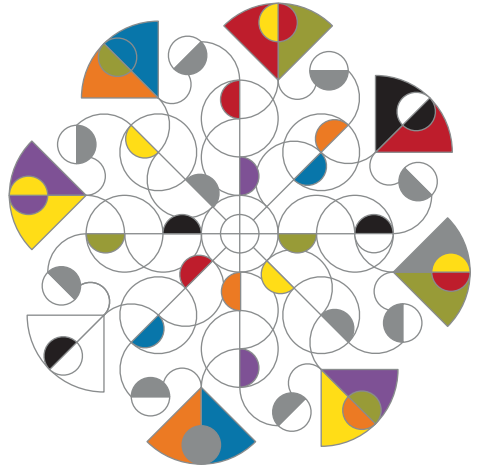
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1. Introduction

This guide will provide everything you need to know about Assimil8or 2.0 software.

If you're already an Assimil8or user, simply read on to discover all the new features and workflow enhancements.

At the time this document was written (mid-June 2020), the full online manual is yet to be updated to reflect the 2.0 software, so if you're a new user, you'll need to refer to both the current manual and this guide. Once the full manual is updated, this guide will be updated to reflect that as well.



Installation

If you're updating your current Assimil8or (or have just purchased a new Assimil8or that did not come with 2.0 installed), download the zip file you'll find on the Downloads tab of:

<http://www.rossum-electro.com/products/assimil8or/>

To update your Assimil8or's software:

1. Unzip the archive, copy the "app" file to the root level of your micro SD card, and insert the card into the front panel slot on your Assimil8or.
2. Select Utilities > Load Software and click the encoder.
3. Assuming you inserted your SD card in Step 1, click the encoder as instructed.
4. If all goes well (which it almost certainly will), you will see a success message and instructions to turn the encoder and then click it to reboot your Assimil8or with the new software.
5. If an error is detected during the process, an error message will be displayed and you can try again.
6. Enjoy your new software.

2. New Features Overview

Below you will find a summary overview of the new features and functional changes in Assimil8or 2.0. Refer to the next chapter for detailed descriptions.

New Features

Manual and Auto-Audition of card WAV files to streamline import operations.

Gate Delay to compensate for sequencer gate/trigger/CV timing anomalies.

Stereo Awareness: Graphic interface and editor improvements to make working with stereo channel pairs virtually automatic.

Preset Selection via CV: The ability to use assignable CV inputs to step forward and backward through a folder's preset list.

New Sound-on-Sound sampling modes: 100% feedback for limitless layering and -3dB feedback for gradual decaying.

Explode Sample (at both the channel and zone level) to divide a sample into 2 to 8 equal regions and automatically assign them to sequential channels or zones.

Chop Sample: Similar to Explode sample, but uses transients to determine the chop points.

New Zone Selection types:

- > **Advance** Each new trigger causes the next zone to be selected (the assigned CV is ignored).
- > **Random** Each new trigger causes a random zone in numerical order to be selected (again, the assigned CV is ignored).

New Zone Voltage Balancing Options: 5V, 10V, Kbd, and Maj

Zone Flip: Allows reversing the order of a contiguous range of zones.

Zone Lock to temporarily lock a single zone for auditioning and editing.

Zone handling and editing improvements, especially with stereo samples

Variable horizontal zoom on the Sample Start/End Page and Loop Start/Length/End Page.

Sync Editing of sample and loop points (i.e, simultaneously set identical Loop Start and Sample Start or Loop End/Length and Sample End points).

Selection of Sampling Destination Channel by pressing and holding the Sampling Setup button and then one of the eight channel buttons.

New Sampling Setup Zone Destination parameter "**Empty Zone**" assigns the new sample to the next empty zone on the destination channel.

CV Control of Mix Levels: Each channel's level in the Mix Output can now be controlled via a CV input without affecting its individual output. There are two control modes: Normal for regular modulation, and Fader for mix control.

Load Folder Warning: The option to trigger a warning popup when loading a new folder to help avoid accidental overwriting of unsaved preset edits.

The ability to **cancel a folder load** in progress.

A **Sampling Pre-roll** of 10 msec (to avoid the possibility of cutting off the very beginning of a sample)

Data Compatibility: Assimil8or V2.0 data is fully forward and backward compatible with Assimil8or V1.XX. (With the exception that the new zone selection types, if used, will load into V1.XX as type "Continuous").

Now on to the fun stuff...

3. New Features in Detail

Here's how to take advantage of all of Assimil8or 2.0's new goodness. We'll start with general functional changes and then cover everything else page by page.

General Changes

Stereo/Right Behavior

Most editing functions are now stereo-aware. Edits on the master channel or zone will make the equivalent edits on the associated right side of the channel or zone.

Selecting, auditioning, loading, and editing a channel, zone, or sample will automatically use a pair of channels, as necessary, to accommodate stereo samples, if the next channel is available for such (i.e. either is already Stereo/Right, or is an empty Master channel).

Gate Delay

Some sequencers issue a step's gate or trigger before the associated CV becomes present at its output. As a result, the Assimil8or appears to be one step "behind" the expected values of pitch or zone selection CVs.

To deal with these sequencers, we've added a global delay for channel startup via trigger/gate. The delay range is from 0 to 5 msec, in 0.1 msec increments.

The Gate Delay is selected on the **Utility>Preferences** page.

Zone Lock

For ease of editing zone parameters, Zone Lock lets you lock the current zone for editing and playback.

To lock the current zone, double-click the **Zones** button from almost any page (including the Home page).

Selecting a new zone while Zone Lock is engaged, either on the Zone page or via the **Zones + Channel** buttons, will lock the editing and playback of the newly selected zone.

On pages with a selected zone indicator, the selected zone number will flash when the zone is locked. On the Home page, a flashing Locked Zone indicator will appear to the right of the selected channel number in the channel map.

Select Sampling Destination Channel

You can now set the destination channel for sampling from pretty much anywhere by pressing and holding the **Sampling Setup** button and then pressing the desired **Channel** button.

Sample Not Loaded Indication

On the Home, Channels, and Zones pages, if a sample has not been loaded (either because it's just in the process of loading, but hasn't completed yet, or because a preset expects a sample to be present but for some reason it's not on the card), the sample name will be displayed with a strikethrough through it. In the case where a sample simply had not completed loading, the strikethrough will disappear as soon as loading is complete.


Sample Monitor Indication

The "L" and/or "R" indicators at the top lefthand corner of screens now flash subtly whenever sample monitoring is enabled for their respective sample input channels.

Page-Specific Changes

Home Page

For stereo samples, Stereo/Right channels will display a graphic depicting a “branch” from its Master channel (instead of the sample name).

 **NOTE:** *If the Stereo/Right channel is not actually a stereo pair of the Master channel (because you’ve assigned an independent sample to the associated Stereo/Right channel), the branch graphic will show a small “slash” at its right end.*



Using a channel button to select the Stereo/Right side of a stereo sample will instead select the Master channel. (A notification of that will appear in the top line of the display.)


As mentioned above, if Zone Lock is engaged, a Locked Zone indicator will appear to the right of the selected channel number in the channel map.

Unsaved Changes Indicator: The yellow Unsaved Changes indicator will flash if the current preset contains unsaved imported samples.

Reload Current Preset: Click the **DATA1** encoder to bring up a popup that will allow you to reload the current preset, essentially discarding edits made since it was last loaded. Useful when you’ve made a bunch of changes to a preset and then decide you want to dump them and revert to the original.


Channels Page

For stereo samples, Stereo/Right channels will display a graphic depicting a “branch” from its Master channel (instead of the sample name).

 **NOTE:** *As mentioned above, if the Stereo/Right channel is not actually a stereo pair of the Master channel (because you’ve assigned an independent sample to the associated Stereo/Right channel), the branch graphic will show a small “slash” at its right end*

Unlike the Home Page, you can select a Stereo/Right channel so that you can edit its Channel Mode.

Selecting a stereo sample, either via the **DATA1** popup or via **DATA2**, will use a pair of channels if the next channel is available for such (i.e. either is already Stereo/Right, or is an empty Master channel).

 **NOTE:** *Assigning the left channel of a stereo sample as the Master will assign the right channel to the next adjacent channel (if available). Assigning the right channel of a stereo sample as the Master will assign the left channel to the next adjacent channel. So you can, if you desire, reverse the stereo orientation of a stereo sample.*

Pressing the Load button from the Channels page

Importing a sample from another folder on a card will return to the Channels page if the Load operation was initiated from the Channels page.

Importing a sample from another folder on a card using **“Load and Advance”** (described in the **Load** section below) will leave you on the Folder Browse page and advance the target channel number for the next import. This makes it extremely easy to import a succession of samples from another folder to consecutive channels of your preset.

Channel Operations Menu


When on the Channels page, double-click the **DATA1** encoder to bring up a popup menu containing channel operations:

Cancel Pretty self-evident

Explode (2-8) Automatically duplicates the current channel's sample into the selected number of channels and sets the sample and loop start and end points to successive even fractions of the entire sample. So, in effect, divides the sample into "x" equal hunks and automatically assigns them to successive channels. Great for splitting precisely edited loops into individual beats or phrases and accessing them on a channel by channel basis. It works on multiple zones simultaneously and also edits the right side if the sample is stereo.

Here's how:

Use **DATA1** to highlight the Explode menu option and use **DATA2** to select the number of channels to explode into. Then click **DATA1** to explode.

 **NOTE:** *The maximum number of selectable channels will be defined by the channel number of the source sample and whether it is a mono or stereo sample. Some examples:*

A mono sample in channel 1 will allow 2-8.

A stereo sample in channel 1+2 will allow 2-4.

A mono sample in channel 4 will allow 2-5.

A stereo sample in channel 5+6 will only allow 2.

Chop (2-8) works exactly like explode, but uses transients to determine the chop points.

Zones Page

When on the Zones page, double-click the **Zones** button to lock the current zone for editing and playback.

Selecting another zone will update the zone lock, if enabled.

Pressing the Load button from the Zones page

Importing a sample from another folder on a card will return to the Zones page if the Load operation was initiated from the Zones page.

Importing a sample from another folder on a card using "**Load and Advance**" (described in the **Load** section below) will leave you on the Folder Browse page and advance the target zone number for the next import. This makes it extremely easy to import a succession of samples from another folder to consecutive zones of the channel.

Zone Operations Menu

When on the Zones page, double-click the **DATA1** encoder to bring up a popup menu containing zone operations:

Cancel Also self-evident

Balance (5V, 10V, Kbd, Maj) Equalizes the voltages of all zones. Also equalizes the Stereo/Right side if a sample is stereo. Choices are:

5V: 0V...+5V

10V: -5V...+5V

Kbd: Chromatic 1V/Oct keyboard. 1/12V steps above 0V


Maj: Diatonic (white keys) for 1V/oct keyboard

Explode (2-8) Automatically duplicates the current zone's sample into the selected number of zones and sets the sample and loop start and end points to successive even fractions of the entire sample. So, in effect, divides the sample into "x" equal hunks and automatically assigns them to successive zones. Great for splitting precisely edited loops into individual beats or phrases and accessing them via CV. A couple of examples:

- > Create a 4 bar beat and explode it into 4 zones to be able to select each bar via CV.
- > Create a two measure phrase in 4/4 and explode it onto 8 zones to be able to select each beat via CV.

Here's how:


Use **DATA1** to highlight the Explode menu option and use **DATA2** to select the number of zones to explode into. Then click **DATA1** to explode.

 **NOTE:** *The maximum number of selectable zones will be defined by the zone number of the source sample and whether it is a mono or stereo sample. See the examples above in the Channels Page section.*

Chop (2–8) works exactly like explode, but uses transients to determine the chop points.

Flip (2–8) lets you reverse the order of the selected contiguous zones. This will be useful when you've done a Chop or Explode and want to play the resulting zones in order, first to last, playing low to high on a keyboard (or sequencer) using one of the keyboard balances.

With a zone selected, use the DATA 2 knob to select the number of contiguous zones (starting with the selected one) to flip. Click the DATA 1 encoder to execute the flip. The order of the selected zones will be reversed. The zone voltage ranges will not be modified.

 **NOTE:** *After an Explode or Chop operation, the newly created zones will be balanced using the current Balance setting. So, if you have a preference, select the appropriate Balance option before executing the Explode or Chop. You can, of course, manually set the Zone values after the Explode or Chop.*

Insert Inserts a zone at the current zone, duplicating the original, and pushing all the other zones down (i.e., physically down the menu, but up in number). Also edits the right side if stereo. An example:

If you start with:

1 A
2 B
3 C
4 D
5 F
6 G
7 H
8 I

And select Zone 4 and then Insert, you'll end up with:

1 A
2 B
3 C
4 D
5 D
6 E
7 F
8 G


Delete Deletes the current zone. Also edits right side if stereo.

New Zone Selection Types

Two new Zone Selection types have been added to the Zone Selection popup:

Advance Each new trigger causes the next zone in numerical order to be selected (the assigned CV is ignored). Zone 8 wraps around to Zone 1.

Random Each new trigger causes a random zone in numerical order to be selected (again, the assigned CV is ignored).

 **NOTE:** *If a preset created in software 2.0 that uses either Advance or Random is loaded into an Assimil8or running 1.XX, selection type "Continuous" will be used.*

Other Parameter Edit Pages (Pitch, Level, Phase Mod, Mutate, etc.)

Since a Stereo/Right channel inherits the parameter values of its associated master channel, editing of a Stereo/Right channel is not allowed. Instead, the Master will be selected, and a notification issued.

Exceptions are the Zones page, where editing the right side's sample list is allowed and the Channels page, to allow for changing the Channel Mode.

Load Folder, Load File, and Load Channel Pages

Load Folder Warning

To help avoid accidental overwriting of unsaved preset edits, you can now choose to have a warning pop up when you attempt to load a new folder. This option is set on the **Utility>Preferences** page. The options are:

Never No warning

Dirty The warning only appears if you have unsaved edits in the current preset

Always The warning always appears

The popup includes the options to Cancel the load, proceed with the load, or save the current preset and then proceed with the load.

Cancel Folder Load

Ever start to load a huge folder and then realize you really didn't want to do that? So have we. So:


Long-press the **DATA1** encoder to cancel a folder load in progress. The message **"Cancelling in 2 seconds"** will appear and, after 2 seconds, the load will be canceled, the previously loaded folder will be reloaded, and the previously selected preset will be selected.

If you release the encoder before the 2 seconds has elapsed, the canceling will itself be cancelled and the load will continue.

Load Button Navigation

From the Home page, and any time the current preset has unsaved data from a previous import operation, clicking the Load button will take you to the most recent import location (not simply to the **Load Folder** page). An example:

You're putting together a drum preset and have imported a snare sample into channel 1 from a folder of snare sounds. You haven't yet saved your preset. You play around with some settings and now decide to add another snare drum to channel 2. Simply select channel 2 and click **Load** and you'll find yourself right back in that snare folder, ready to select another sample.

 **NOTE:** *When browsing files (samples or presets), or other channels for import, the destination of the import is continually displayed as a scrolling message at the top of the browsing screen.*

After executing a Load, you will return to the page from which you invoked the Load. So:

- > Pressing **LOAD** from the Channels page will return to the Channels page after the load is executed
- > Pressing **LOAD** from the Zones page will return to the Zones page after the load is executed
- > Pressing **LOAD** from the Home (or other) page will return to the Home page after the load is executed

Channel Use

Selecting, auditioning and/or loading a stereo sample will use a pair of channels if the next channel is available for such (i.e. is either already Stereo/Right, or is an empty Master).

If the next channel is in use (e.g. is a valid independent master) it will not be touched — assigning a stereo sample to the selected channel will not affect it. In this situation, when loading a stereo sample from a card, only the left side will fill the selected channel. When selecting a local stereo sample on either the Channels or Zones pages, either left or right sides of stereo sample can be selected.

In short:

- > If you want to accommodate stereo samples, be sure to make the next channel 'available' (empty Master, or Stereo/Right)
- > If the next channel is already in use (as anything other than a Stereo/Right), it is protected, and will not be touched.

Auditioning Samples

When browsing samples in other folders for import, you have the option of automatically auditioning the first 2.5 seconds of each sample as it's highlighted, as well as manually auditioning a highlighted sample by pressing the currently selected Channel button or inputting a gate or trigger into that channel's **Gate/Trig** input.


Auto-Audition can be turned on or off on the **Utility>Preferences** page or by longpressing the **Load** button on the Load Files page only.

Browsing and Importing Samples

When browsing samples, a highlighted sample is automatically (and temporarily) loaded and placed into the selected channel(s), and the channel mode(s) set appropriately. As described above, if Auto-Audition is enabled, the sample will auto-audition for 2.5 seconds. (And, as always, pressing **Channel** buttons will select new channels as load targets.)

Once you've found a sample you want to import, confirm the import by either:

- > Long-pressing the **DATA1** encoder to immediately load the sample(s) and return to the **Channels** or **Zones** page (depending on from where you entered the Folder Browse page).
- > Single-clicking the **DATA1** encoder to bring up the Files Operation popup and selecting **Load** or **Load and Advance** (see below).
- > Double-clicking the **DATA1** encoder to immediately **Load and Advance**.

 **IMPORTANT NOTE:** *If you navigate to another page without executing any of the above confirmation gestures, nothing will be imported and the preset will revert to the sample assignments prior to your sample browsing.*

Importing Multiple Samples

You can import multiple samples in one visit to a folder's Browse Files page.

Here are the ways to do that:

- > Use the **Channel** buttons to select channels one at a time and place samples on them (without leaving the Folder Browse page and without executing any of the confirmation gestures). Once you have assigned all of the samples you'd like, execute a confirmation gesture to import all of the samples at once.
- > Use **Load and Advance**. This function imports the selected sample into the selected channel or zone and then automatically advances the destination channel or zone. Using this, you can fill up a preset's channels or a channel's zones quickly without having to leave the Folder Browse page. Again, once you've selected all of the desired samples, execute a confirmation gesture to import them all at once.

In any case, after confirming the import via **DATA1**, you will return to the Channels page if Folder Browse was entered from the Channels page, or will return to the Zones page if Folder Browse was entered from the Zones page, else back to the Home page.

Sample Start/End and Loop Start/Length/End Pages

Horizontal Zoom: To adjust horizontal zoom, press, hold, and turn **DATA1** to adjust the zoom from 1X to 32X. The zoom parameter is shared among all the Sample and Loop pages, and persists when leaving and returning to these pages.


Vertical zoom remains completely automatic.

Zoom Bars: Both horizontal and vertical zooms have zoom bars to indicate the fraction of the total represented on the screen.

Sync Editing: When setting Loop Start and Loop End/Length on the Loop page, you can press and hold the **Play Mode** button while making adjustments to cause the Sample Start and End points to be set to the selected Loop points. This makes it extremely easy to simultaneously adjust the length of a sample and set the loop for the entire edited length.

Editing Fields: When you've selected any of the Sample or Loop point editing fields by highlighting it and clicking **DATA1**, moving between the Sample and Loop pages via the 4 dedicated buttons will result in the destination field being selected and the editor open.

Truncate in Place (Destructive): Press and hold the **Play Mode** button while long-pressing the **Sample Start** or **Sample End** button (or both) to permanently truncate the sample and discard the truncated data. A popup will appear indicating how many other places this sample is used and giving you the option of cancelling the truncation.

 **IMPORTANT NOTE:** *This process provides no undo, and permanently truncating the sample here will also affect every other place it appears. So, if you have any doubt about the wisdom of this, better to execute the regular truncation where a new truncated sample is created and the source sample is left untouched.*

Sampling Setup Page

Sound On Sound Mode: Two mode options allow sound on sound sampling.

They are:

SOS Sound on sound sampling with 100% feedback, for unlimited layering

SOS>> Sound on sound sampling with -3dB feedback on each pass, for gradual decaying.

In Sound on Sound Mode, you have the option of setting the sample and loop lengths on the fly. Here're the options:

- > If you do nothing, the sample and loop length will be defined by whatever you set the sample length to in the **Sampling Setup** page.
- > If you stop sampling before you reach the preset sample length for the first time (either by pressing the **Sample** button or by the assigned CV input rising above 1.6V), the Stop event will be transformed into a "Set Loop" event, and the sample end and loop point will be set to that instant and recording will continue from the beginning. The next Stop event (button or CV) will actually stop recording and place the sample.

This makes it extremely easy to set the sample and loop length to match an existing phase or beat.

Zone Destination: A new “Empty Zone” option has been added. As you might imagine from the name, this assigns a new sample to the next empty zone on the destination channel. Once you’ve filled all of the zones, the Empty Zone destination will continue placing into Zone 8. (The previous Zone 8 sample will not be deleted, just replaced.)

Pan/Mix Page

Each individual channel’s Mix Level can now be controlled by a CV input. The gain response is 10dB/V. Select the CV input in the **Mix Mod Source** field and set the amount of bipolar CV attenuation in the **Mix Mod Gain** field.

You select from two control modes for CV mix control:

Normal mode functions like standard modulation, i.e., 0V of modulation results in no change of the set parameter value and + or - volts raises or lowers the parameter accordingly.

Fader mode is designed for mix control by faders. The level is biased down 5V such that zero volts of CV results in no audible output and higher CV levels introduce audibility (i.e., a fader does what you’d expect a fader to do).

Utility>Preferences Page

A new global Preferences page replaces the previous OLED Control page.

Global Preferences include:

- Screen Brightness:** from 1 to 11
- Screen Saver:** from 2 minutes to Never
- Gate Delay:** from 0 to 5 msec, in 0.1 msec increments
- Auto-Audition:** on/off
- Load Folder Warning:** Never, Dirty (only if current preset is edited and unsaved), Always

Utility>New Folder Page

Creating a **New Folder** now loads the folder after it is created, without warning, to assist in new bank creation.

Utility>Inc/Dec Preset Page

You can assign CV inputs to increment or decrement the selected preset in numerical order, as well as reset to the first preset in the current set. A CV has to increase to at least 1.7V in order to increment, decrement or reset. It then has to decrease to at least 1.5V to register as Off for the next increment, decrement, or reset.

Empty presets function as “stops.” That is, presets can’t be incremented or decremented past an empty preset. This allows you to create multiple individual sets of presets in a single folder (perhaps moving to different sets for different compositions in a performance).

This assignment is on a “per folder” basis, i.e., each folder can have different CV assignments.