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Configuration Dialogs and Operating Techniques

Configuration Dialogs and Operating Techniques

This chapter describes the secondary dialogs and other elements, and related operationing techniques, that supplement the primary functions of the Live Bar.

The File Browser

Open the File Browser from the Live Bar's Set menu or with the F10 key.

The File Browser is specific to SFP's requirements, but is modeled on the concepts of a typical file manager. You will recognize most of the functionality as it is similar to that offered by your operating system's file manager.

The File Browser is used for:

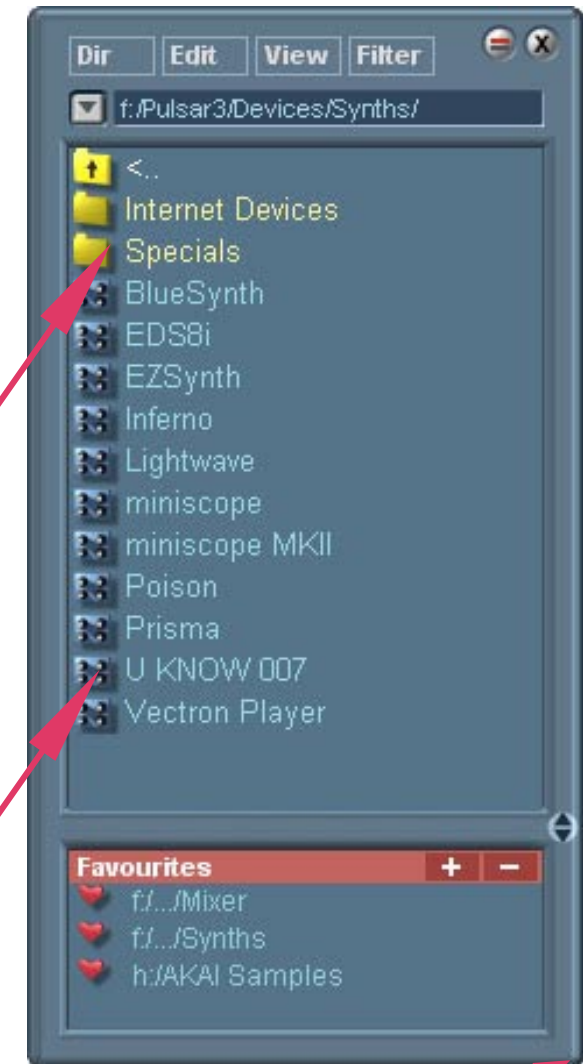
- loading Devices and Modules into your project
- loading samples and sample programs (Multisamples)
- loading projects (as an alternative to the *Load Project* option in the File menu)
- administrating and organizing your files (copy, cut, delete, rename etc.)

The File Browser is also capable of copying files from an AKAI-format CD to your non-removable hard drive - an operation that is not possible with your operating system's file management utilities.

directories
(yellow)

files
(blue)

window size




The File Browser displays only files of the types relevant to the SCOPE Fusion Platform (SFP), that is, files that can be loaded into an SFP project. A listing of these file types, and their icon symbols follows. Note that although the file extension is not shown in the File Browser, it probably will be visible in your operating system's file manager.

| | |
|------------------|---------------|
| Projects: | .pro |
| Devices: | .dev |
| Modules: | .mdl |
| Sample programs: | .p/.sf2/.sts |
| Samples: | .s/.wav/.aiff |

Navigation

When SFP starts, the File Browser opens to display the Devices directory. All drives, directories, and files are identified by a symbol, and listed as a text entry (drives and directories in yellow, files in blue).

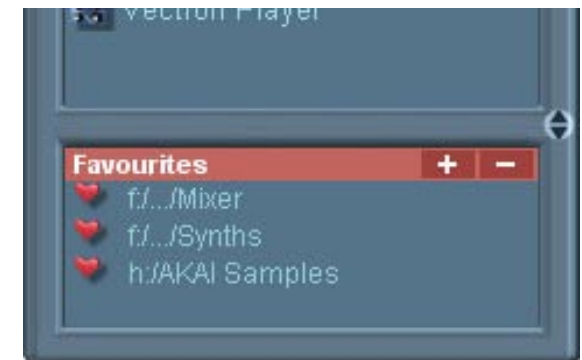
To change to another directory you can click once on its symbol, or double-click on the text entry. By clicking on the symbol  (again, a single click on the symbol, or, in this case, a double-click on the blue arrow) or by selecting **Up** from the **Directory** menu you will arrive at the next higher level of the directory structure. At the highest level the drive designations will appear instead of directory names.



Clicking on the current path text beneath the menu bar, or on the small arrow symbol, opens a drop-down list from which you can select a drive.

Alternatively you can select a drive by clicking the circled drive letters on the lefthand side of the File Browser.

For quick navigation to frequently used directories you can create a 'favourites' list. This list is located at the bottom of the File Browser. Add a new entry by selecting the **Fav** menu entry. The Buttons „+“ and „-“ are used to add or remove a directory from the list.



File Browser Menus

Directory

Up: Moves you up one level in the directory tree (i.e. previous directory/folder).

New: Creates a new directory. The directory is named **New Folder** by default, but the name can be changed at any time.

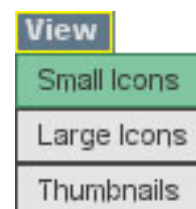
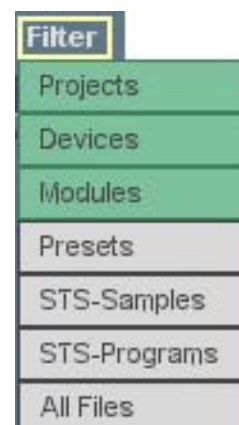
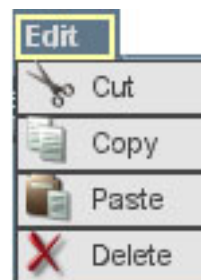
Edit

Cut: Cuts the selected file or directory from the list and saves a copy in a temporary file (shortcut <Ctrl/X>=PC or <Apple/X>=MAC).

Copy: Copies the selected file or directory into a temporary file (shortcut <Ctrl/C>=PC or <Apple/C>=MAC).

Paste: Inserts the contents of the temporary file (Cut or Copy) into the current directory (shortcut <Ctrl/V>=PC or <Apple/V>=MAC).

Delete: Removes the selected file or directory (shortcut =PC or <NumLock>=MAC).



View Menu

Small Icons: Listed files are displayed with small icons.

Large Icons: Listed files are displayed with large icons.

Thumbnails: Devices and modules are displayed as minimized views of their surfaces.

Filter

The Filter function lets you select the individual file type(s) to be displayed in the file listing. File types enabled for display are shown in green in the menu. Click on a file type in the menu to enable or disable it for display.

For example, when looking for a sample in a directory with many different kinds of files listed, you can remove all files except sample files from the display

The following file types apply:

Projects: Project files (*.pro)

Devices: Devices (*.dev)

Modules: Modules (*.mdl)

Presets: Preset files (*.pre)

STS-Samples: Individual sample files in Akai (*.s),

Wave (*.wav) or

AIFF (*.aif, *.aiff) formats.

STS-Programs: Sample programs in

Akai S1000 or S3000 (*.p) or

Soundfont (*.sf2) formats.

CreamWare-STS: (*.sts)

All Files: displays all file types

Shortcut Menus

Clicking the right mouse button (Ctrl + mouse click in the Mac) in the background of the File Browser calls up a small shortcut menu with the following options:



Rename (only if a file or directory is selected): Change the name of a file or directory.

Show AKAI Partitions: With AKAI-format CDs, a partition letter is shown in addition to the file name. This option is useful when different AKAI partitions contain files of the same name and must be differentiated.

Clear CD Cache: If two CDs have the same serial number, the CD contents is not refreshed when one CD replaces the other in a drive. This option clears the cache, thus forcing a manual directory refresh.

Paste as STS: Allows AKAI programs copied to the temporary buffer with the Edit /Copy command to be pasted into the current directory in STS format. Samples (*.s) are converted to the Wave format (*.wav).

The Routing Window

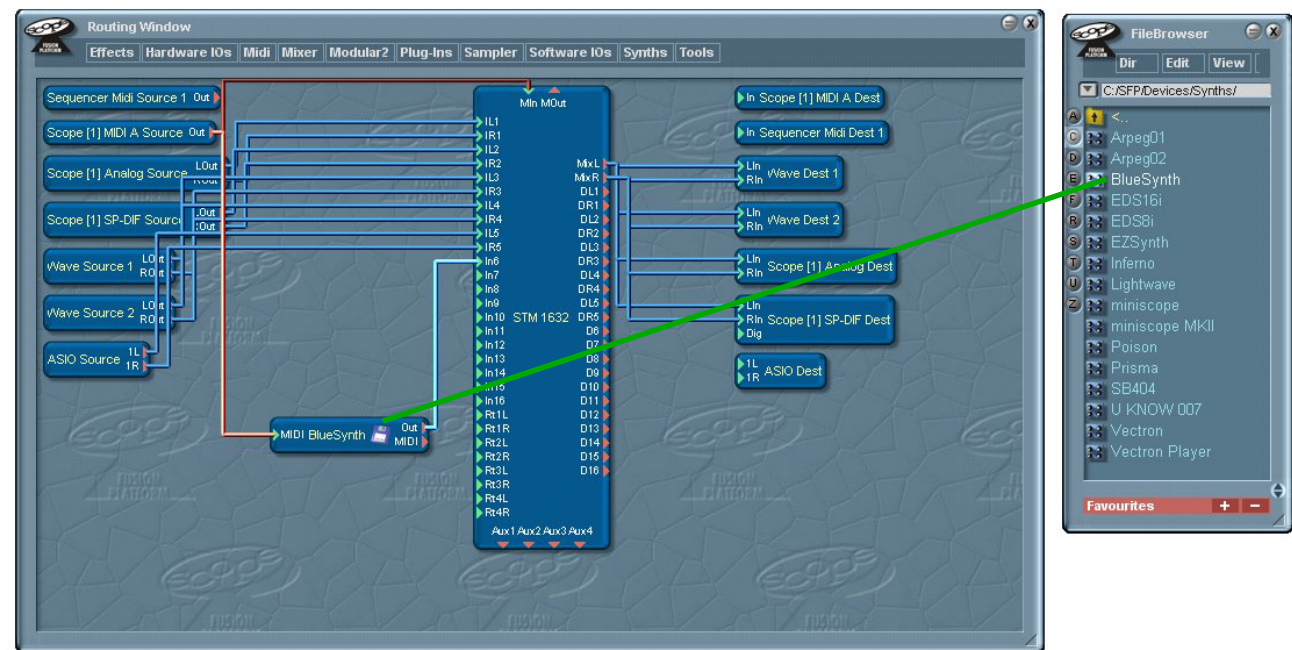
Open the Routing Window from the Live Bar's Set menu. Like the Live Bar, the Routing Window lets you accomplish a number of tasks, such as loading modules. It's also a convenient environment in which to connect modules, and view an overall picture of the loaded modules and their connections.

Loading Modules

In addition to loading modules from the Live Bar you can also load them using the File Browser or the Device menu located in the title bar of the Routing window.

Loading from the File Browser

Modules and Devices can be loaded into a project by dragging them with the (left in PC version) mouse button from the File Browser into the Routing Window. When the program starts, the File Browser defaults to the **Devices** directory, where synthesizers, sample players, mixers and other devices are found. Other subdirectories designated with names that should be self-explanatory contain additional modules. Complete descriptions of all modules and devices are found in the Modules section of this manual.



Most of the modules and devices can be loaded repeatedly. Exceptions to this are, for example, modules representing the physical I/Os, and certain special devices. You'll find a complete list and descriptions of all modules and devices in the Modules section of this manual.

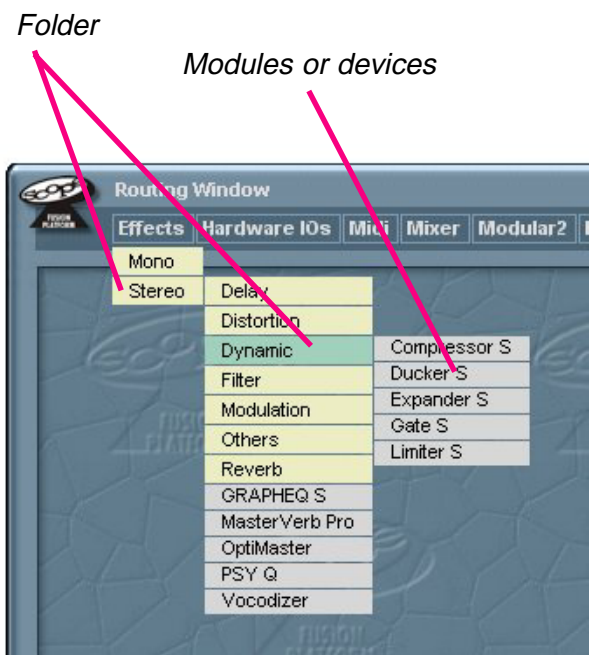
Loading from the Module Menu

As an alternative to using drag 'n' drop to load modules into the Routing Window from the File Browser, you can also load them through the Module menu located in the Routing Window's title bar.

Clicking a menu button opens a menu containing module references (white background) or additional sub-menus (yellow background). In the latter case an additional menu opens to the right when you select the subdirectory menu item.

You can use drag 'n' drop to pull modules from the menu into the Routing Window or you can first click on a module, then click on a location in the routing window. The module will drop to the position of the mouse cursor when you click.



You can use the file browser, or your operating system's file manager, to create additional subdirectories in the Device directory. These directories will also appear in the module menu the next time you run the SFP program.



Deleting Modules and Devices

To delete a module from the Routing Window, first select it by clicking on it with the left (PC) mouse button. Then press /<NumLock> to remove it and all its connections from the project. Select more than one module by holding the left mouse button to draw a wireframe around a group of modules. Finally, you can right click on a module ('Ctrl' + mouse button in MAC version) to open a menu in which you can select *Delete Module (Remove Device)*.

Modules and Devices

Modules are represented in the File Browser by the symbol , whereas Devices are represented by . Although not shown in the File Browser, modules are designated with the *.mdl filename extension, while devices have a *.dev extension.

Devices are usually more complex than modules. Examples of typical devices are the synthesizers, sampler, and complex mixers. However, modules, too, can have control surfaces, and can be arbitrarily complex. Modular patches, for example, are modules.

The essential difference between modules and devices lies in the fact that modules are saved as components of the project, while devices are saved as *references*. Therefore a project contains all its modules, plus references to devices which are loaded from their respective directories when the project loads. This difference would be negligible to you except for the following implications:

- Since Projects are stored using the current version of a module, it may be necessary when updating to a new version of the software to replace individual modules stored with a project with updated versions. You will be notified in the README file if this is necessary.
- When a project loads, it looks for the required devices, and if they are not present, or cannot be found, the project cannot be loaded completely. This means that if you exchange a project with another user who uses a different directory structure, some of the devices may not be found. In this case the software will ask you for a path specification to the device location. If the device does not exist in the user's environment, then the project cannot be loaded completely.
- Changes made to devices (e.g. device updates or Preset changes) will affect all projects that use the device.

Both modules and devices are represented in the Routing Window with their respective connection points (pads). Usually inputs are on the left, and outputs on the right. MIDI connections are normally designated with an 'M' in the connection name (MIn, MOut etc.) and are often located on the top edge of the module.

Individual or multiple modules can be dragged freely within the Routing Window using the (left in PC version) mouse button.

As you have seen, the distinction between modules and devices has relevance for you as a user. However, in order to increase the readability of the manual we sometimes interchange the terms which, if not clear from the context, should be considered to be equivalent.

Connecting Modules

Although in previous sections we have „wired“ modules together using the Live Bar, this chapter provides more detailed information, including concrete examples and several tips.

One of the really unique features of the SCOPE Fusion Platform is the freedom it allows you to route the signal from module to module (it goes without saying that ‘unreasonable’ connections, as from a MIDI output to an audio input, cannot be made). SFP can be configured flexibly and visibly to conform exactly to your current requirements, just as you would connect hardware devices in a studio.

To achieve this flexibility, modules in the Routing Window are provided with graphic connection points (pads). There are four kinds of connections available:

MIDI Input (usually designated as MIn)

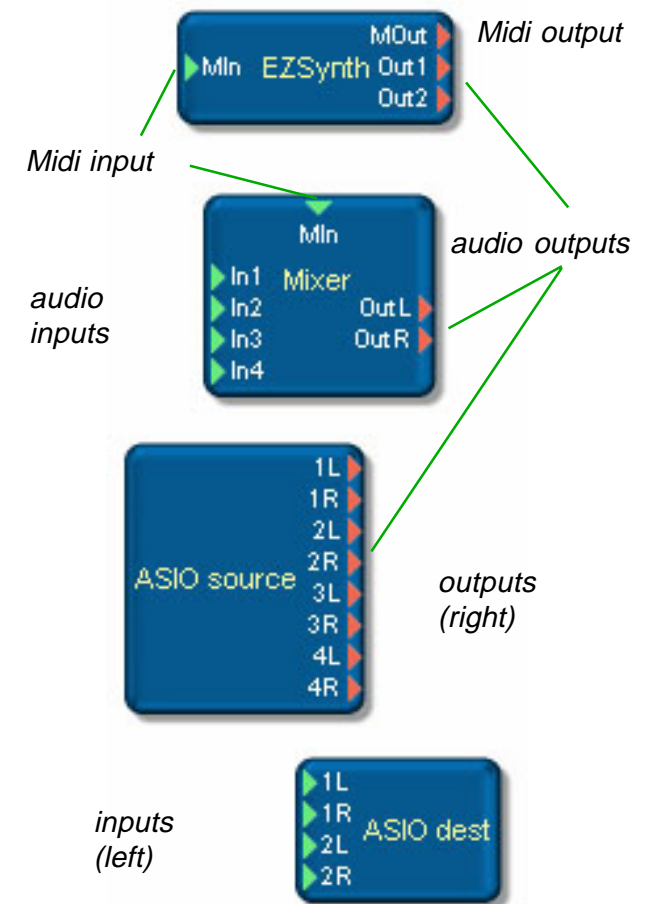
MIDI Output (usually designated as MOut)

Contrary to what you may be accustomed to when dealing with external MIDI devices, the MIDI output cannot be used for the serial connection of several devices (MIDI chain). The output is used only to transmit MIDI data generated by the module or device (i.e. Controller data) - not to pass through MIDI events arriving at the input.

Audio Input (designated variously as In, In1, LIn, RIn, etc.)

Audio Output (designated variously as Out, Out1, LOut, ROut, etc.)

Inputs and **outputs** are easily differentiated by their graphic symbols - inputs use a green triangle and outputs a red one. Additionally, inputs are usually located on the left side of a module and outputs on the right.



To establish a connection first click on the output, and then on the desired input (although the reverse sequence is possible). The connection is represented by a virtual cable that appears between the modules. **Note: MIDI cables are red and Audio cables blue.**

While the mouse cursor is over a connection, its shape can take one of the following forms.

The Standard Cursor option in the *Settings* dialog must **not** be enabled.

normal:



Set connection by clicking:



One side has been connected:







Connection not possible:




Connection is separated:





When you place the mouse over a connection the first time, the symbol changes from standard  to a patch cord plug .

When you click, the symbol changes back to  (or possibly the Connection not possible symbol, if the connection is occupied). If you now move the mouse pointer, the cursor changes to  (to signify you are holding the other end of the cable in your hand). When the pointer is placed over another compatible connection, the cursor changes again to

a plug symbol . Now, when you click, the connection will be established, the cable will appear, and the mouse cursor will resume its standard form.

Deleting Connections

To delete a connection, simply select the cable by clicking on it, and then strike the (<NumLock> or <Delete>) key on your computer keyboard. If you want, you can also click again on both ends of the connection, which also deletes it. In this case, when the mouse is over the first connection point, it changes to a plug symbol, , and over the second, a scissors symbol .

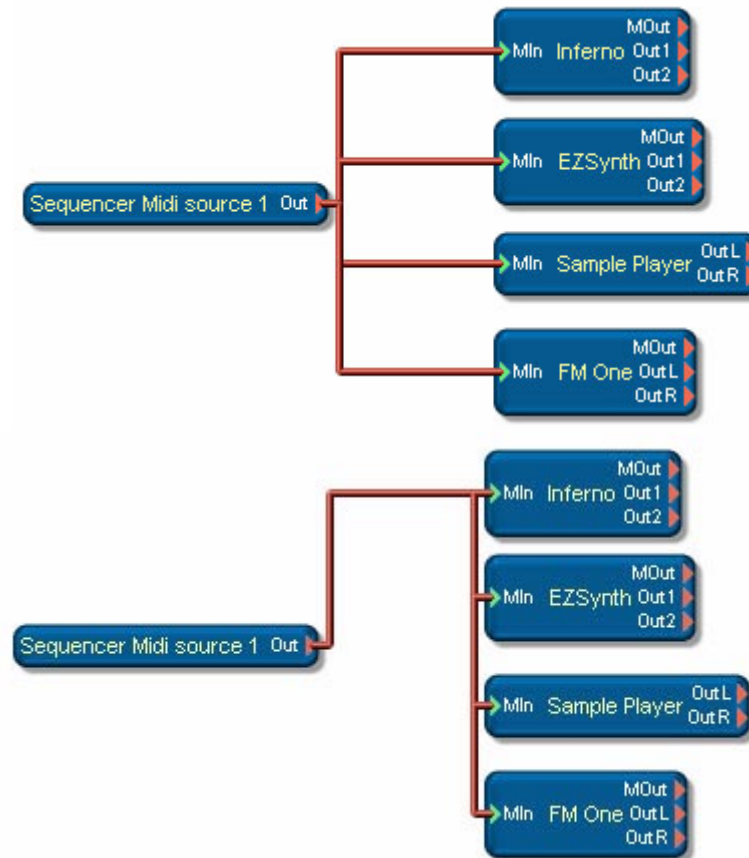
Exchanging Modules

You can exchange a module with another module - while maintaining the connections - by dropping it onto the old module while holding the Ctrl-Key when you load it into the routing window.

Characteristics of MIDI Connections

Unlike with hardware synthesizers, you cannot connect several MIDI devices together in series (MIDI chain) - only in parallel. In SFP you can connect a MIDI output to several MIDI inputs simultaneously (but not the reverse!). Therefore, to connect several synthesizers to a MIDI signal arriving from your sequencer, you must connect the MIDI output of the Sequencer Midi source module with the MIDI inputs of the various synthesizers, as in the following illustration.

Because inputs can be connected together to pass the signal on to other devices, you can, as an alternative, make a connection from one input, which already carries a signal, to another device's input in order to pass the signal on to it, as in the following illustration.



Here are the two different ways to connect MIDI modules. The result is the same: MIDI data from the sequencer is routed to several synths.



Be careful: A device does not echo the MIDI input to the MIDI output. The MIDI output is only for data generated by the device itself (e.g. controller data). With such a connection MIDI data from Pulsar Midi source does not reach the Inferno synth.

However, you cannot connect several MIDI outputs to a single input (as you might want to do to audition your keyboard while playing your sequencer). For this purpose you must use the **MIDI Merger**, found in the Devices directory. It has two inputs which are merged to a single output.



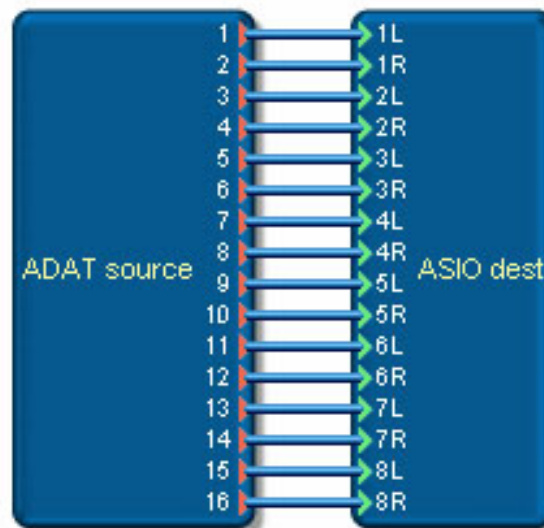
using the MIDI Merger

Audio Connection Tips and Tricks

Often you must connect two modules together where each one has a number of sequential connections. This would be the case, for instance, when connecting 8 ADAT inputs to the mixer. Instead of repeating the process of making a connection 16 times, you can make the first one (e.g. ADAT A Source 1 with mixer input channel 1) and then strike the 'N' key (for 'New' connection) which then establishes the next two connections (one on each module). With each repeat of the key press, a new connection is established until, after 7 repetitions, all the connections are established.

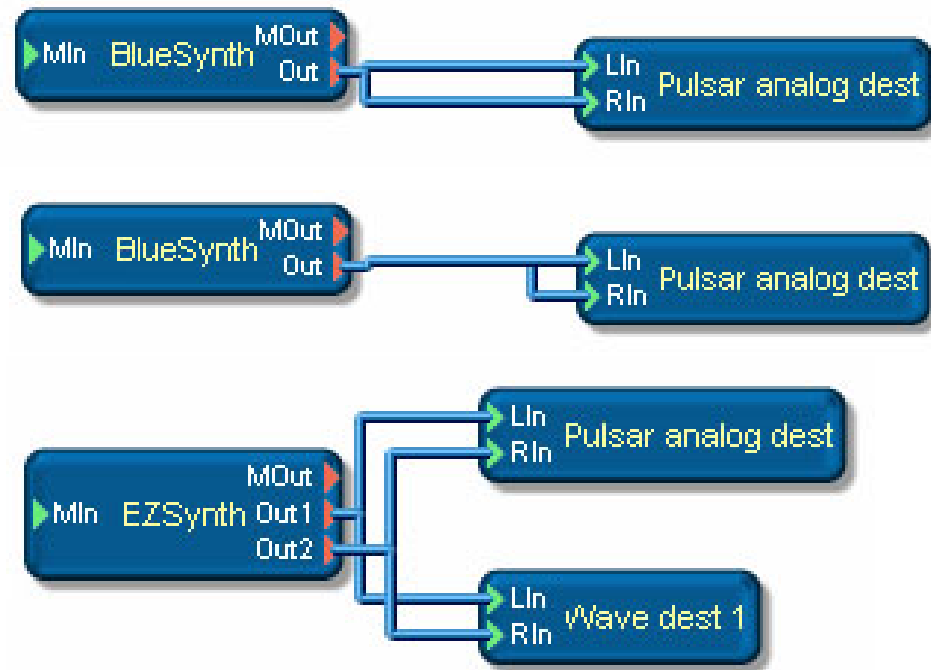
If a module contains multiple inputs or outputs you can connect them even more quickly by pressing <Shift> + <N> after you have made the first connection. All remaining connections are then established automatically.

You can also use this method to quickly delete a series of connections. Use the <N> key or the <Shift> + <N> key combination after deleting the first connection.



Multiple connections can quickly be established with the <N> key.

Remember that a single output can be connected to multiple inputs, and that several inputs can be connected together to carry the same signal. If you want to hear a monophonic synth play back through both channels, just connect its output to both inputs of the hardware monitor output (dest) module. In the same way, you can supply a signal to your recording software (through the Wave dest module (Soundmanager dest in MAC version)) and simultaneously to a physical monitor output so you can audition it directly.



Ultimate versatility: In SCOPE Fusion Platform each output can be connected to more than one input at the same time (upper or lower pictures). You can also connect inputs with each other (LIn und RIn in the middle picture)

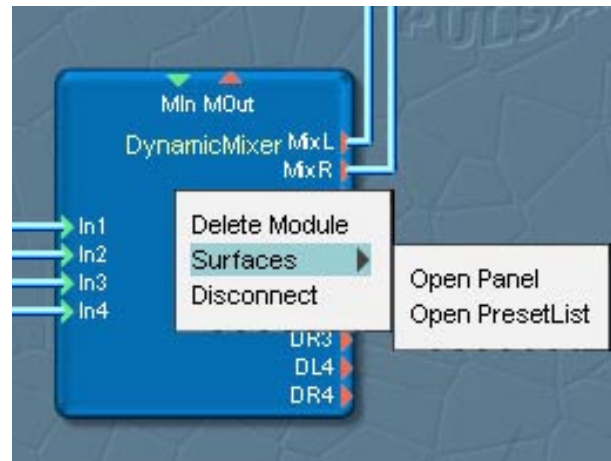
Module Menus

Every module has an associated menu that contains at least one option: *Delete Module* or *Remove Device*. Other options may be available, such as options to open a control panel or the preset list if they apply.

To open a module's menu, right click (CTRL + <click> on the Mac) on the module in the Routing Window.

Delete Module / Remove Device: Deletes a module or removes a device, including all connections to other modules or devices, from the Routing Window. The device or module is not, of course, deleted from the hard drive.

Surfaces: Contains options to open a device's main control panel or other control surfaces. Because some devices provide multiple surfaces, there may be several entries in the sub-menu (for example, *Open Mixer Surface*, *Open Bus Surface*, and so on).



Open PresetList: (Located in the *Surfaces* sub-menu). Opens a dialog in which you can select or manage the device's presets (stored settings).

Disconnect: Removes all connections to or from the module or device.

Problems Finding Devices

Sometimes a device or other file referenced in a project is not found when the project loads. This can happen when:

- you have renamed one or more directories, or have added new drives to your system so that the reference in the project no longer corresponds to a valid path to the device or other file.
- you load a project from another user. In this case, the project was based on a different directory structure than yours.
- you have deleted or moved the file.

For these situations a Find dialog appears to help you locate the problem file either manually or automatically.

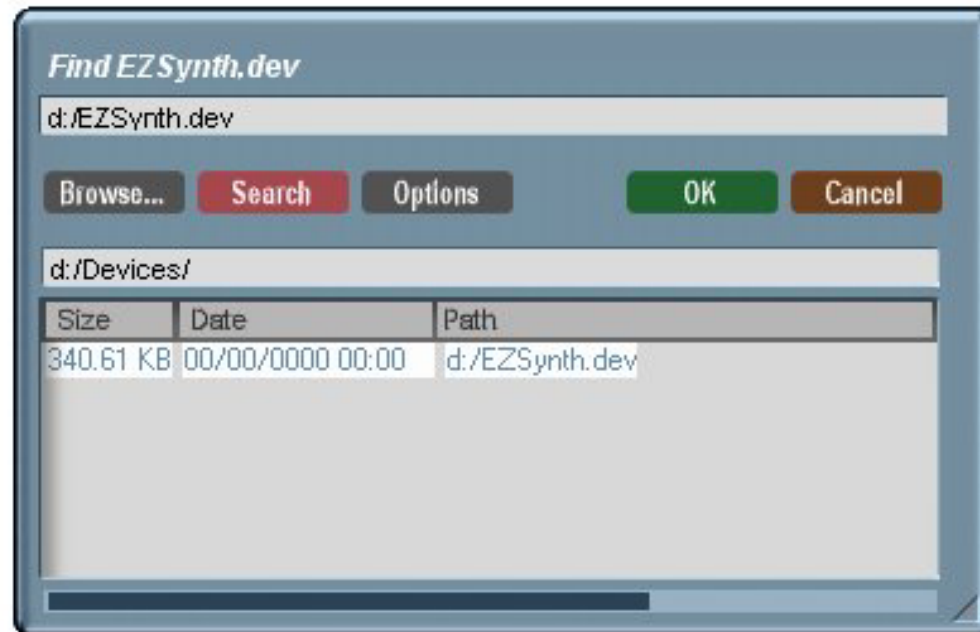
If you find the device or file, you can select it in the result list and confirm later with OK (or double-click on the file) in which case the project will load with this file. When you next save the project, the new path reference will be saved with it.

Find Dialog Functions

Browse...: Opens your operating system's File Selector so you can locate the file manually.

Search: Searches for the file in the directories selected in the *Search Options* dialog. Matching files appear in a result list.

Search Options: Opens the *Search Options* dialog.



Search Options

In the *Search Options* dialog you can specify the file type appropriate for the file you are looking for. You can also select specific directories or directory/subdirectory hierarchies to search.

To open a subdirectory, click its „+“ symbol. To select a specific directory to search, click its checkbox (a black x appears). If this is a subdirectory, its parent directories will show red x marks.

Use Setting for all file types: With this option selected, the find utility searches the same paths for all file types. The file type selection menu is disabled.

Selection List: Here you select the file type to search for in the selected path.

Use automatically: With this option selected the search is automatic, and if a suitable file is found, the dialog closes automatically.



Device and Module Control Surfaces

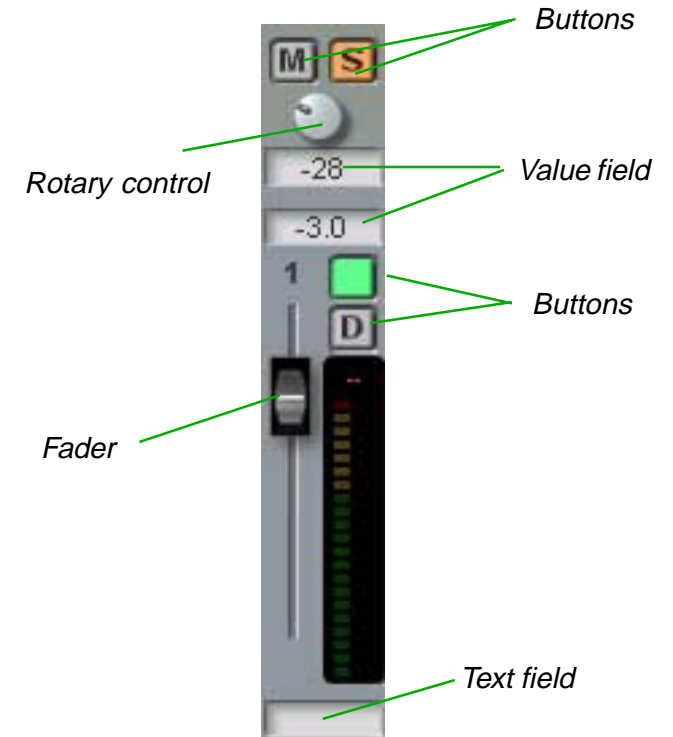
The more complex modules and devices provide control surfaces (panels) for adjusting the various parameters. Open a control surface by:

- clicking the module's icon in the Live Bar
- double-clicking on the module in the Routing Window
- using the **Surfaces** sub-menu from the module's menu (that opens when you right-click on a module or device in the Routing Window)
- double-clicking on the minimized surface (thumbnail) in the lower part of the screen (if available)
- clicking the device icon in the **Devices** menu

Although the controls and switches used by the device surfaces vary in appearance, their operation is consistent and falls into a few general categories.

Rotary Controls (potentiometers) can be adjusted using the mouse. Click on the control with the left (= PC version) mouse button, and move the mouse cursor around the control in a circular motion. The control follows. To make very fine adjustments, increase the radius of the circle (move the mouse further away from the center of the control). This increases the resolution. Most rotary controls return to a neutral or zero position when you double-click on them with the (left) mouse button.

You can change the behavior of rotary controls in the **SCOPE Settings** dialog (refer to the section on this dialog in this chapter).



Faders operate similarly to rotary controls, but the mouse motion is vertical or horizontal (depending on the fader orientation) rather than circular. As with the rotary controls, moving the mouse pointer away from the fader increases the resolution of the adjustment.

If a controller is provided with an accompanying **value field**, you have the option of entering a value directly into the field. Simply click in the field - the existing value will be displayed as selected, and a text edit symbol appears. Enter the value using the computer's keyboard and confirm it by pressing the <Enter> key or clicking anywhere on the surface outside the number field.

Buttons respond to a mouse click to change their state. Often the state is indicated by a certain color, or a control indicator (LED).

Rocker switches respond both to a held mouse button or a click.

Several controls can be manipulated with the computer keyboard. For a list of these assignments, see the Appendix.

Drawers

In some devices, certain control functions are kept in extendable 'drawers'. To open or close a drawer, click its edge 'handle'.

Tool Tips

Several of the buttons and other controllers display Tool Tips, or small, concise reference boxes, when the mouse is held over the object temporarily.

Tool Tips appear only if the option **Enable Tool Tips** is selected in the SCOPE Settings dialog.

Tool Tips are available for all module connections in the Project Window, in many of the global dialogs (i.e. the Preset dialog) and for some of the device controls. An example of device controls that use Tool Tips are the volume or gain faders in the SFP mixers. Tool Tips display the currently adjusted value accurate to several decimal places.



On some controls more precise values are displayed in Tool Tips.

Presets

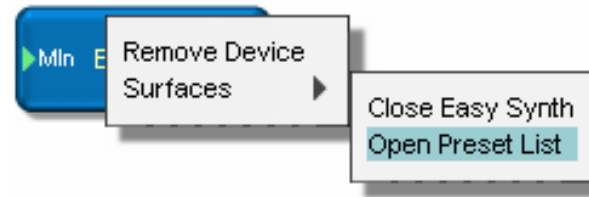
By **Preset** we mean a stored snapshot of all of a module's settings. Most of the SCOPE Fusion Platform's synthesizers contain a large number of existing Presets designed to provide a collection of useful 'work sounds'. These were developed by prominent sound designers. You can use these in your work to provide some outstanding sounds, or you can use them as a startingpoint to develop your own versions. Or, you can save the current state of the device at any time in order to use it later in another project.

Note that all current module settings are stored with the project, so it is not necessary to save them as a preset each time.

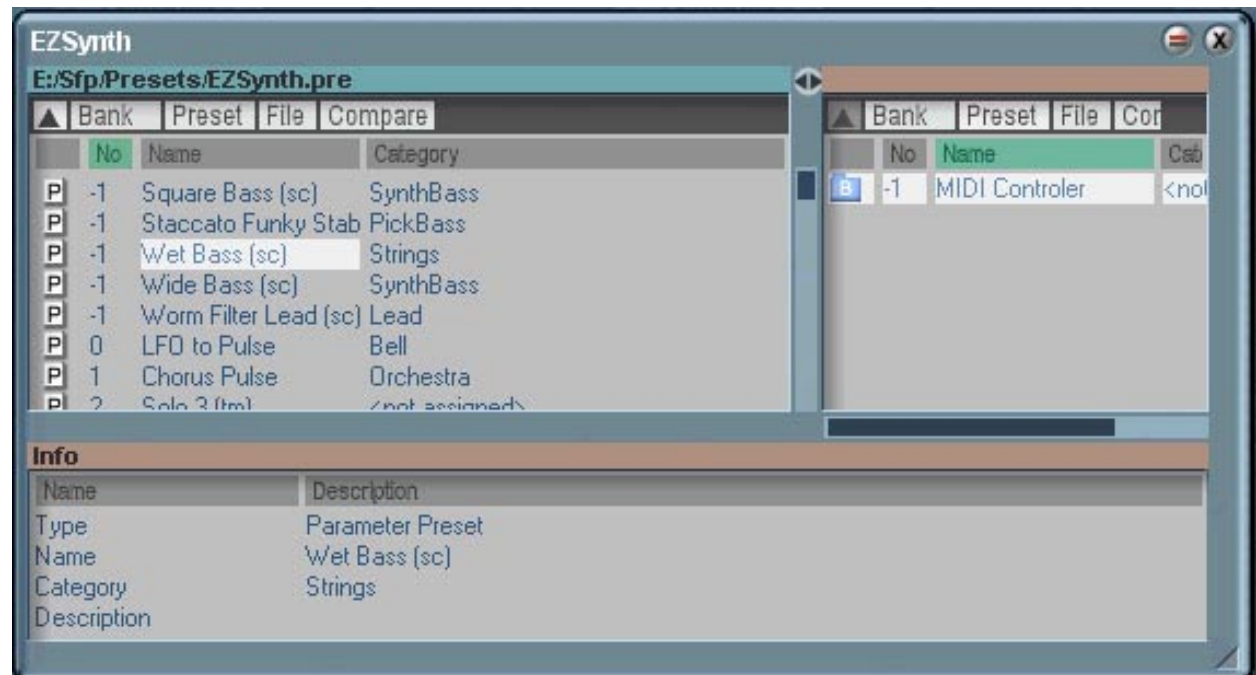
You can select and change presets directly from the Live Bar. To manage them you must use the **Preset** dialog. You can open the Preset dialog from the module's menu, or by clicking the **Preset** button in the device's control panel.



Examples of switches or buttons to open Preset Lists



Opening a Preset List from a Module Menu.




Preset window

The Preset Window

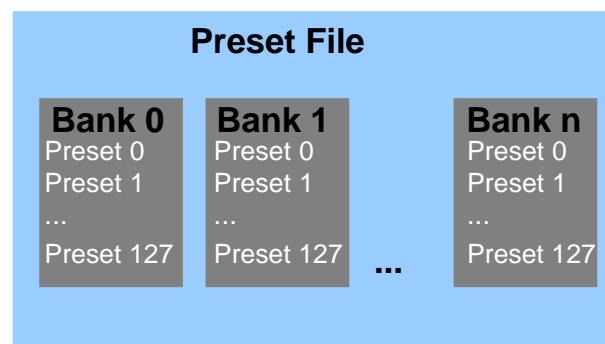
The Preset window is divided into right and left areas, each of which functions identically. However, you should regard the left area as the primary list and the right as a convenient temporary storage location to use when exchanging presets between different preset lists.

To resize the Preset window drag the bottom or right edges, or the lower right corner. The double-arrow indicator between the areas lets you adjust the dividing line. To maximize one of the areas, double-click on the emphasized title bar that indicates the path of the Preset files. The other area will minimize. A subsequent double-click on the title bar exchanges the current view with that of the other (minimized) area.

Managing Presets

Presets are organized into banks with each bank containing a maximum of 128 presets. To view the presets contained in a bank, click the Bank icon. Use the buttons  to return to the bank-level view.

Banks are stored in Preset files (files ending in *.pre). Therefore, a logical structure with three levels emerges: the preset file, the banks, and the individual presets.



You can arrange presets or banks by number, name, author, date, or description by clicking on the respective heading at the top of the appropriate column.



| No | Name | Category |
|------|------------------|-----------|
| P -1 | Square Bass [sc] | SynthBass |


To change the name, number, or description of a preset or bank click on the text to select it, and then click again to open an input box. You can also open the input box for a selected field by pressing the <F2> key.



MIDI Controler Presets

Each Preset file includes a bank named MIDI Controller to store Presets with MIDI controller assignments. This makes it possible to assign or re-assign different MIDI controllers to the onscreen device controls without changing the sound settings.

Loading Presets

To load a preset either select it with the mouse and then press <Enter>, or double-click on the preset's name or the corresponding preset button  in the list. Upon loading, all the control settings stored in the preset re-establish themselves. If a preset is selected in the preset list, you can select other presets throughout the list using the up and down arrow keys. Then, when you want to change to another preset, press <Enter> while the preset is selected. This is handy sometimes when you want to use one hand on the MIDI keyboard, and the other on the computer keyboard.

MIDI Program Change

Presets can also be called with **MIDI Program Change** commands. The program change number corresponds to the preset number (0..127). When you send the appropriate program change command from a keyboard or sequencer, the corresponding preset loads.

New Presets are first assigned the number -1 which does not correspond to a ProgramChange assignment.

If a Preset file contains several banks then your external controller or sequencer must send the appropriate bank number along with the program change event.

Creating New Presets

To create a new preset, choose **Create** in the Preset menu. All the current settings are stored under the name 'New Preset'. Change the name to something more meaningful and confirm the new name by pressing <Enter>.

The preset has been registered in the bank, but has not yet been permanently saved. To save it, choose **Save** in Preset dialog's File menu.

New Presets are first assigned the number -1 which does not correspond to a ProgramChange assignment.

Assigning a Category

Click with the right mouse button (<CTRL> + click on the Mac) in the Category column to open a list from which you can select a category. Use this to arrange your presets according to sounds.



Presets can be arranged by sound category.

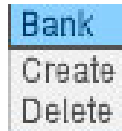
Deleting Presets

To delete a preset, first select it, and then choose **Delete** from the Preset menu, or press the <Delete> key. As above, the preset is deleted permanently only after saving the preset file with the **Save** command in the File menu. When you remove the module, you will be asked to confirm the deletion of the preset.

The Preset Window Menu

Bank

These commands apply only when Bank view is displayed.



Create: Creates a new preset bank.

Delete: Deletes the currently selected bank.

The bank is not permanently deleted until the preset file is next saved.

Preset

These commands apply only when Preset view is displayed.



Restore: Loads the selected preset.

Create: Creates a new preset with the current settings and the name 'New Preset'. If an existing preset is selected when this command is called, you are

asked if you want to overwrite the preset with the current settings, or if you want to create a new one.

Delete: Deletes the currently selected preset.

The preset is not permanently deleted until the preset file is next saved.

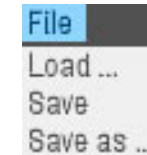
Cut: Removes the preset from the list and makes a copy of it in a temporary file.

Copy: Copies the selected preset into a temporary file (clipboard).

You can also copy a preset as a **reference** to the original by using the **Ctrl + R** keyboard shortcut. In this case, changes to one copy are reflected also in the other.

Paste: Pastes the current contents of the clipboard into the preset list as a new preset.

File



Load: Loads a preset file.

Only preset files specific to the current module can be loaded.

Save: Saves the preset file under the current file name.

Save as: Saves the preset file under a new file name.

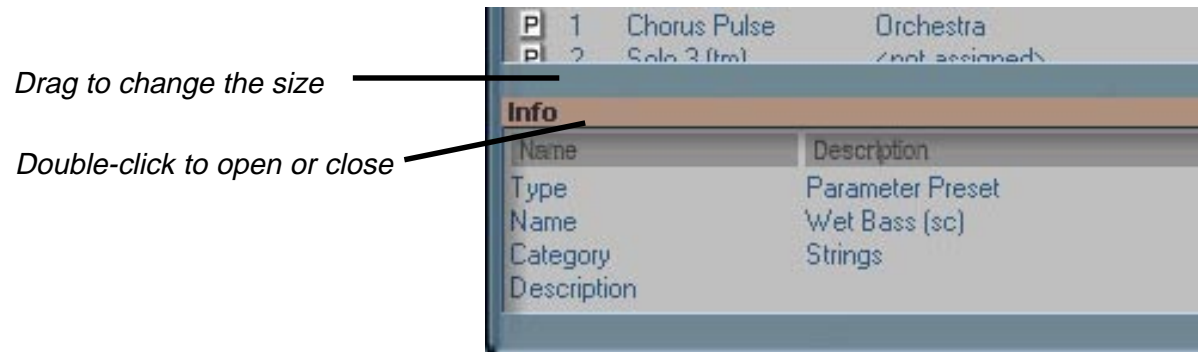
Compare



Use this button to switch back and forth between a selected preset and the current device settings. For example, use this to load a preset, make some changes to it, and then compare it with the original without losing the changes.

The Info Display

To open the Info display either double-click on the Info field at the lower border of the Preset list or drag the gray split bar up. The display shows information about the selected preset. You can also provide information by selecting a category from the context menu, or by entering a description of the preset.



Using Two Lists

With both list views open you can load two different Preset files simultaneously. The file loaded into the left side becomes the primary list (to which MIDI program change numbers apply). On the right side you can load a secondary file. By using drag and drop to exchange presets from one side to the other you can quickly organize your preset files.

Select multiple files by pressing <Ctrl> or <Shift> while making your selection.

MIDI Controllers

Most settings on device control surfaces can be controlled by MIDI Controller messages sent by external hardware devices (MIDI Fader boxes, keyboard modulation wheels, some mixers, etc.). This can be very helpful, as it frees you from having to use the mouse to change settings. And since controller messages can be recorded in a sequencer, dynamic parameter changes (modulation of filter settings, or volume levels) can be automated in the SCOPE Fusion Platform.

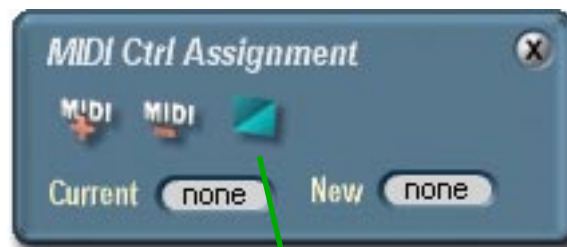
Manipulating an onscreen control (such as a synth potentiometer, or a mixer fader) with an external MIDI controller is quite straightforward. First you must establish a MIDI connection between the MIDI source (keyboard - *[Hardware]* MIDI source module, or sequencer - Sequencer MIDI source module) and the virtual device to be controlled, since MIDI controller information is part of a standard MIDI stream. Make sure the device or module is set to the same MIDI channel as that on which the data are sent.

Open the device's control surface and right-click ('Ctrl' + mouse click in MAC version) on the control to be associated with a MIDI controller. The **Midi Ctrl Assignment** dialog appears. The field labeled **Current** indicates the current MIDI controller assignment (or none, if no assignment has been made). Now move the controller on your keyboard, or start the sequencer in order to send the controller data. The software automatically recognizes the controller, and registers the number in the **New** field. To confirm the assignment, click on the **Assign** button. The dialog closes. Now when you move the controller, the onscreen control follows the activity.

Use **Reset** to cancel the current assignment.

Note that each MIDI controller (0..127) can operate on only one of the onscreen controls. If you assign a controller that is already in use, the original assignment is lost.

You can also store MIDI Controller assignments as MIDI Controller Presets.



Opens the Controller List

You can open an extended dialog for controller assignment by clicking on the **Ctrl List** button in the **Midi Ctrl Assignment** dialog.

The procedure is similar to the one described above, but this dialog offers a larger overview and some additional options.

To assign a controller here, first select the onscreen controller you wish to control via MIDI, and then adjust or move the external controller. The controller number appears in the **Learn** display field. To confirm the assignment, double-click on the controller number. A subsequent double-click deletes the assignment.

As an alternative, you can first click the onscreen control, and then double-click on the desired number in the Controller list. This has the advantage that external equipment need not be connected in order to make the assignment.



It is possible to use one MIDI channel for MIDI note events, and another for controller messages. You could play the synth using one MIDI channel, but control it remotely over another. If **Use device MIDI channel** is enabled then both MIDI channels are the same. If disabled, you can select a controller channel in the Channel field in the Controller list. Click and hold on the field and move the mouse cursor up or down to change the channel number.

You can adjust the **Modulation Range** of a selected controller in the list. You may want to do this when you wish to limit the modulation depth of a controller without actually changing the data. Using this feature you can also enable high-resolution control by having the full range of controller data adjust only a small range of the onscreen controller.

Click on the onscreen controller to which the controller is assigned to select the controller in Settings. Use the red fader to adjust the modulation range.

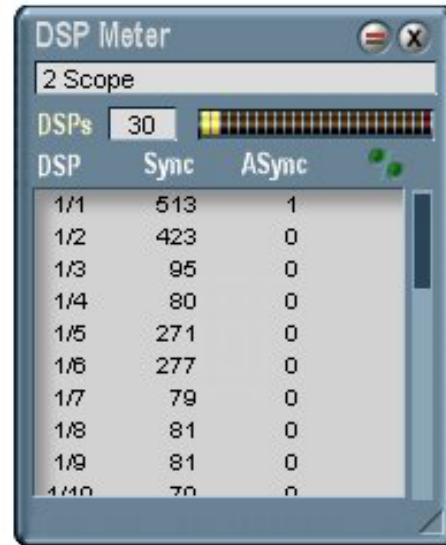
When using MIDI controllers to adjust onscreen controls undesirable audible steps may occur when adjusting a parameter. This is because the MIDI protocol specifies only 128 steps for controller values, and this may not be enough to create smooth changes for some purposes.

Monitoring DSP Usage

You can open the DSP Meter module by selecting DSP Load in the Live Bar's Set menu. This module displays the number and type of installed boards as well as the total number of DSPs available. The bar graph indicates the current DSP usage.

By clicking the drawer handle at the bottom of the surface you can open a drawer showing the DSP usage in detail. For each DSP the number of cycles for both synchronous (i.e. audio computation) and asynchronous (i.e. control, communications, data exchange) activities are displayed.

If you click on one of the green lights of the percent symbol in the upper right corner, then the values will reflect the proportion of DSP used relative to full utilization.



DSP Requirements of some of the Modules and Devices:

Normally a module or device reserves the maximum amount of DSP it needs when it is loaded. Therefore a device requires the same amount of DSP resources whether it is in use or not. Make sure you make maximum resources available by not loading any unnecessary or unused modules in the current project.

Synthesizers and Sample Players require additional DSP reserves for each individual voice. Do not allocate more voices than your project requires.

Some modules or devices require resources from the host computer (for example, the Reverb effect requires PCI channels and host RAM to operate). It can sometimes happen that a module will not load, or a warning message appears, even though the system has sufficient DSP reserves available.

Mixer channels require DSP resources only when a signal is connected to the input. Do not connect any signals to those channels you are not using.

Samplerate Settings

Adjust the system sample rate and word clock configuration in the Sample Rate Settings dialog. To open it, select **Samplerate** in the **View** menu.

Word Clock

When several digital devices are to operate together (and this includes software as well as hardware devices) they must have, under normal conditions, the same sampling frequency, and also the same reference clock (word clock) in order to operate synchronously. This is possible only when one device serves as the master clock (word clock master) and the others are configured to use it instead of their own internal clock (word clock slave).

The slave normally detects the master clock directly within the data stream transmitted by the master. If the two devices are connected using, for example, S/P-DIF, the slave takes the clock from the audio data stream and uses it to output its data as well thereby operating in perfect synchrony.

The clock functions even though there may be no audible signal present. In this case the data are still being transmitted but the data words are set to a value of 0.

In a digital system there can exist only one word clock master. Devices must be configured depending on the application. In any device configuration, your audio DSP card can serve either as word clock master slave.

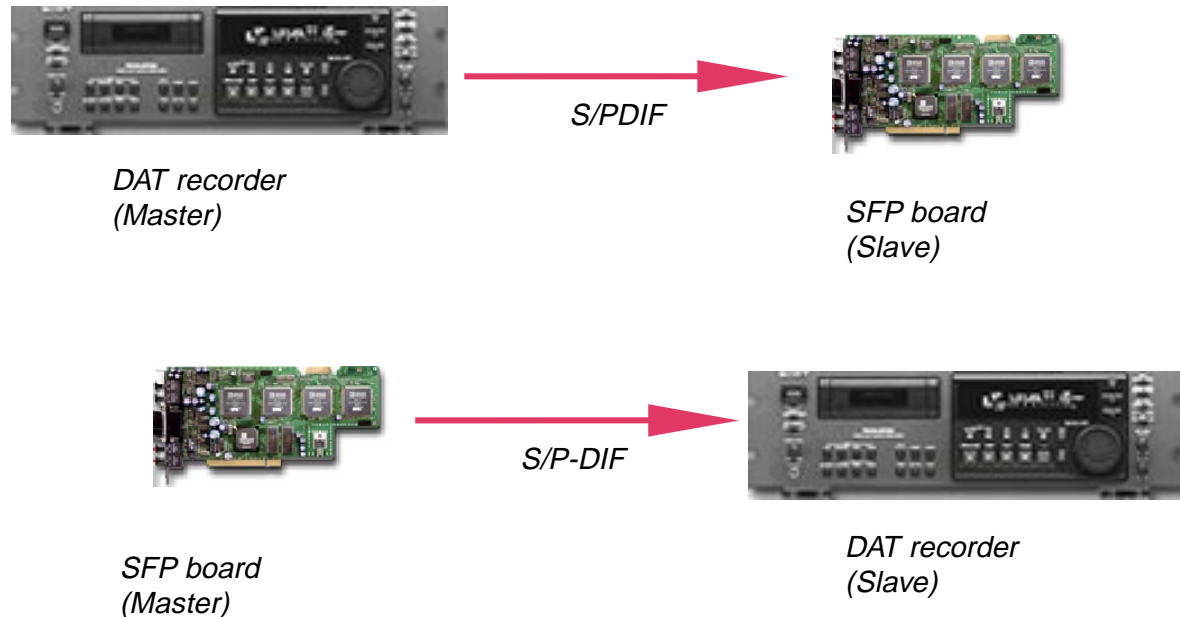


When you launch SCOPE Fusion Platform the first time it is configured as word clock master at a sample rate of 44.1kHz. Any changes you make to these settings are saved with the project.

When Should the DSP Board be a Master, and When a Slave?

In some situations the choice of whether to be master or slave is somewhat arbitrary. In others, however, a specific word clock configuration is required. When using S/PDIF (or AES/EBU) the transmitting unit must always be the master, and the receiver the slave. If you transmit digital signals to SFP from a CD player or a DAT recorder, SFP *must* be set to slave. The recorder or player is automatically set to master when playing back as per the S/PDIF or AES/EBU standard. When transmitting data from the SCOPE Fusion Platform to a DAT or CD recorder, you must set SFP to master mode. The DAT or CD recorders will switch to slave automatically when placed in record mode.

When using the ADAT interface the situation is different. ADAT devices can perform either as master or slave devices. The general recommendation is to set the device with the converters as the master clock, as the audio quality may be slightly better. If you experience clock problems such as crackles, snaps, or buzzing you should experiment with both configurations. The other device must also be manually configured. Consult the device's manual for instructions on how to do this.



With data transfer via S/P-DIF the receiving device must always be word-clock slave.

External Word Clock

In some situations, especially when using several devices, the word clock in the data stream can deteriorate. In this case it is advisable to supply the word clock from a central source. For this to work, all devices must support external word clock and provide the appropriate BNC jacks.

You will also need the optional SFP Sync Plate which contains the BNC and also ADAT sync connectors. If a Sync Plate is attached, the External Clock option under Slave is available.



SFP as Master

Click the Master button, and select the appropriate sample rate.



SFP as word-clock master at 44.1 kHz

SFP as Slave

First make sure that the digital device is connected and switched on so it sends a data stream to the DSP board. If the SFP program detects a data stream the respective input indicator glows red, indicating Connected status. Select this input with the appropriate button to place the hardware in slave mode. In a second or so, the sample rate of the connected data stream appears in the System field. If no valid clock is detected, then a line replaces the sample rate value.

The configured sampling frequency has a direct effect on DSP usage. Operating the system at 96kHz uses twice as much of the DSP resources as operating at 48kHz. You should carefully consider what sampling rate is actually required for your purposes. Note that 44.1kHz is an important common standard among many devices, and is probably best overall for most applications.



SFP as word-clock slave at 44.1 kHz

SCOPE Settings

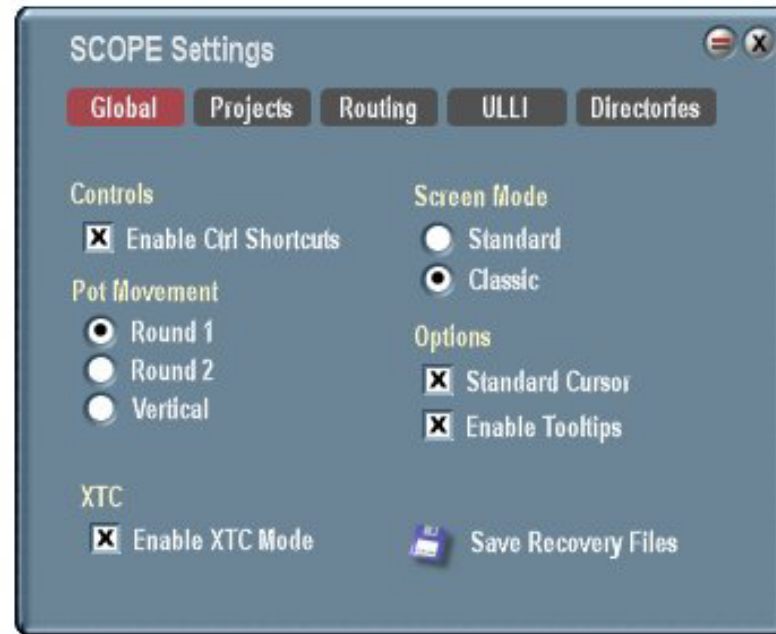
Open the Settings dialog by choosing **Settings** from the Set menu in the Live Bar. Here you can set the mouse cursor, the window sizes and appearance, paths, the default project, and the background project (which configures the DSP card inputs and outputs when the SFP program is not running). A complete description of the options in this dialog is found in the reference section of this manual.

Global

Controls

Potentiometer Movement: Configures the way rotary controls respond to mouse movement.

Round1: This is the default behaviour for rotary controls as described in the section *Onscreen Controls* in the *Device and Module Surfaces* chapter. In this mode, adjust the control by dragging the mouse around it in a circle. By increasing the distance of the mouse from the control, it can be adjusted more finely. The pointer on the control always points towards the mouse pointer. If you drag the mouse



pointer back and forth beneath the control, the value flips between minimum and maximum.

Round2: The difference between Round1 and Round2 is that with Round2 the control's pointer does not necessarily point toward the mouse cursor. Therefore, the potentiometer can be clicked at any arbitrary place without the control's pointer jumping to point to it. You can still 'turn'

the control, however. Another difference is that the control will not flip from minimum to maximum or vice versa when the mouse pointer passes beneath it.

Vertical: In this mode, the control responds only to vertical mouse movement. The further away the mouse is from the controller, the finer the control resolution.

Screen Mode

Standard: Selects the software's standard graphic mode (without the Desktop background, see the chapter: **Launch Desktop** - Desktop Mode)

Classic: Selects the standard graphic mode of the previous version of the software (with Desktop background, see the chapter: **Launch Desktop** - Desktop Mode)

Standard Cursor: This option selects the standard mouse cursor of the operating system in place of the SFP custom cursor. You would enable this only if you experience annoying graphic anomalies such as a flickering of the SFP mouse cursor.

Enable Tooltips: With this option enabled small reference boxes appear when the mouse cursor remains over certain elements on the control surface (such as a faders or other controls).

Enable XTC Mode: Enable this option to make the XTC effects and synthesizers available when you open your VST-compatible sequencer program.

Save Recovery Files: Use this switch to produce backup copies of two critical files: SCOPE.RGY and CSET.INI. The SCOPE.RGY file contains all your keys and is particularly useful after a new or updated installation that requires the keys to be entered. You can import them easily from a safety copy of SCOPE.RGY.

The CSET.INI file contains the many variables representing your system configuration. If this file is somehow destroyed, or you want to revert to an earlier configuration, you can recover previous settings from the safety copy. You'll find additional information in the RECOVER.TXT file that is also written into the directory when you make safety copies.

Project

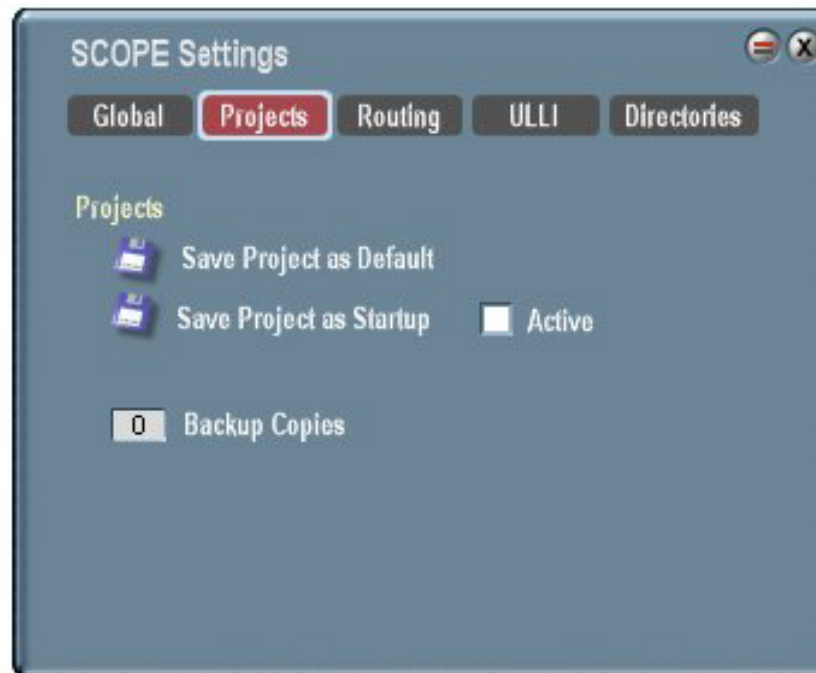
Save Project as Default: Use this option to set the current project as the default project. This is the project that loads when you choose **New** from the File menu.

Save Project as Startup: Clicking this button saves the current project as the Startup project. This is the project that loads automatically when your operating system starts (the Active option must be enabled).

Activate Startup Project: Only if this option is selected does the Startup project load when you restart the computer.

Backup Copies: SFP can automatically create safety backups of the current project. Enter a number and restart the SFP program. When you save your project the first time, the program creates the specified number of backup files. The names of these have a digit appended to the extension *.PRO, e.g. "PROJECTNAME.PRO.2". Whenever you

save the project, the oldest of the backup files is overwritten so that you always have the specified number of different versions of your project. If you need to restore the last or another previous version, you can identify it in the Explorer/Finder by its file date. Rename the file (the extension must be *:PRO) so that you can open it with the SFP program.



Routing

Specify here if devices and modules are to be connected automatically during loading.

Auto Routing MIDI

Connect Instruments/Effects to MIDI

Source: When enabled the MIDI input of the device or module will connect to the **MIDI Source** module. The devices are therefore immediately connected to the card's hardware MIDI input.

Connect Instruments/Effects to MIDI

Dest: When enabled the MIDI output of the device or module will connect to the **SEQ MIDI Dest** module. This setting is significant only if you use SFP in combination with a sequencer.



Auto Routing AUDIO

Connect Instruments to Mixer: Select this option to automatically connect loaded instruments to the next available channels of the mixer. Of course, this will work only if a mixer is present in the Project.

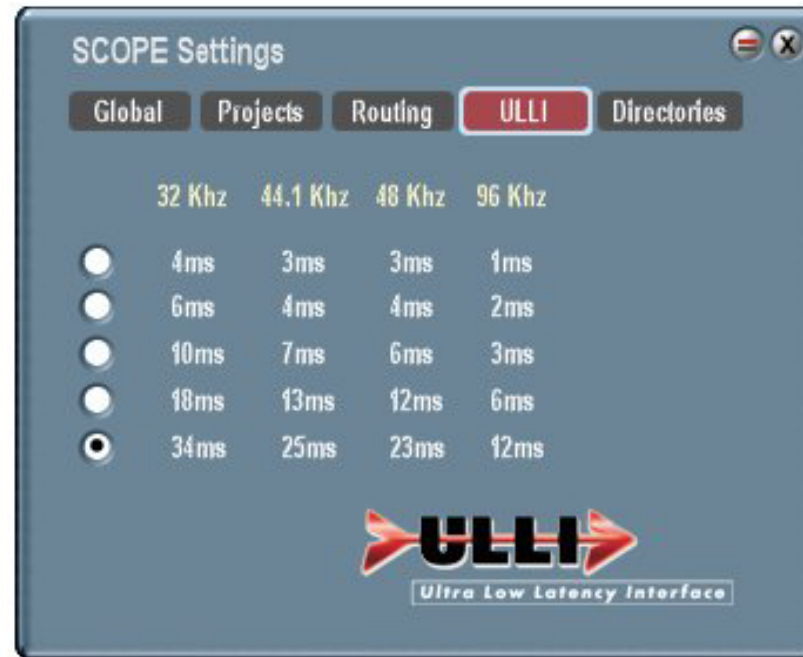
Connect Effects to Mixer: Select this option to automatically connect loaded effects to the next available channels of the mixer. Of course, this will work only if a mixer is present in the Project.

Connect Audio Source Modules to Mixer: Select this option to automatically connect the loaded hardware interfaces to the next available channels of the mixer. Of course, this will work only if a mixer is present in the Project.

ULLI

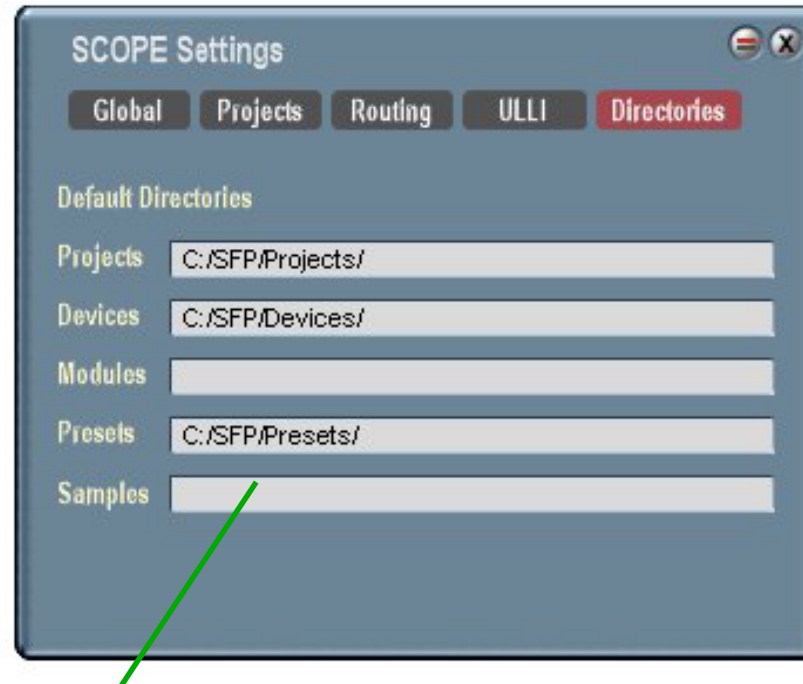
ULLI stands for Ultra Low Latency Interface. In this dialog you can adjust the buffer size for the ASIO driver and the resulting latency of the audio output. The latency depends also on the sample rate as shown in the table. The smaller the latency, the more that is required from the host computer. Find an appropriate compromise for your system by experimenting with various settings.

For the changes to take effect you must restart your computer.



Directories

The text fields in this drawer specify the default paths for the various file types; Projects, Devices, Modules, and Presets. Dialogs for handling these files open automatically to the appropriate directory as indicated here. Change the path by editing the existing text.



If you enter a file here, it will appear in the context menu of an STS sampler Program slot. This allows you to load a program directly without using the File Browser.

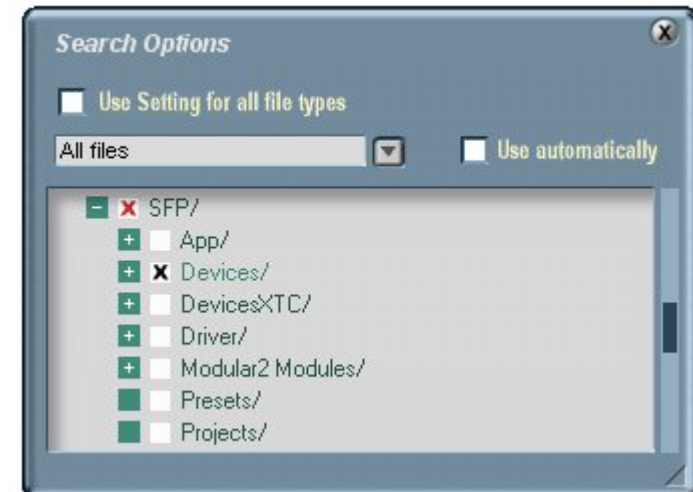
Registry

Call this dialog using the entry of the same name in the View menu. This display-only dialog indicates all the auxiliary modules for which a key has been registered by the system.



Search Options

This dialog is explained in detail on page 16 of this chapter concerning the search for devices when a project loads.

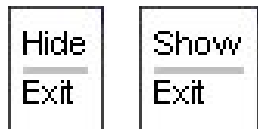


Tray Icon Menu

Open the SFP menu by right-clicking on the SFP symbol in the Windows Tray (lower right next to the clock display) or in the upper right of the Finder (Mac version).

The menu contains the following commands:

Show/Hide: Shows or hides the SFP software.



Exit: Closes the SFP software, and removes the SFP icon from the tray. If you want to start the software, use the desktop icon or select the program from the Start menu.

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