ReCycle!

THE ULTIMATE TOOL FOR   SAMPLED GROOVES

About ReCycle

When ReCycle is running, the Apple menu contains an item called "About ReCycle!...". Selecting this brings up a window showing you the version of the program and a list of the people involved in creating it.

To close the About ReCycle window, click anywhere in it.

System Information

When ReCycle is running, you will find an additional item on the Apple menu, called "System Information". If you select this item, a dialog will open, displaying information about your computer and the SCSI and OMS configurations:
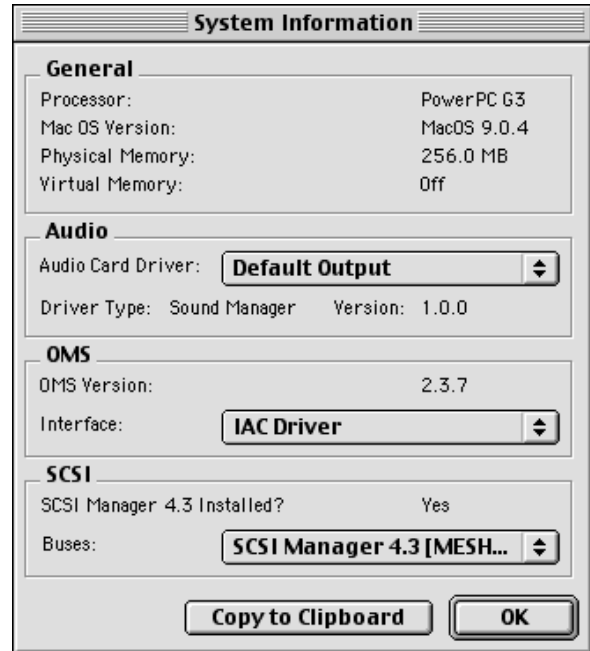
General

This section contains info about your computer's processor type, operating system, physical memory and virtual memory. You cannot change these settings.

Audio

This section contains a list of the available Audio Card Drivers. If you select one of the drivers from the pop-up menu, the version and type (ASIO/Sound Manager) of the driver are displayed below.

OMS

This section contains information about the installed OMS version. By using the pop-up menu, you can check which MIDI interfaces are available.

➔ **It doesn't matter which interface is "selected" on the pop-up menu. The pop-up is only there for you to view the available interfaces.**

SCSI

This section indicates whether SCSI Manager 4.3 is installed (required for SCSI communication in ReCycle), and contains a pop-up menu where you can view the available SCSI buses.

➔ **It doesn't matter which SCSI bus is "selected" on the pop-up menu. The pop-up is only there for you to view the available SCSI buses.**

Copy to Clipboard

Clicking this button copies the contents of the System Information dialog onto the Macintosh clipboard. You can then paste this into a text file or an e-mail, e.g. when contacting tech support.

Open...

This dialog is used to load audio files from the hard disk. The dialog is a standard file dialog with some additions.

! **By default, this dialog will appear automatically when you launch ReCycle. If you don't want this, open the Preferences dialog on the Edit menu, and deactivate the "Show Open Dialog on Startup" option.**

File Info

When you select a file in the list, information about file type, length, etc is shown in the lower part of the Open dialog.

For all recognized audio file formats, the following information is displayed:

- **File Type (see next page).**
- **Number of channels.**
- **File Length.**
- **Bit depth.**
- **Sample Frequency.**
- **File Size, in Bytes (For REX2 files the data compression ratio is displayed in parentheses. For example, 2.4:1 means that the file was 2.4 times larger before it was compressed).**

If the file is a ReCycle file, the following additional information is displayed:

- **Tempo.**
- **Time signature.**
- **Length in bars and beats.**
- **Usage, which tells you the size of the loop (i.e the audio between the locators) in relation to the total file size in percent.**
- **The number of slices in the file (only available if a REX2 file is selected).**
- **Export Size tells you the size of the file if transmitted/exported (only available if a REX2 file is selected).**

Play and Stop buttons

When you click the Play button, the selected file will be played back. If you wish to stop playback before the file ends, click Stop.

Auto Play

If this option is on (ticked), playback will start automatically as soon as a new file is selected from the dialog. If a new file is selected during playback, the previous selection will stop and playback of the new selection will start directly.

You will not be able to play a file under the following conditions:

- **If the file is in a format ReCycle doesn't support.**
- **If there isn't enough memory (RAM) left to load the sample.**
- **If the sample is longer than 30 seconds it won't play automatically (but you can audition it with the Play button).**

About The Different File Formats

ReCycle can load mono or stereo files that meet the following criteria:

- **The bit depth can be 8, 16 or 24 bits.**
- **Sample rates between 11.025 kHz to 1.0 MHz are supported.**
- **The file is not longer than 5 minutes (regardless of sample rate and mono/stereo status).**

The table below shows the supported file formats.

Name	Extension	Comment
ReCycle	RX2/RCY/REX	REX2 is the native file format created when you save in ReCycle. RCY/REX are ReCycle files that were created with previous versions of ReCycle.
Wave	WAV	The standard Microsoft file format for audio. May be in formats other than 16-bits.
Audio IFF (AIFF)	AIF	Audio Interchange File Format; Apple's standard audio file format. May be in formats other than 16-bits.

Close

This Closes the active document. If there are unsaved changes, you will get the option to save the changes or to cancel the operation.

Save

This saves any changes made to the file since you last saved. If the file hasn't been saved before, the Save dialog comes up asking you to specify a name and location for the file. Files are saved as REX2 files, the native ReCycle file format.

Save As...

This dialog box allows you to Save as a REX2 file to disk and specify the name and location for the file.

Save All

Save All saves all open documents. For new documents, that have not previously been saved as REX2 files, the Save As dialog is used. If Cancel is selected the entire Save All operation is cancelled. Save All is disabled on the menu if no open documents need to be saved.

Export Sound

The Export Sound dialog is used if you want to save your files for internal samplers and in other formats (see the online Sampler and File Format Reference document) for which the program saves audio files on your computer's hard disk.

File Formats

The File Format pop-up is where you select the file format you wish to export the file as. The following file formats are supported:

Name	Ext.	Comment
Standard MIDI File	MID	Allows you to export a Standard MIDI file. This can be used if you *only* want to create a MIDI File (for example when using ReCycle to create "groove maps").

Name	Ext.	Comment
Wave	WAV	The standard Microsoft file format for audio. Exports one or several files, with one slice in each file, depending on the "Transmit as One Sample" setting on the Process menu.
Audio IFF (AIFF)	AIF	Audio Interchange File Format; Apple's standard audio file format. Exports one or several files, with one slice in each file, depending on the "Transmit as One Sample" setting on the Process menu.
Sound Designer II	SD2	The current Digidesign file format. Exports one or several files, with one slice in each file, depending on the "Transmit as One Sample" setting on the Process menu.
Mixman Track File	TRK	Mixman TRK (for "Track") files are the building blocks in the Mixman Studio and Mixman Studio Pro applications. To facilitate tempo-matching, the Mixman TRK files contain "slices" internally (somewhat like ReCycle files). A single file is created. If the exported document is based on a stereo file, an alert box will appear informing you that the file will be mixed to mono, since Mixman files are always mono.
SampleCell Instrument File	INS	Digidesign's SampleCell is a PCI based sampler card/software editor for both the MacOS and PC platforms. ReCycle exports an Instrument file plus one or several sound files, with one slice in each file, depending on the "Transmit as One Sample" setting on the Process menu. ReCycle's Export settings for SampleCell supports templates. Creates AIF or SD2 files.
SoundFonts 2 Banks	SF2	SoundFont is a file format for storing wavetable synthesized sounds. Effectively, this turns an ordinary sound card into a sampler. Creates a single SF2 file when exported, with the option to export a MIDI file with the same name.
Akai S5000/S6000 Program Files	AKP	Exports a program file together with one or several audio files, with one slice in each file, depending on the "Transmit as One Sample" setting on the Process menu.

Export Settings

Before exporting a file in one of the supported formats, the Export Settings

dialog is shown. The following items may be present, depending on the selected export format:

➔ **A Sample Rate pop-up allows you to change the sample rate when Exporting.**
Supported sample rates depend on the File Format selected.

➔ **An "Export MIDI File with Same Name" tickbox.**
When checked, a MIDI file with the specified name will be generated together with the exported file.

➔ **A "Templates" checkbox.**
Currently only SampleCell supports templates. See the on-line Sampler Supplements document or the documentation that came with SampleCell for details.

File Quick Selection List

The most recently loaded files are listed on the File menu. Selecting one Opens it.

Quit

This simply Quits the program. If you have any unsaved changes you will be asked whether yo want to save them before quitting.

Undo/Redo

You may be able to Undo your last action by selecting this menu item or by pressing [Command]-[Z] (the default key command for Undo). The menu item also gives you a clue about what will be undone. For example: If it says "Undo Delete Slice(s)" the last thing you did was deleting a slice.

If you wish to "Undo the Undo", this is possible since after an Undo, this menu command changes to "Redo".

The following actions can be undone:

- **Move slice**
- **Delete slice(s)**
- **Hide slice(s)**
- **Lock slice(s)**
- **Insert slice (pen tool)**
- **Move left/right locator**
- **Convert to mono**
- **Normalize**
- **Crop Loop**
- **Convert sample rate**
- **Re-Analyze**
- **Preset selection (effects)**

Copy Loop

You can use "Copy Loop" to copy the entire loop (i.e. all waveform data between the left and right locators) to the Clipboard. You can also use the key command [Command]-[C] for this item.

Paste as New Document

If the Clipboard contains data, this can be pasted into a new (automatically created) document window by using the "Paste as New Document" menu item.You can also use the key command [Command]-[V] for this item.

Delete

"Delete" will delete all selected slice markers. You can also use the [Delete] button on your computer keyboard for this.

Select All

The "Select All" menu item will select all slice markers in the active document. You can also use the key command [Command]-[A] for this.

Invert Selection

If you have a selection of markers, you can invert the selection by using "Invert Selection". After this operation, the markers that were previously selected are now deselected, and vice versa. This is mainly useful together with Silence Selected, to extract individual sounds from a loop.

Preferences

The Preferences dialog is used to make audio settings, to set some general options for how the program operates, and to customize the look of the waveform display.

Preferences - Audio

Selecting an Audio Card Driver

All available drivers are listed on the Audio Card Driver pop-up menu.

➜ **If you are using audio hardware for which there is a specific ASIO driver, you should select this.**
With an ASIO driver written specifically for the audio hardware, ReCycle can communicate more or less directly with the audio hardware.

➜ **If you plan to use the internal audio outputs on your computer, please select "SM (Built In)".**
This is the Apple Sound Manager default output.

→ **If you have some additional audio hardware (such as USB-speakers) installed, please select "SM Device Name", where "Device Name" is the name of your audio hardware.**

If you select an ASIO driver, some additional items will be available in the Audio Preferences:

→ **If the card and its driver supports it, the "Clock Source" pop-up allows you to set an external source to which the audio playback can synchronize its sample rate.**
Please refer to the documentation that came with your card for details.

→ **The ASIO Control Panel may contain settings specific to your audio card.**
Please refer to the documentation that came with your card for details.

→ **If you have an audio card with multiple outputs, you can select which output pair you wish ReCycle to use by clicking the "Channels..." button.**
This item will not be selectable if you use a card with only a regular stereo output.

Setting the Audio Card Buffer

ASIO

You cannot change audio buffer size If you are running ReCycle using the Sound Manager Default Output driver.

→ **If you are using an ASIO driver specifically written for the audio hardware, you can in some cases make settings for the hardware by clicking the ASIO Control Panel button.**
This opens the hardware's ASIO Device Control Panel, which may or may not contain parameters for adjusting the number and/or size of the audio buffers. Please consult the documentation of your audio hardware and its ASIO drivers for details!

Preferences - General

→ **The "Don't show Open Dialog on Startup" item determines whether or not the Open dialog should automatically open when ReCycle is launched.**

→ **When "Always Move Left Locator to First Slice Point" is activated, ReCycle will automatically place the Left Locator on the first slice point when you Open or Receive a sample.**
If this is not activated when you Open or Receive a sample with no loop setting, or the loop start is just at the beginning of the sample, a dialog appears suggesting you should let the program move the Left Locator to the first slice point. This is to avoid very short slices at the beginning of the sample, It is recommended that you do this, unless you have a good reason not to.

→ **If "Set Bars to 1 in New Documents" is ticked, any new audio file will open up with Preview mode activated, and the Tempo calculated to the length being one bar.**
Note that this will lead to files playing back at the wrong tempo if the loop isn't exactly one bar! You can always change the number of bars later of course, and the tempo will be recalculated according to the bars setting.

→ **The "Units on Horizontal Ruler" allows you to set whether Time (in seconds) or number of Samples should be displayed on the horizontal ruler.**

Preferences - Waveform

You can customize the look of the Waveform window by using the settings at the bottom of the Preferences dialog:

The "View stereo files as sum of L+R" Option

If this item is ticked, the left and right channels of stereo files will be summed to one channel, instead of being stacked on top of each other. Note that this is a display option only, the actual audio material is not affected.

Waveform Color

Click this button to select a new color for the waveform. This brings up the standard Apple Color Picker. The color field to the right shows you the current color selection.

Waveform Look

Use this pop-up menu to select one of three different waveform "looks"; Plain, 3D or Shaded. Plain displays the waveform with normal graphics, 3D adds a depth effect to the graphics and Shaded adds a progressive shade to the lower part of the waveform.

Contrast Slider

This slider sets the amount of contrast between the background display and the waveform. For maximum contrast, position the slider all the way to the right. Moving the slider to the left progressively adds more of the chosen waveform color to the background display.

Sampler Settings
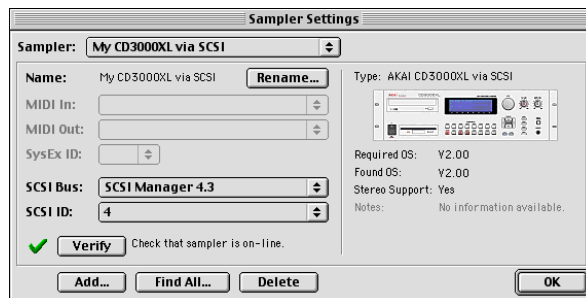
The Sampler Settings dialog is where you set up and edit the Sampler List. The samplers you have included on this list will be available on the Sampler menu in the main ReCycle window, for transmit and receive operations.

! **Even if a sampler is on the list, this doesn't mean it's set up correctly or even connected to the computer! ReCycle doesn't automatically remove samplers from the list if they are not connected. You may temporarily disconnect your sampler between sessions, without having to set it up in ReCycle again.**

Finding all Connected Samplers

There are special considerations regarding the following sampler models or setups:

➔ **Ensoniq samplers (all models).**
These cannot be automatically found by ReCycle.

➔ **Generic SDS and SMDI (Generic and Extended).**
These cannot be automatically found by ReCycle.

➔ **Multiple instances of the same model samplers that require a MIDI connection for SCSI transfers (i.e. Kurzweil K2000/Yamaha A3000/ Roland S-760).**
There may be problems if you have two or more of the above mentioned sampler models (that is, two or more instances *of the same model)* connected via MIDI, and one of these is also connected via SCSI.

In all the above mentioned cases, you should instead add the samplers manually, see "Add Sampler Dialog".

ReCycle can scan the SCSI and MIDI connections and automatically add all properly connected samplers to the Sampler List:

1. **Open the Sampler Settings dialog.**
   You should have turned on and booted all connected samplers before you turned on the computer and launched ReCycle.

2. **Click the "Find All..." button at the bottom of the dialog.**
   ReCycle scans for samplers.

3. **When a properly connected sampler is found (that isn't already on the Sampler List), you will be asked if you want to add it to the list.**
   Click "Yes" to add the sampler to the list.

4. **If a sampler is found, that is already included on the Sampler List, ReCycle will tell you this.**
   Click "Skip" to continue the search.

! **ReCycle will only find one sampler of each model - if you have more than one sampler of the same model connected, you need to add these manually (see Add Sampler Dialog).**

➔ **If a sampler is found, that isn't properly connected, ReCycle will inform you of this and tell you what you need to do.**
   For example, you may have a Yamaha A3000 sampler connected via SCSI only. The program will find it, but since this sampler requires a MIDI connection, it will not be added to the Sampler List. Instead you will be asked to check your MIDI connection and MIDI interface.

Once the Find All process is complete, all properly connected samplers have been added to the Sampler List (provided that you clicked "Yes" for each one of them in step 3 above). You can check this by pulling down the Sampler pop-up menu at the top of the dialog.


You can now rename and edit the settings for samplers on the list, as described in the section "Making Settings for a Sampler".

Add Sampler Dialog

You can manually add a sampler to the Sampler List at any time, regardless of whether the sampler is connected or not. This is useful if you want to set up your system before you connect your samplers, or if you have several samplers of the same model connected (since ReCycle only "finds" one sampler of each model):

1. **Click the "Add..." button at the bottom of the Sampler Settings dialog.**
   The Add Sampler dialog appears.
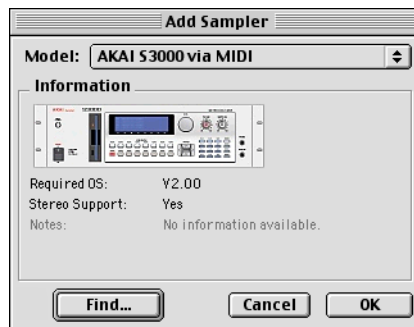
2. **Use the Model pop-up menu to select the sampler model you want to add.**
   Note that each actual sampler model may have more than one entry on the pop-up menu, if there are different ways to connect the sampler (e.g. via MIDI or via SCSI).

! **There are special considerations for some E-mu samplers - please read the E-mu chapter in the Sampler and File Format Reference on-line document!**

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3. **If you know that the sampler is connected and booted, click the "Find..." button.**
   ReCycle scans the MIDI and/or SCSI connections for a sampler of the selected model. If it finds one, you are asked whether you want to add it to the Sampler List. If you click "Yes", the sampler is added to the list with the correct SCSI ID and/or MIDI SysEx ID settings.

! **Please note that ReCycle will only find one sampler each model - if you have more than one sampler of the same model connected, you need to add these by clicking "OK" instead, and adjust the MIDI/SCSI settings manually, see Making Settings for a Sampler.**

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4. **To add a sampler without "finding" it, click OK.**
   A sampler of the specified model is added to the Sampler List, with default values for SCSI and/or MIDI settings. You will probably have to change the SCSI and/or MIDI settings manually later.

About the Generic SDS and SMDI Samplers

! **Samplers that may be compatible with the Generic SDS/SMDI and Extended SMDI formats cannot be automatically "found" by ReCycle, nor can the connection be verified! To check if these protocols for transferring samples works with your sampler is a matter of trial and error (see the Sampler and File Format Reference documentation for details).**

These are not samplers as such, but rather protocols for transferring samples between two devices. If your sampler model isn't supported by ReCycle you may still be able to transfer audiofiles using one of the generic sampler formats.

• **SDS stands for "Sample Dump Standard", and is a protocol for transfer of sound sample data between devices via MIDI.**
• **SMDI stands for "SCSI Musical Data Interchange" and could be described as "SCSI SDS", i.e.the purpose of the SMDI protocol is to use the superior data transfer ability of SCSI to serve the same purpose as SDS.**

Common to both protocols is the ability to send samples between any two devices in a commonly recognized format.

Adding an Ensoniq Sampler

For technical reasons, Ensoniq samplers cannot be automatically "found" by ReCycle. This means you have to add these samplers manually, without "finding" them (by clicking OK in the Add Sampler dialog as described above), and then adjust the MIDI settings in the Sampler Settings dialog.

! **To make sure your settings are correct, use the Verify function in the Sampler Settings dialog, as described below.**
Note: Make sure the Ensoniq sampler isn't in "Load Mode", as this will disable MIDI communication!

Verifying the Connection with a Sampler

! **Verifying the connection does not work with any of the Generic or Extended SMDI formats! Please refer to the Sampler and File Format Reference documentation for more details.**

Near the lower left corner of the Sampler Settings dialog, you will find a small icon next to a "Verify" button. The icon indicates whether the currently selected sampler on the Sampler pop-up menu is properly connected (on-line) or not.

For example, if you add a sampler manually without using the "Find" function, the icon will be a red cross, indicating that the sampler isn't on-line. If the selected sampler is found automatically by ReCycle, the icon will be a green check mark, indicating that the sampler is on-line.

Sampler on-line. Sampler not on-line.

➔ **To update the status of the icon and check the connection to the currently selected sampler, click the "Verify" button.**
For example, you may want to do this after having changed SCSI or MIDI settings, as described below.

➔ **Each time you launch ReCycle, the program automatically Verifies the connection with all samplers on the Sampler list.**
If a sampler isn't on-line, it will not be available on the Sampler menu.

Making Settings for a Sampler

In the area to the left in the Sampler Settings dialog, you can adjust the settings of the currently selected sampler. There are three sections:

→ **Name.**
This shows the name of the sampler as it will appear on the Sampler menu in the main ReCycle window. If you wish to rename it, click the "Rename..." button and enter a new name.
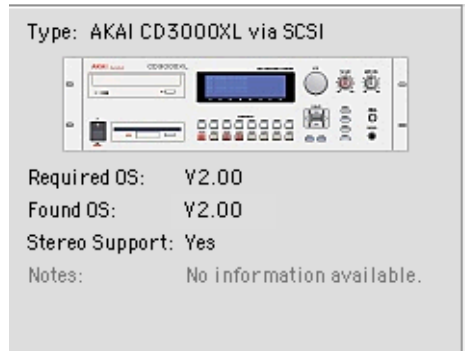
→ **MIDI settings.**
If the selected sampler uses a MIDI connection, you will find settings for MIDI In/Out ports and SysEx ID. To change these settings, use the respective pop-up menu.

→ **SCSI settings.**
If the selected sampler uses a SCSI connection, you will find settings for SCSI Bus and SCSI ID. To change these settings, use the respective pop-up menu.

! **If you change the MIDI or SCSI settings manually this way, you should always use the Verify function to check that the sampler is on-line.**

Read the Sampler Information!

Type: AKAI CD3000XL via SCSI

Required OS: V2.00
Found OS: V2.00
Stereo Support: Yes
Notes: No information available.

When a sampler is selected (on the Sampler pop-up menu), you will see an image of its front panel displayed to the right in the Sampler Settings dialog, along with model and connection information. Below the image, you will also find the following information:

➔ **Required OS.**
This is the operating system required for the sampler to work with ReCycle.

➔ **Found OS.**
This is the operating system currently used by the sampler. If this is an older OS version than the "Required OS", you need to upgrade the sampler.

➔ **Stereo Support**
This tells you whether the sampler supports stereo audio files or not.

➔ **Notes.**
Under this heading you may find additional important information. There may for example be certain settings you need to make in the sampler before using it with ReCycle. Make sure that you follow the instructions under this heading carefully!

Deleting a Sampler from the List

If you wish to remove a sampler from the Sampler List, proceed as follows:

1. **Pull down the Sampler pop-up menu and select the sampler you want to remove.**
A picture of the sampler is displayed, together with information about the required Operating System and additional notes.

2. **Click the "Delete..." button at the bottom of the dialog.**

3. **Click "Yes" to confirm that you want to remove the sampler.**

The Effects

The Envelope, Equalizer and Transient Shaper items opens the effect panels for the respective effect. These menu items do not activate or deactivate the effects, they only bring the effect panels into view.

ReCycle features three effect processors, Envelope, Equalizer, and Transient Shaper, that can be used to further manipulate audio loops.

➜ **All effects are applied globally, i.e. they will affect all slices equally in a loop.**

➜ **To be able to apply the effects, Preview mode must be activated.**
To activate Preview mode for an audio file (as opposed to a ReCycle file) you must first have set up the left and right locators, specified the length and time signature of the loop and created a sufficient number of slices (see the previous chapter). You could also load ReCycle files for further processing, in which case these settings have already been made and you can apply effects in Preview mode directly.

➜ **When using effects, the principle "what you hear is what you get" applies to the end result, whether you save the file or transfer the file to a sampler.**
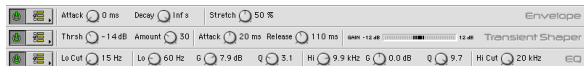
Open the Effect Panels

The three Effect buttons (from left to right); Envelope, Transient Shaper and Equalizer.

The three effects each has its own panel, containing the parameters. By clicking on one of the effect buttons located to the left of the transport controls, the corresponding panel is shown below the toolbar. You can also open the effect panels from the View menu.

➜ **The left to right order of the buttons also reflects the internal signal path of the effects.**
If all are activated, Envelope is always the first effect in the signal path, the Transient Shaper is the second, and Equalizer is the last.

The three effect panels.

Activating Effects

Effects can be active regardless of whether the panel is visible or not. There are two ways you can activate effects:

➜ **By clicking on the Effect On/Off button for an open panel.**
When an effect is on (activated), the On/Off button becomes dark, and a green dot is shown in the effect button for the corresponding effect.

Effect On/Off button.

➜ **By holding down [Option] (Mac) / [Alt] (Win) and clicking on an effect button you can toggle the effect on and off.**
The green dot in the corresponding Effect button is greyed out if the effect is deactivated.

About the Presets

For each Effect there are a number of preset settings available.

➜ **To select a Preset, click on the Preset button beside the Effect On/Off button.**
A pop-up menu appears with the available Presets listed.

The Effect Presets button.

! **It is not possible to store user presets.**

Effect Parameters

Envelope

To open the Envelope processor, click on the Envelope button, or select Envelope from the View menu.

The Envelope Attack and Decay parameters govern how the volume of a slice should change over time, from the time it is triggered (the slice note starts) until the slice note ends. This can be used to make a loop more distinct (by having a snappy attack and a short decay time) or more spaced-out (by raising the attack time).

The Envelope panel also features a third parameter; "Stretch", which is described separately below.

➜ **The Attack parameter determines the attack length (in milliseconds) for each slice.**
The higher the setting, the slower the attack. Parameter range is 0 - 430 ms.

➜ **The Decay parameter controls the length of the end portion (tail) of each slice.**
The more the knob is turned anti-clockwise, the shorter the decay. Range is 27ms - Infinite (=full decay).

Stretch

This feature is used when you know you might want to lower the tempo of the loop in your sequencer.

How Stretch works

When you slice up a loop and play it back from your sequencer, each sample will play in succession. At the original tempo, one slice will end exactly where another starts.

As you understand, when you then lower the tempo, there will be small gaps between the slices, which disrupts the flow of the audio.

Stretch is used to add an extra tail of audio to each slice, to lengthen it. This is derived from the natural decay of the sound. This extra tail of sound then fills out the gap between the slices when the tempo is lowered.

! **Please note that the attack of the sound is not affected in any way.**

The Amount of Stretch

The Stretch knob is used to set the amount of stretch as a percentage value.

The percentage values tell you how much longer the entire sample will be after stretching. If you select the largest value (100%), for example, the slice will become twice its original length when transmitted to the sampler.

➜ **To decide how much stretch you need, lower the Preview tempo by the same amount as you intend to use, and adjust the Stretch parameter as necessary.**
If there is a discernible gap of silence between slices you should raise the Stretch setting.

! **Note that Stretch is not Time Stretch! The Stretch feature doesn't lengthen the whole slice, it only adds a portion of sound to the end of it.**

Stretch and the old ReCycle Formats

You should be aware of the fact that REX (as opposed to REX2) files can contain certain settings that are irreversible. For example, if stretch was applied when the file was saved, the stretching is part of the actual REX file and cannot be removed. It is possible, however, to apply more stretch, which may or may not be what you want.

➜ **For REX files it is therefore advisable to try lowering the tempo in Preview mode first, to see if you actually need to apply Stretch.**
REX2 files however, only contains the actual audio file and the slices, the rest (effects, stretch setting etc.) is added when the file is loaded and can be changed at any time.

Transient Shaper

The Transient Shaper is a type of attack/release envelope control, which produces a result that could be likened to compression. Compressors level out the audio, by making loud sounds softer and vice versa. The result is that the levels become more even and individual sounds can get more power and "punch".

- **"Normal" compressors are triggered by peaks and volume changes in the actual audio. The Transient Shaper is instead triggered by the individual *slices* in the loop.**

Regardless of method, if you have ever used a compressor, you will find that the Transient Shaper will affect the sound in a similar way. It is, however, important to be aware of this difference, as the Transient Shaper won't work as intended unless the file contains slices!

To compensate for the volume loss that can be caused by this effect, the Transient Shaper has automatic gain compensation, that raises the overall level by a suitable amount. The parameters are as follows:

Parameter	Description
Threshold	This is the threshold level above which the effect sets in. Signals with levels above the threshold will be affected, signals below it will not. In practice, this means that the lower the Threshold setting, the more the signal will be affected by the Transient Shaper. The range is -6 to -40 dB.
Amount	This lets you specify the amount of gain reduction applied to the signals above the set threshold. The range is 0 to 99.
Attack	This governs how quickly the envelope will apply its effect when signals rise above the set threshold. If you raise this value, the response will be slower, allowing more of the signal to pass through unaffected. Typically, this is used for preserving the attacks of the sounds. The range is 0 to 91 ms.
Release	When the signal level drops below the set threshold, this determines how long it takes before the Transient Shaper lets the sound through unaffected. Set this to short values for intense, "pumping" compressor effects, or to longer values for a smoother change of the dynamics. The range is 13 ms to 1.4 s.
Gain meter	This shows the amount of gain reduction or increase (in dB), caused by the combined compression and gain compensation.

Equalizer

The Equalizer allows you to cut or boost selected frequencies to shape the overall sound quality. To open the Equalizer, click on the Equalizer button or select it on the View menu. The parameters are as follows:

Parameter	Description
Lo Cut	A highpass filter allowing you to set the lower limit of the overall frequency range. You can progressively cut frequencies from 15 Hz up to 12 kHz.
Low Frequency	The center frequency for the low-end parametric equalization. Around this frequency, the sound will be boosted or cut according to the Low Gain setting. The available frequency range is 20 Hz to 3 kHz.
Low Gain	Governs the amount of boost or cut around the set frequency. The range is ± 18dB.
Low Q	Determines the width of the frequency band around the center frequency to be affected. The narrower the frequency band, the more drastic effect of the boost or cut. Range is 0.5 to 10.
High Frequency	The center frequency for the high-end parametric equalization. Around this frequency, the sound will be boosted or cut according to the High Gain setting. The available frequency range is 1.5 kHz to 16 kHz.
High Gain	Governs the amount of boost or cut around the set frequency. The range is ± 18dB.
High Q	Determines the width of the frequency band around the center frequency to be affected. The narrower the frequency band, the more drastic effect of the boost or cut. Range is 0.5 to 10.
Hi Cut	A lowpass filter allowing you to set the upper limit of the overall frequency range. You can progressively cut frequencies from 20 kHz down to 100 Hz.

Magnify to Fit/Magnify to fit Loop

If you select Magnify to Fit, the display will zoom out so that the entire sample fits the window. If Magnify to Fit Loop is selected, the display will zoom in (or out) so that the area between the left and right locators will fit the window.

Jump to Cursor

If this is selected, the window will scroll to the current play position, maintaining the current magnification factor.

Show Grid

You must have set a loop length for this item to be available. When enabled, a grid showing Bars/Beats/16th notes is shown in the waveform display.

Scroll during Playback

When you play back, the current position is indicated by a dotted line travelling across the waveform. If the option "Scroll during Playback" is checked on the View menu, the current position will always be displayed in the waveform display. This option can also be toggled on or off by pressing [F] on your computer keyboard.

Transmit as One Sample

Deactivated

When Transmit As One Sample is turned *off*, the audio gets sliced into individual samples when transmitted, and the MIDI files created will contain one note for each of those slices.

This is the preferred mode if you want to use your MIDI sequencer to edit the loop, change its tempo or use the MIDI file as a groove.

Activated

When Transmit As One Sample is turned *on*, the program will transmit the part that stretches from the Left Locator to the Right as one sample. Also, in this mode, the MIDI File will only consist of one event, with the length set using the Bars and Beats settings.

When should Transmit as one Sample be Activated?

One obvious application of transmitting as one sample (as opposed to separate slices) is when you simply want to change the properties (like pitch and/or tempo) of an audio file without otherwise changing it. Say you have an audio file (Wave, Aiff etc.) that you wish to use in a song. The problem is that the tempo and/or the pitch of the file is wrong for the song, and you wish to fix this. The solution is to open the file in ReCycle, then slice it up and set the length of the loop using the normal techniques. Enter Preview mode, set the new tempo and/or pitch, and lastly export the file (with Transmit as one Sample activated) in it's original format but with a new tempo and/or pitch etc.
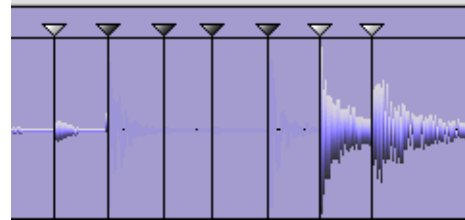
Transmit as One Sample cam also be used in conjunction with Silence Selected to separate sounds from a loop.

Silence Selected

When this function is activated, the slices that have *selected markers* will be silenced when transmitted or Exported. Preview mode can be used to audition this function.
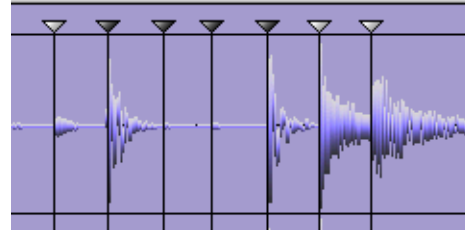
When Silence Selected is turned on, the slices which have selected markers...

...will be replaced by silence.

This feature is probably best used when Transmit As One Sample is turned *on*, to silence individual sounds in a longer sample. It can also be used to simply skip unwanted sounds, when slicing.

But, Silence Selected works even if Transmit As One Sample is turned *off*. In this case, the selected slices will simply be skipped, both when transmitting to the sampler and when creating MIDI Files. This will then create "gaps" in the sampler's keyboard map and a corresponding "gap" in the MIDI File.

Normalize

Normalize will change the gain to ensure maximum level.

➜ **When Normalize is selected, a dialog box appears asking if you want to Normalize the whole file or each slice.**
If you select the latter, and the selected file is a rhythmic loop, the normalizing will disrupt the inherent dynamics of the loop, since the gain of each slice will be changed to more or less equal level.
Therefore, normalizing the whole file is probably what you would normally select.

➜ **Normalizing each slice can be used when you use ReCycle to process individual sounds that don't belong to a loop.**

! **Normalize can't do miracles. If your recording contains unwanted noise, normalizing will increase the noise level together with the other audio material.**

Convert to Mono

This item will convert stereo files to mono. It is only selectable for stereo files.

➜ **The dialog lets you decide which channel(s) you wish to use as the basis for the converted file.**
The options are Left, Right or a Mix of both Left and Right channels.

Convert Sample Rate

This item allows you to convert the sample rate of a file. Lowering the sample rate will reduce the file size, but it will also lower the fidelity of the recording (less high frequency material will be present).

On the other hand, increasing the sample rate will not raise the fidelity of the sample in any way. It is therefore not recommended to convert from a low rate to a higher one, unless it is required by the sampler.

The dialog shows the files current sample rate, and the supported sample rates you can convert to.

Crop Loop

➜ **Crop Loop allows you to trim files, by removing all audio data outside the left and right locators.**
If you have set up a perfect loop with the locators, and the file contains audio outside this locator range you can use Crop Loop to remove this superfluous data.

Remove DC

This function will remove any DC offset in the audio. DC offset is when there is too large a DC (direct current) component in the signal, sometimes visible as the signal not being visually centered around the "zero level axis". DC offset can introduce clicks and it also affects zero crossing detection and certain processing functions such as Re-Analyze and Normalize.

Re-Analyze

Re-Analyze re-runs the slice-detection algorithm on the waveform data. You may have deleted slices that were detected when the file was first analyzed. This command will "re-discover" those slices.

➜ **All slices discovered by Re-Analyze that lies on a position in the file not already occupied by a slice will be added.**
Note that these may or may not be visible, as this depends on the Sensitivity setting!

Transmit

The top menu item on the Sampler menu changes name depending on which sampler you have selected. Selecting "Transmit to..." opens the Transmit dialog for the currently selected sampler.

Exactly how the dialog looks depends on the selected Sampler, but there are a few standard items you will most often find there:

Sample Rate

Sample Rates between 11.025 to 1 MHz are supported.

Status Bar shows inherent rate

When you Open or Receive a sample, its inherent sample rate is displayed in the Status Bar at the bottom of the ReCycle application window.

Available rates

In the transmit dialog, a number of sample rates can be selected from a pop-up. Exactly what options are available depends on the sampler selected.

➜ **If possible, the sample's inherent rate is suggested.**
If, for example, the sample was recorded at 48 kHz, this will be the suggested sample rate in the Transmit dialog.

➜ **If the sample's inherent rate is not supported by the sampler, the next higher rate is suggested.**

➜ **In addition to the above, a number of other sample rates can be selected from the pop-up in the Transmit dialog.**
If the sampler only handles a few sample rates, they can all be selected. If the sampler supports many rates, the most commonly used ones (or the ones closest to these) are available. Those most common rates are 11.025kHz, 22.05kHz, 32kHz, 44.1kHz and 48kHz.

When is sample rate conversion performed?

If you transmit, and the sample rate set in the Transmit dialog is not the same as shown on the Status Bar (the sample's inherent rate), a sample rate conversion will be performed during the transmission.

When should I change from the suggested sample rate?

Lowering the sample rate will make the samples occupy less memory in the sampler, but it will also lower the fidelity of the recording (less high frequency material will be present).

On the other hand, increasing the sample rate will not raise the fidelity of the sample in any way. It is therefore not recommended to convert from a low rate to a higher one, unless it is required by the sampler.

Templates

When ReCycle sends audio to your sampler it will put the samples it creates in a "container" which holds all the samples and their mapping on the keyboard. This "container" may be called a Program, Instrument, Patch or similar, all dependent on the naming used by the sampler manufacturer. For now, let's call it a Program.

There are a number of settings in the Program which may or may not be of importance to you.

• **If the settings are *not* important to you, you don't need to use templates, you should use the Default option in the Transmit dialog. ReCycle will then simply create as simple a Program as possible. You can then change this Program's settings by using the controls on the sampler itself.**

• **If you *do* need special settings, you use Templates. You might for example want the first slice to appear on a certain key, you might want to have all samples play to a certain output, you may want the Program to receive on a certain MIDI Channel etc. Proceed as follows:**

1. **On the sampler, manually create a Program with the desired settings.**
   Make sure the first sample in the Program's keyboard map is positioned where you want the first sample in the keyboard map created by ReCycle.

2. **Save this Program to disk (using the sampler's regular file saving functions), for later use, but make sure it still resides in the sampler's internal memory.**

3. **In the ReCycle Transmit dialog, select this program from the Template pop-up.**
   Exactly how this is done depends on the sampler. If it is external you can select the Program from a pop-up menu in the dialog. If ReCycle saves the data on to your computer's hard disk, then you select a disk file as your template.

4. **Transmit/Export the Program.**
   A new Program is created in the sampler. It will get all the settings of the Template. The first slice will appear on the same key as where the first sample in the Template was.

! **If you use exactly the same name as the Template, the new Program may replace the Template.**

Program Name

Using this field you can specify a name for the Programs you are about to create in the sampler.

- **You can specify the name directly in the dialog. You will only be able to type in characters supported by the sampler, and the name will be truncated to fit the length of the names in the specific sampler.**
- **The actual slices that the Program contains will get names derived from the Program name, with a number added at the end. For example BigDrums#01, BigDrums#02, etc.**

Transmit

This button creates a Program and samples for it as described above, *without* creating any MIDI File.

MIDI File + Transmit

This button will make two things happen:

➜ **Programs and samples are created as described above.**

➜ **A file dialog appears, which allows you to create a MIDI File on your computer's disk.**
This resulting file should used in your sequencer to play the slices in the sampler.

Receive

If you have an external sampler connected to the computer, ReCycle can receive the audio directly from it.

1. **Make sure the sampler you wish to receive from is selected on the lower half of the ReCycle Sampler menu.**
If the sampler cannot be found on the Sampler menu, you need to go into the Sampler Settings dialog and add the sampler.

2. **Select "Receive..." from the Sampler menu.**
A dialog appears. Its exact appearance depends on which sampler you have selected.

The Yamaha A3000 Receive dialog.

3. **In the dialog box you will find a pop-up which allows you to select a sample in the sampler.**

4. **Clicking Receive transfers the sample into the computer and opens it in a new window.**

Close All

Close All closes all open document windows.

Document List

The Document List shows all currently open ReCycle documents. Selecting one will make it the active document.

Go to the Propellehead Homepage...

This launches the Internet browser you have specified as your preferred browser for your computer. The browser then takes you to the Propellerhead web site. Note that you need an active Internet account for this to work.

Download Drum Loops

This takes you directly to a page on the Propellerhead site that contains audio loops in either the Wave or Aiff format that are free to download.

ReCycle Tech Info and Support

This menu item brings you directly to the ReCycle Support pages on the Propellerhead web site. Use this option if you are having trouble with ReCycle and need help!

Order ReCycle Now

This takes you to the "Prop Shop" where you can place orders for all cool Propellerhead products.

Register ReCycle Now

This is where you register your copy of ReCycle. Registering means that you get access to product updates (when available), tech support and other goodies.