Kyma·5 Quick Reference

— SOUND BROWSER —

Click to update the list when files or directories have been added or removed by other programs.

Each Sound in the list that is preceded by a cyan arrow (>) performs processing on an input (the **replaceable input**). These Sounds come with a default input, but a **replacement input** can be substituted for the default input, making it easy to quickly audition and create combinations of different processing algorithms and source material. The following controls set the replacement input to use with Sounds that take replaceable inputs:

Click this button to replace the Sound's original input with the previously selected replacement input.

This is the name of the previously selected replacement input.

Click here to make the Sound or file selected in the list become the replacement input.

Click here to make the first audio input channel of the Capybara become the replacement input.

Play and stop buttons for auditioning the selected Sound or file. (**Cmd+Space** and **Cmd+K** are shortcuts.)

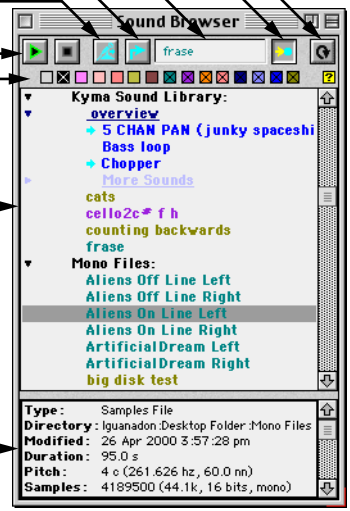
Check a box to show a specific kind of file or Sound in the list. The categories are, from left to right, unknown file types, folders, text files, global maps, tools, compiled Sound grids, MIDI files, samples or digital recordings, spectral analysis files, RE resonator files, group additive synthesis files, Sound files, Sound collections within Sound files, Sounds within Sound collections or Sound files, and time lines.

Sounds, files and folders are listed here in the same color as the check boxes (e.g., blue for Sounds). A Sound that has been changed but not yet saved is displayed with a yellow triangle to the left of the name. Choose **Save** from the **File** menu to save the changes made to all Sounds.

Click a file to select it. Double-click a Sound or file to edit it. Click the triangle next to a folder to show or hide its contents (hold **Control** or **Command** key down to also open all sub-folders). Double-click a folder to open a Sound Browser on that folder.

Use the arrow keys to move the selection up or down. Use **Find**... from the **Action** menu (**Cmd+F**) to select a Sound or file by name. The **Action** and **Info** menus refer to the selection. Use **Cmd+Space** or the transport controls to audition the selection. Click and drag the selection into a time line, Sound editor, or Sound file window to use the selection in your work.

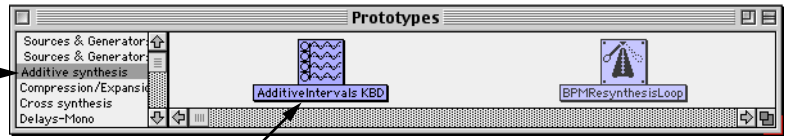
Information on the selected Sound, file or folder.



— SYSTEM PROTOTYPES —

The prototypes are categorized by function or technique. Clicking on a category name here changes the list of prototypes that appears at the right.

Select a prototype by clicking on its icon, or choose **Find prototype**... from the **Action** menu (**Cmd+B**) anywhere in Kyma to search for a prototype by name. This prototype is selected. The **Action** and **Info** menus refer to this Sound. Press the **Control** or **Command** key along with **Space Bar** (**Cmd+Space**) to compile, load and start (or play) this prototype. Click and drag the prototype into a time line, Sound editor, or Sound file window to use it in your work.



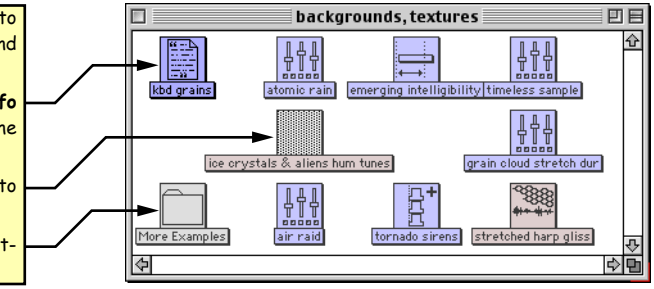
— SOUND FILE WINDOW —

A Sound file contains a collection of Sounds and Sound folders. Use Sound files to keep related Sounds together. Sounds can be dragged between this window and time lines, Sound editors, and other Sound file windows.

This Sound is selected. Click any Sound icon to select it. The **Action** and **Info** menu operations refer to this Sound. Press **Enter** to change the name of the Sound. Press **Ctrl+Space** to compile, load and start the selected Sound.

This Sound is being edited (see Sound editor). Double-click any Sound's icon to edit its structure and parameters.

This is a Sound collection. Use **Collect**... from the **Action** menu to place the selected Sounds into a new collection.



— VIRTUAL CONTROL SURFACE —

The virtual control surface (VCS) is a control panel or user interface for the currently playing Sound. It stores control settings in **presets** and alternative graphical arrangements of the controller widgets in **layouts**.

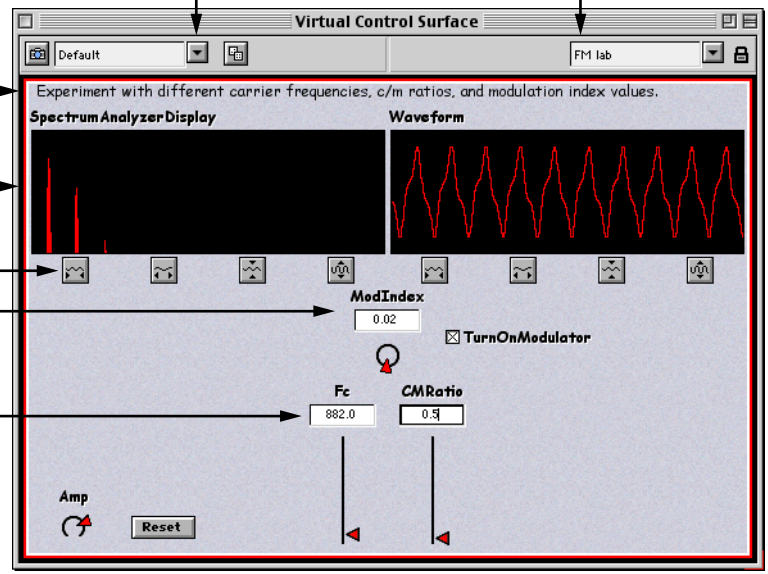
The top part of the VCS contains controls for selecting and editing presets and layouts. The bottom portion contains the graphical controls for interacting with the Sound.

Click the triangle to choose a preset from a list. Click the camera (or click the name and press **Enter**) to take a snapshot of the current settings.

Click the dice to set controllers randomly. Click a controller label (making it gray) to keep the dice from changing that controller.

These are the layout controls. Click the triangle to choose the controller layout from a list of predefined layouts.

Click the padlock to unlock/lock the VCS. When unlocked, the MIDI mapping, type, range, and location of the controllers can be edited (see below).



Kyma automatically displays comments from **Annotation** modules in your Sound. You can also add text using the VCS editor.

Spectrum and waveform displays come from **SpectrumAnalyzer** and **OscilloscopeDisplay** Sounds or by playing the Sound from **Spectrum analyzer** or **Oscilloscope** in the **Info** menu. The axes of the spectrum are linear frequency and dB magnitude. The axes of the oscilloscope are time and amplitude.

Compress or expand the frequency, magnitude, time or amplitude axes with these buttons.

All controls come from Event Values (hot variables) in the Sound (for instance, **!ModIndex**). An Event Value can be displayed as a fader, potentiometer, or continuous rotary (with or without the text field), or as text, buttons, or switches.

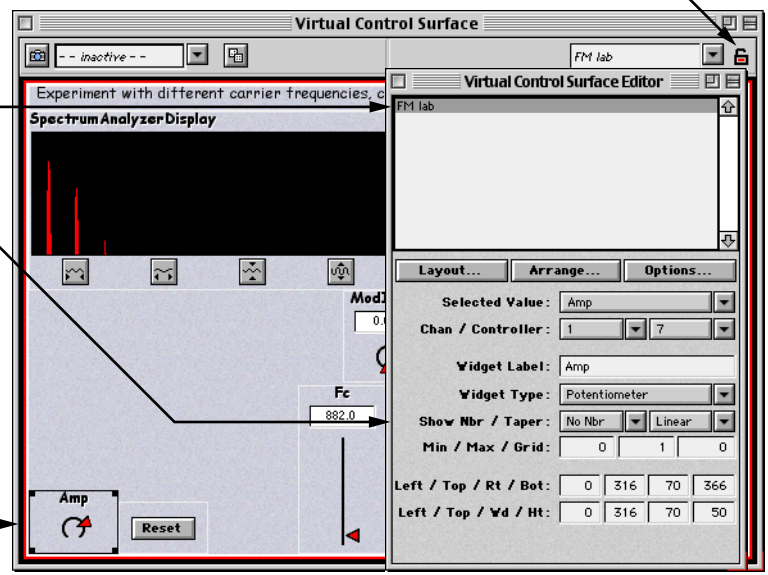
To change the value of a fader, potentiometer, or rotary, use the mouse (hold **Shift** down for fine adjustments), or enter a number into the box above the control and press **Enter**. **Tab** cycles through the boxes. If a MIDI device is mapped to the controller (though the global map, a **MIDIMapper** Sound, or the VCS itself), the controller can be adjusted using the MIDI device.

If a CM Automation Motor Mix is attached to the Capybara and selected in the Kyma preferences, it will automatically show abbreviations of the controller names displayed in its LCD scribble strip, and its faders, rotaries, and buttons will be mapped to control the VCS.

Clicking the padlock at the upper right corner of the virtual control surface unlocks the layout and opens the VCS editor.

The upper portion of the editor displays a list of layouts for the currently playing Sound. Click to select one or **Shift+click** to select several layouts. The buttons below the list open pop-up menus for adding, merging and removing layouts (**Layout**…); arranging the selected controller widgets (**Arrange**…); and adding and removing controller widgets (**Options**…).

The lower portion of the editor provides a way to edit the selected controller widget(s): its MIDI channel and controller number, its label, its type (fader, button, etc.), whether it has an associated number field, its taper (linear or log), its minimum, maximum and gridding values, and its screen location.



Select widgets by clicking in the VCS window (hold down **Shift** key to extend the selection), drawing a box around a group (hold down **Command** or **Control** to start within a widget), or by selecting a name using **Selected Value** in the editor.

To quickly assign a MIDI controller to a widget, select the widget, press the **Escape** key, and move the controller.

Click & drag a corner or edge of a widget to resize it; click & drag from the center to move it. Click, press the **Shift** key, then drag to move only vertically or horizontally. While resizing or moving a widget, the edges of other widgets act as snap-to guides to aid placement.

— TIME LINE —

Menus; selected Sound name, timing & color

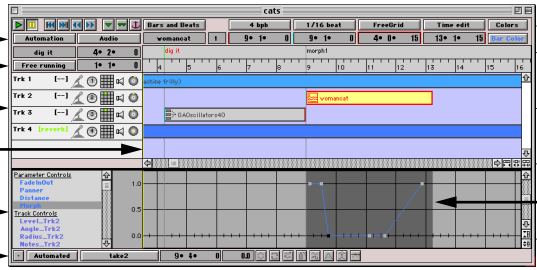
Timing source, current time & time ruler

Tracks and track settings

Yellow time cursor indicates current time.

List of controllable parameters

Control editor menus, info, transformations



Transport controls, time line menus

Selected marker name & time; markers

Sounds with various durations & start times

Time zoom-out, zoom-in, fit-window buttons

Automated control of selected parameter

Value zoom-out and zoom-in buttons

Play and pause (**Space** toggles, **Ctrl+** plays, **Ctrl+** rewinds & stops); go to prev & next marker, prev & next Sound; insert marker, spaced markers, anchor.

Set groups of controllers to live, automated, or record-enabled.

Set time displays to bars and beats or time code.

Set bar division or frame rate and beat or frame subdivision.

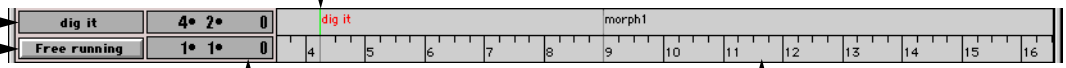
Set time grid mode (free, quantized, magnet); do time editing; choose time line colors.

The selected Sound's name and polyphony. Enter a new name or polyphony & press **Enter**. Use **Ctrl+L** to enter spaces into name. Polyphony is the number of voices for keyboard-based Sounds.

Start time, anchor time, duration, & end time of selected Sound(s). Enter a time & press **Enter**.

The selected marker's name and time. Enter a new name or time and press **Enter**. Use **Ctrl+L** to enter spaces into the name.

Click to select marker; drag marker to reposition it; **Delete** key removes marker.



Timing source: use pop-up menu to chase MIDI or SMPTE time code or MIDI timing clock; or to use an internal timing clock.

The current time is displayed here. Enter a time & press **Enter** to move the yellow time cursor to a particular time.

Click in the time ruler to send the yellow time cursor to that time.

Click to send track output to a submix. Submix is assigned color & slot in grid.

Drag & drop to add Sounds. Drag & drop **onto** a Sound to use **it** as the replacement input.

Click a Sound, draw a box, or **Select all** from **Edit** menu to select (**Shift** extends selection); **Delete** key to delete; click & drag to change tracks or start time (click, hold down **Shift**, then drag for vertical or horizontal move); click & drag Sound end to change duration. Selected Sound parameters are displayed below on left.

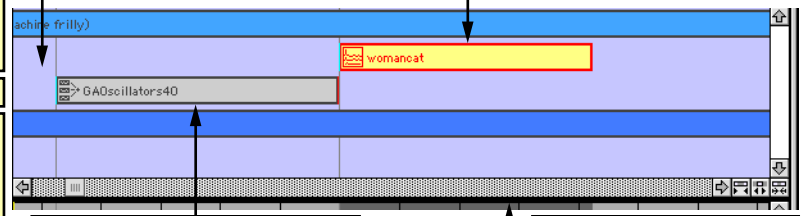
Mic & MIDI are green when live, red when recording

Yellow dot is virtual source location

Click to solo; **Option** or **Control** & click to mute. Use **Shift** key to solo/mute multiple tracks.

Click to set track MIDI channel.

Pop-up menu to route track output: directly to physical outputs; or via pan controls (**Angle**, **Radius**, **Panner** & **Distance**) and speaker locations (**Preferences** under **Edit** menu) to physical outputs.



Click to choose audio input: a physical input, submix, or no input. The color-coded submix **reverb** is input for this track.

Double-click a Sound to edit it. Edited Sounds are displayed in gray.

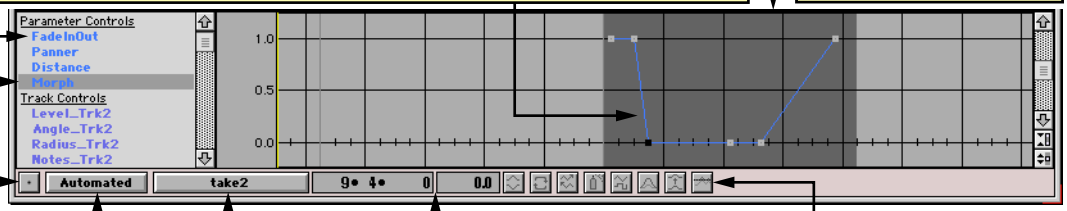
Drag this line up or down to adjust size of the track area.

Automated control editor: click a breakpoint, draw a box, or **Select all** from **Edit** menu to select (**Shift** extends selection); **Option** or **Ctrl** & click to add; **Delete** key to delete; click & drag to move breakpoints (click, hold down **Shift**, then drag for vertical or horizontal move).

Dark background shows times when this control is active.

The selected Sounds' parameters.

This parameter is selected.



Click to enable recording of the selected parameter when the time line is next played.

Type of control: use pop-up menu to choose whether the selected parameter is automated, is controlled live, or is slaved to another parameter's value.

Source of control: use pop-up menu to select a take, a MIDI controller, or another parameter from which the selected parameter will get its values.

The time and value of the first selected breakpoint. To move a point, enter its new time & value into these fields & press **Enter**, or click & drag it to the new location.

Click to apply a transformation to the control. Hold the mouse over any button for a description of its transformation.

— SOUND EDITOR —

The Sound editor shows the signal flow between Sounds and the parameters of those Sounds.

Double-clicking a Sound in the time line or Sound file window opens the Sound editor on a copy of that Sound. The changes you make in the Sound editor are **not** saved back into the time line or Sound file window until the Sound editor is closed. Use **Save** from the **File** menu to save back the changes without closing the editor window.

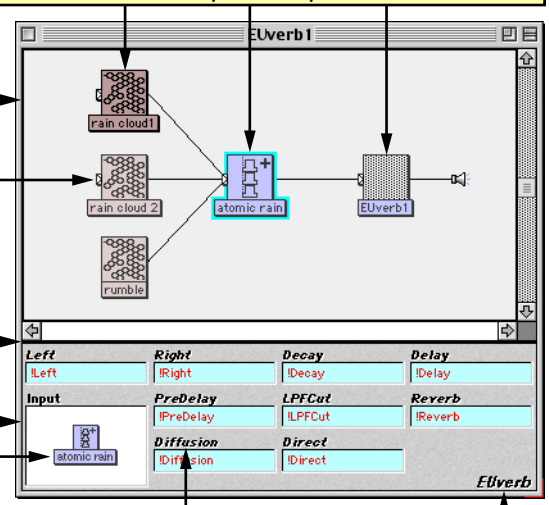
Click a Sound to select it. Use **Cmd+Space** to audition the selected Sound, **Enter** to change its name. The **Action** and **Info** menus refer to this Sound.

Double-click a Sound to edit its parameters. The edited Sound's parameters are shown at the bottom of the window, and its icon is grayed out.

A cyan halo surrounds the **replaceable input**. The replaceable input Sound is replaced when you drag the Sound being edited onto another Sound in the time line or onto a line in a Sound editor, or use it with a replacement input in the Sound browser. To set the replaceable input, select a Sound and choose **Set replaceable input** from the **Action** menu.

The top part of the editor is the signal flow diagram. A stereo signal travels along each line from left to right. A thick line with a number in a box indicates that a signal is used more than once in the destination module (as in the lower window).

To insert a Sound into the signal flow, drag the Sound onto a line connecting two Sounds. To delete a Sound, click on its icon to select it, then press **Delete**. To replace a Sound with a copy of another Sound, drag the other Sound on top of the Sound to be replaced. To route the **same** Sound to two or more places, hold down **Control** or **Option** while dragging. Alternatively, use **Paste** or **Paste special**... from the **Edit** menu.



Click a Sound's tab (the small box attached to the left edge of the icon) to show hidden inputs. Clicking again will hide the inputs. Click and drag a Sound to reposition it. Hold down the **Shift** key to move the Sound and its inputs at the same time.

Drag this line up or down to adjust the size of the parameter area. To expand to the maximum size, double click in the background of the parameter area.

These are the parameters of the Sound double-clicked in the signal flow diagram.

A parameter with a cyan background and italic name is a hot parameter. Hot parameters can be controlled by any combination of constant values, values from MIDI or on-screen controllers, the output of another Sound, or arithmetic expressions.

A parameter with a white background and non-italicized name is a constant parameter. A constant parameter has a fixed value for the duration of the Sound.

Signal inputs to a Sound appear in both the signal flow diagram and in the Sound's parameters. To change the input, cut, copy, paste, or drag Sounds into the parameter field, or onto the icon of the old input in the signal flow diagram. The signal flow diagram will not be updated until you double-click a different Sound or double-click in the background of the signal flow diagram.

This is the name of one of the Sound's parameters. Hold the mouse over the name for a description of the parameter.

This is the type of the Sound being edited. Hold the mouse over this area for a description of the Sound type.

Parameters can be controlled by Sounds acting as LFOs. To insert a Sound into a hot parameter field, **Copy** the Sound, and then **Paste** it into the field. Use **L** for left, **R** for right, or **M** for mono mix.

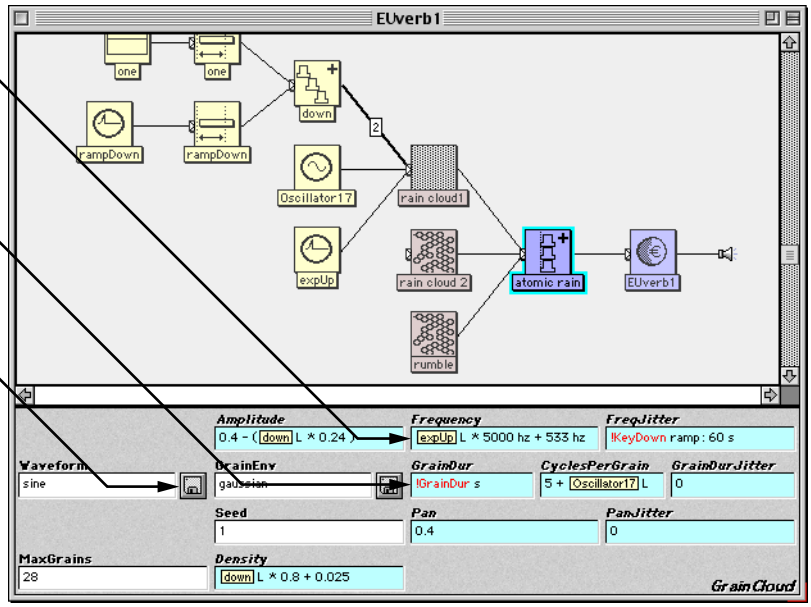
Hot parameter fields can contain Event Values controlled by MIDI or the Virtual Control Surface. Event Values can be inserted by hitting the **Escape** key and moving a MIDI controller or playing the MIDI keyboard (one key for **!KeyPitch**, two keys for **!KeyDown**, three keys for **!KeyVelocity**), choosing **Paste hot**... from the **Edit** menu, or by typing **!** followed by any name.

Click this button to choose a file from a standard file dialog. Use **Shift+click** to get information about the current file. Use **Control+click** or **Command+click** to open an editor on the current file.

Can't remember what arithmetic can be used in parameter fields? **Ctrl+Shift+H** lets you choose from a list.

Can't see everything in a field? Use **Large window**... from the **Edit** menu (**Ctrl+L**) to expand it to full screen size.

If a field flashes when you play the Sound, it indicates an error in the field's value.



— SAMPLES FILE EDITOR —

The gray box indicates the region of the file that is visible in the editing pane, below. Click and drag in this area to change the visible region. The red box indicates the current selection.

The buttons do the following: scroll one page to left; play selection; replace selection with a sample from disk; fit selection to window; compress time axis; expand time axis; compress level axis; expand level axis; additional options (including editing header information); and scroll one page to right.

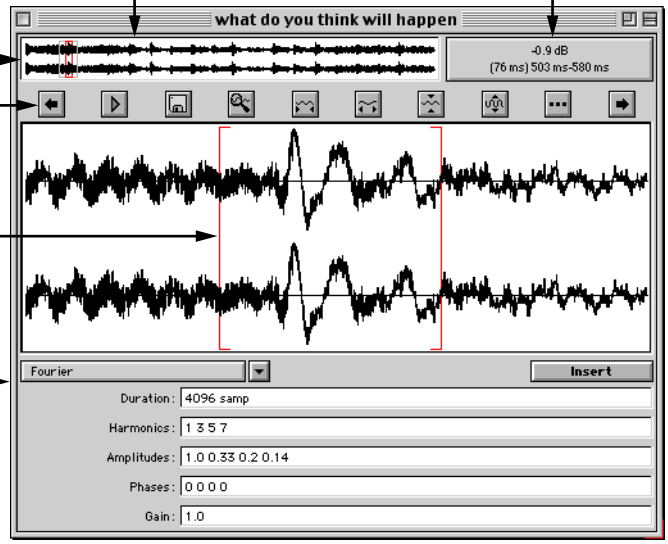
The editing pane displays the portion of the file visible in the gray box in the overview. Click and drag in the overview, or use the scroll, expand, and compress buttons to navigate through the file.

The samples between these red lines are selected. Click and drag in this area to change the selection. Use **Cut**, **Copy**, **Paste**, **Trim**, and **Clear selection** in the **Edit** menu to alter the file. All changes in the editor are non-destructive; use **Save** or **Save as…** from the **File** menu to save the changes to the hard disk.

This section is used to algorithmically generate waveforms. Use the triangle button to select a template from the list of templates. Modify the template parameters, and click **Insert** to evaluate the template and replace selection with the result.

This is an overview of the entire file. Two channels are shown, even when editing single channel files.

Peak level in editing pane, and the duration, start, and end of the selection. Click to change units.



— STATUS FROM DSP MENU —

Status from the DSP menu displays audio levels and DSP usage in the Capybara. It also provides a way to configure the audio inputs and outputs.

Input peak level indicator. Click mouse to clear. Possible clipping if it shows >0< (meaning the signal reached 0 dB at some point). Output has a corresponding indicator.

Input and output level indicators. Lines indicate -10, -20, -40, -60, and -80 dB.

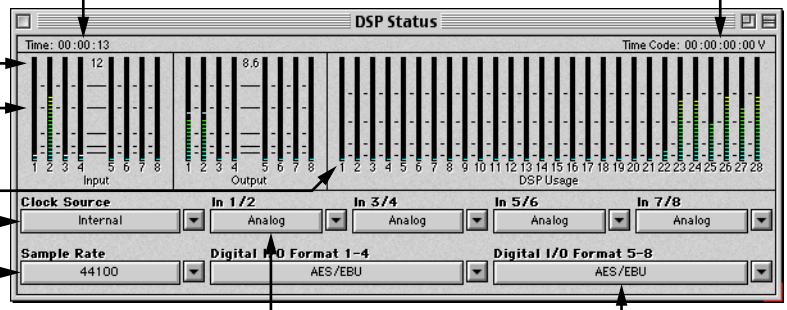
Approximate measure of current computational load on each DSP. Each line indicates approximately 20% usage.

Choose between internal and external sample rate clock sources from the pull down list.

Choose a sample rate from the pull down list.

Time since currently playing Sound was started. Does not update after Sound ends or when DSP is stopped.

Last time code received via SMPTE LTC (L), SMPTE VITC (V), or MIDI time code (M).



Choose analog or digital audio interface for each input channel pair from the pull down list.

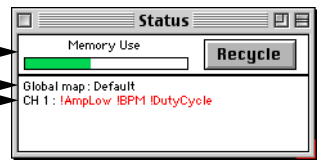
Choose either AES/EBU or S/PDIF as digital input and output format for groups of four inputs and outputs.

— STATUS FROM FILE MENU —

Indicates the amount of memory Kyma is using on your computer. Leave this window open so that Kyma can do memory recycling automatically for you. Click **Recycle** if the meter goes into the red.

Displays the name of the global map file currently in use. The global map associates memorable controller names, like !DutyCycle, with real MIDI channels and controller numbers.

Shows the inputs expected by the Sound currently playing: audio, MIDI controllers, and/or MIDI keyboard.



— SPECTRUM EDITOR —

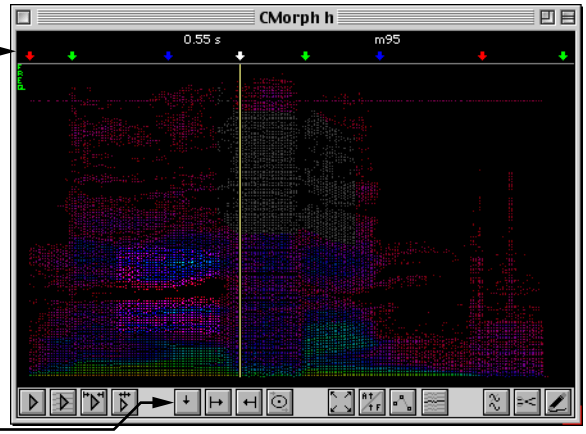
The spectrum editor displays the amplitude and frequency envelopes of sine wave components to be used during additive resynthesis. Each horizontal track represents a single sine wave. Color indicates the amplitude of the sine wave, vertical position indicates the frequency of the sine wave, and horizontal position indicates time. The spectrum editor uses the Capybara for real time auditioning of the resynthesis while editing.

The yellow scrub bar can be moved with the mouse, with MIDI pitch bend, or left or right arrow keys. While the scrub bar is moving, the resynthesis will play.

Markers indicate labeled time points and time segments for cutting or auditioning. The white marker is selected and its time position and label are displayed at the top of the editor.

Click a marker to select it; the scrub bar moves to the marker time. Press **Enter** to rename the selected marker; use the **Delete** key or **Cut** from the **Edit** menu to remove the selected marker.

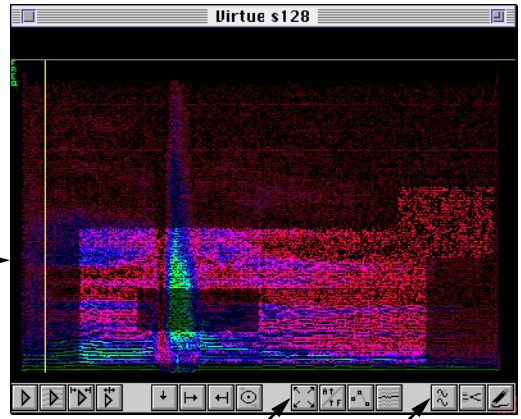
These buttons do the following: creates a marker at the scrub bar time; places the start marker at the scrub bar; places the end marker at the scrub bar; and sets pre- and post-roll play times.



Selected tracks are brighter. Select by clicking on an individual track, or by drawing a box around a region to select. Hold the **Shift** key while selecting to add to or remove from the current selection. Select a track between 1 and 10 by pressing a number key (**1**-**9**, **0**). Up and down arrow keys select next higher or lower track.

Create a Sound to play the selected part of the spectrum by choosing **Copy** from **Edit** menu, then **Paste** into a time line, Sound editor, or Sound file window.

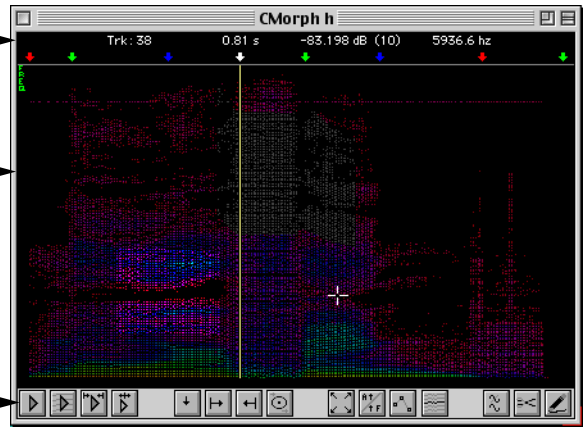
Hold down the **Control** or **Command** key while drawing a box to zoom in on a specific region.



These buttons do the following: zoom the display all the way out; switch between time-frequency and time-amplitude display modes; switch between isolated-dot and connected-dot between spectral frames; select tracks and frames based on various criteria.

These buttons do the following: modify the selection in various ways; cut the time between the start and end markers; and switch in and out of drawing mode.

Information on the track under the cross hair cursor is displayed here.



Zero the amplitude of the selected tracks by choosing **Clear** from **Edit** menu. Grayed tracks have zeroed (cleared) amplitudes.

These buttons do the following: play the entire spectrum; play the selection; play the selection between start and end markers; and play the selection outside of start and end markers.

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