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UNIVERSAL EDITOR AND LIBRARIAN MANAGEMENT SYSTEM

EMAGIC

SoundDiver

Universal MIDI Librarian, Management and Editing System

for the
Apple Macintosh

and
Atari Falcon, TT, ST and STE

also for SoundSurfer V1.5

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Preface

SoundSurfer users have grown to appreciate the power of one of the most capable sound management programs ever. Broadly-speaking SoundSurfer is a universal database for sounds, effects, drum patterns and all kinds of other SysEx data.

This kind of software is conventionally called a »Librarian«. However SoundSurfer goes way beyond an orthodox librarian program:

- it has Modules and Adaptations for more than 200 models of MIDI device, all of which may be used at the same time within the *same* computer
- it allows the data – such as all the sounds of all your synthesizers – from different devices to co-exist in the same library at the same time.

In addition SoundSurfer has a Bank Manager. This sort of program is used to edit the memory contents of a synthesizer or other MIDI device by copying, moving, importing from the library or reassembling collections of sounds.

SoundSurfer has already been setting standards where there's a need for the efficient and productive management of large numbers of sounds from any number of devices.

Many MIDI devices, especially rack-mounted ones like synth expanders and studio effects, are much easier to program on the screen. Instead of peering at a tiny display that contains a few cryptic characters, and having to use confusing, multi-function buttons, SoundSurfer uses a large, graphical display, a mouse and a keyboard.

SoundDiver dedicates your computer to the editing of your MIDI data. SoundDiver includes all of SoundSurfer and offers, in addition, dedicated Editors for most MIDI devices.

SoundDiver is capable of many things:

- it has individual Editors for most of the 200 devices supported
- it boasts powerful window management with Overview
- it offers editing of parameters and parameters groups via mouse and keyboard

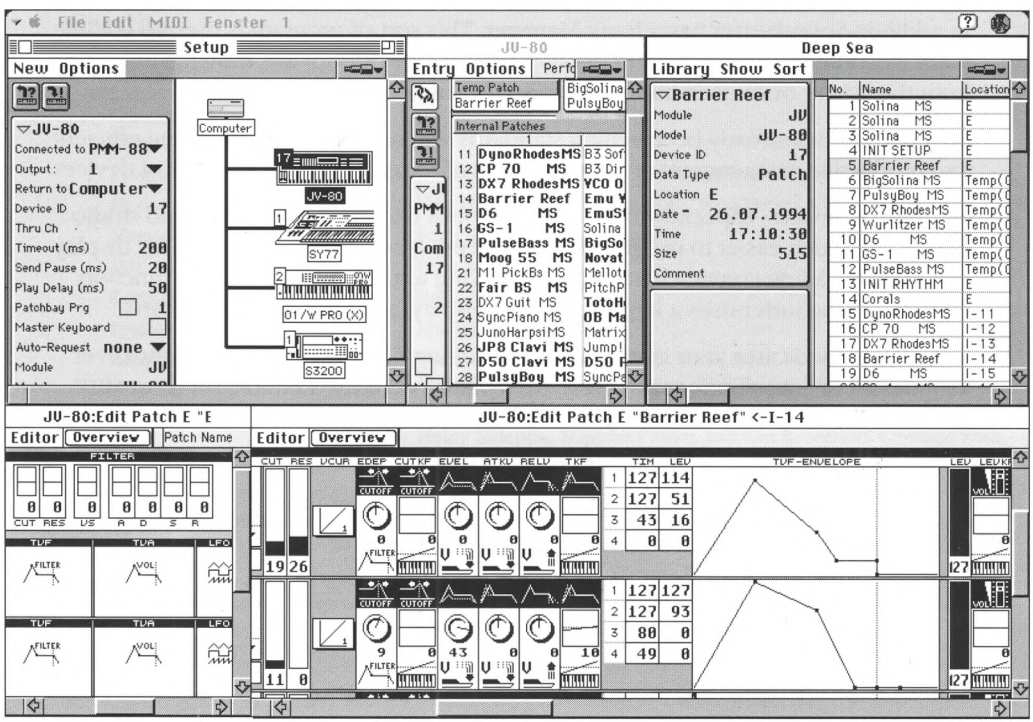
- it bristles with graphic controls such as envelopes, sliders, knobs, etc.
- its Universal Module allows the creation of user-defined Editors
- many of the Editors offer powerful Cut/Copy/Paste functions and random sound creation.

And the best of it all is that you need only one program to manage *and* edit your entire MIDI system.

Wishing you all the best with SoundDiver!

Michael Haydn

October 1994



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About This Manual

Welcome!

This manual describes SoundDiver's functions. Parts of it also explain SoundSurfer V1.5 by expanding on the SoundSurfer manual. Because SoundSurfer is built-into SoundDiver, the overall functions that govern sounds are described in the Sound-Surfer manual.

This manual covers the following information:

- the new way of installing SoundSurfer and SoundDiver
- features in SoundSurfer and SoundDiver that have been changed or added since the SoundSurfer manual was last printed
- a complete description of functions specific to SoundDiver.

So that you get into your new program as quickly as possible and install and operate it as easily as possible, please use the two manuals as follows:

SoundSurfer users

Read this manual's chapter *Installation* on how to install your SoundSurfer. Because the installation routine is much improved, the corresponding chapter in the Sound-Surfer manual has become redundant for Macintosh users.

1. Then work through the SoundSurfer manual from chapter 3 onwards.
2. Read the chapter *New Features* in this manual.
3. Read chapter 5 *AutoLink* in this manual.

SoundDiver users

You too should work through the manuals after steps 1 and 2, but then read this additional manual all the way through so you get to know the specific SoundDiver functions.

IMPORTANT NOTE: the SoundSurfer manual was created for the Atari version. The illustrations relate therefore to the Atari version and the key commands also relate to

that version. This additional manual however relates to the Macintosh version. It shows Macintosh screen shots and gives the Macintosh key commands. Please look up the corresponding Atari key commands in the Appendix.

Chapter 1

Installing and Operating the System

The SoundSurfer and SoundDiver installation routines have been completely revised and optimized, such that their modules and adaptations are now appreciably simpler and easier to install.

Instead of having to use a special installation program, modules and adaptations can now be directly installed from SoundSurfer or SoundDiver.

NOTE: in this chapter, for »SoundDiver« read »SoundSurfer and SoundDiver« unless indicated to the contrary.

What the package includes

Your SoundDiver package eontains the following components:

- the program disk
- one or more extra disks with modules and adaptations
- the SoundSurfer manual
- this addendum manual
- a registration card.

Please complete the registration card as soon as possible and send it to your country's distributor.

Only once you are a registered user do you have access to...

- a regular update service, including use of the **SoundDiverBox mailbox** on +49-8121-49912
- support if you have problems via our Hotline +49-4101-4765-65.

Copy-protection

SoundDiver is protected against illegal copying by special software protection. The protection is transparent and is contained on the program disk. You may make as many copies of SoundDiver as you like onto other floppy or hard disks, but these will only work if the original program disk is temporarily inserted at the appropriate stage during start-up.

You can, however, make one further installation from the program disk onto a hard disk, allowing you to use SoundDiver at home and in the studio.

Installing the system

Please start by reading chapter 2 *Installing the System* in the SoundSurfer manual on page 25ff, ignoring the sections *Contents of the original program disk*, *Installing the modules and adaptations* and *Starting* SoundSurfer *for the first time.*

The installation on the Atari is fully covered in the SoundSurfer manual. Installation on a Macintosh is covered in the section *Macintosh* below.

Modules and adaptations are installed using a completely new procedure which is covered at the end of this chapter.

Atari

There are no changes to the installation routine on an Atari. You can carry on installing modules and adaptations as before.

You however now have the *possibility* of installing just SoundDiver itself in the installation program and then installing the modules in SoundDiver. This can make your life easier as you now need just the *one* program.

Macintosh

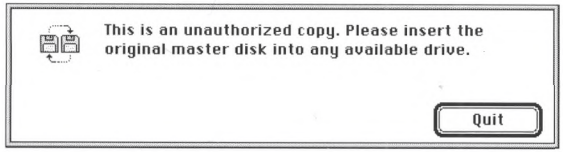
SoundDiver Macintosh is protected by hard disk copy-protection software. You may make as many copies of SoundDiver as you like on other hard disks. To allow a copy to run independently you must give it an »Authorization«.

There are two ways to authorize. The first and simplest is to copy the program file onto the hard disk and to start it there. The second type is where you start SoundDiver from the original program floppy, and install it from there onto the hard disk.

You then install the modules and adaptations from within SoundDiver.

Simple Authorization

- Start by copying SoundDiver to the desired location on your hard disk. For instance, you could create a new folder in the hard disk's main window and name it »SoundDiver«, and copy SoundDiver into it.
- Now start SoundDiver by double-clicking its icon.
- If the original program floppy is not inserted the following warning message appears:

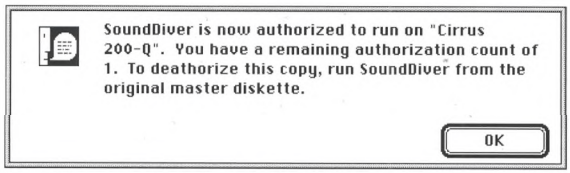


To continue, you have to insert the program disk.

- The Authorization window appears:



- Select »Authorize« in order to allow SoundDiver to be started from your hard disk. From now on you will be able to run SoundDiver without recourse to the original program floppy. There are two Authorizations so you can run SoundDiver, say, at home and in the studio. After a successful Authorization, a message appears confirming this:



- Select »Cancel« and the installation will be aborted.

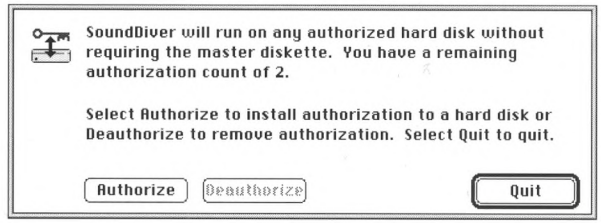
Power Authorization

The second type of Authorization installation involves starting SoundDiver from the original floppy disk. This allows you to authorize or de-Authorize different hard disks.

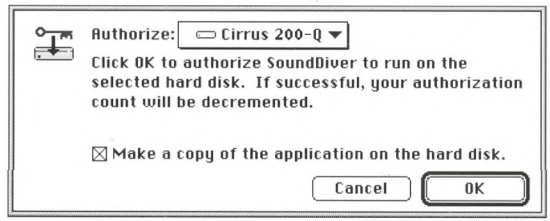
- Start SoundDiver from the original program floppy. The following message appears:



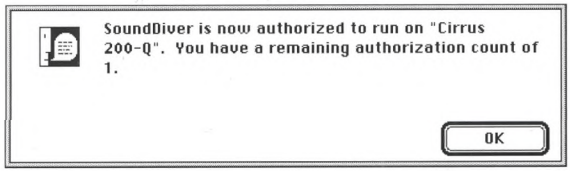
- Select »Setup...«:



- If you select »Authorize« here, you can choose the desired hard disk via a flip-menu. You may also make a copy of SoundDiver. To do this activate »Make a copy of the application onto the hard disk« and after clicking »OK« choose the folder into which SoundDiver is to be copied:



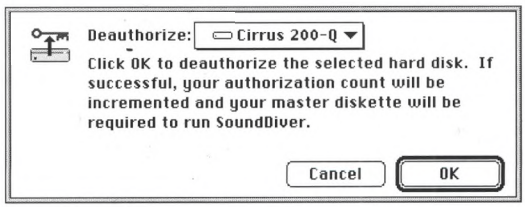
- As soon as you have installed an Authorization on a hard disk, a dialog box appears giving the number of remaining Authorizations:



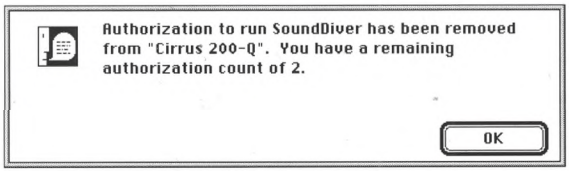
- If you quit this dialog box the installation program returns to the normal »Authorize/ Deauthorize« dialog box. You may now carry out further installations.
- You start the SoundDiver you have just installed by double-clicking the SoundDiver icon on the hard disk.

Removing an Authorization

- Start SoundDiver from the original program floppy
- Click »Deauthorize« and select the hard disk from which you want to remove the installation:



- After a successful Deauthorization, the program floppy is »credited« with an Authorization for use on a different hard disk:



Starting SoundDiver without Authorization

You may also start SoundDiver without an Authorization. This can make sense where you want to temporarily use the program on someone else's computer. To do this you always need the original floppy:

- insert the original floppy in the drive
- copy SoundDiver to the desired hard disk and start the copy by double-clicking its SoundDiver icon. The Authorization dialog box will appear
- choose »Continue«, and SoundDiver will start.

Starting SoundDiver from the floppy disk

Starting SoundDiver directly from the original program floppy is possible but not terribly useful. The problem is that the modules and adaptations must always be in the same drive as the one where the program was started, in this case the original floppy. The floppy has limited space on it, besides which the program takes longer to start.

Optimization programs

SoundDiver's copy-protection is not affected by disk optimization and defragmenting programs. You may use programs such as Speed Disk or DiskExpress II as often as you like.

WARNING: never use such programs on the original floppy as you will lose all your remaining Authorizations.

Completely removing SoundDiver from the hard disk

To completely remove SoundDiver from the hard disk:

- remove the Authorization as described above, then
- delete SoundDiver, the »Diver« folder, libraries and preferences (not forgetting those in the Preferences folder of the Macintosh System folder) from the hard disk.

Starting the program for the first time

When you start the program for the first time SoundDiver carries out a few automatic routines that allow as rapid and correct an installation of your MIDI system as possible as human error is avoided. To ensure that everything functions as well as it should, please check the following before you start the program for the first time:

- all devices and any patchbays being used must be correctly connected in both directions with the computer
- all devices must be switched on and their MIDI parameters correctly set. Make especially sure that their System Exclusive capabilities are enabled, and that similar or identical devices are set to different Device IDs or MIDI channels
- Macintosh AppleTalk must be disabled. AppleTalk interferes with the MIDI communication and can cause transmission failures.

When SoundDiver is started for the first time a variety of dialog boxes appear that present you with the first steps before scanning.

The Macintosh starts by opening the »Preferences« window in which you define the MIDI port(s) via which the devices and the computer are talking.

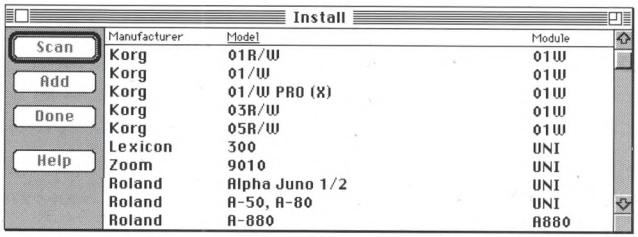
Installing devices

SoundDiver automatically opens the Setup and Install windows when started for the first time. Later, you can open them manually by choosing »Install« from the Setup menu in order to install devices.

Installation is very easy: all you need do is select the devices that SoundDiver is to install and press ⏎. SoundDiver does all the rest on its own – including the copying of modules and adaptations off floppy disk onto hard disk if they are not already in the Diver folder.

The following sections cover the installation of devices in detail.

The Install window



The window called »Install« is where modules and adaptations are scanned or manually installed, and put in the Diver folder. In other words, the overall control of modules and adaptations is all conducted from this one window.

Selecting the models

Before you can scan or install models you first have to select them in the Install window. You may select one or more models. If you select more than one model SoundDiver carries out the desired operation for each model in turn.

What you can select:

- To select just one model, click its line.
- To select more than one model click their lines while pressing ⇧.
- A second click on a line deselects it.
- To select all the models, choose »Select all«. In this case you can use »Toggle selection« to undo what you've done. Please bear in mind, though, that scanning all the devices supported by SoundDiver takes a long time as there are a lot of them.

Scanning using the keys

The Install window (choose »Install...« from the Setup window's local New menu) allows you to target the names of specific devices by using the computer keyboard. Bearing in mind the growing number of modules and adaptations, this method of finding things is much quicker than scrolling the list.

To find a specific device, type in its beginning letters quickly followed by the model name with the Add New Devices window open. The selection beam jumps to the nearest match it finds.

If you type something like »DX4« SoundDiver finds the DX7 because it sees the letters DX in several model names, though not »4«. In this case the next number up that it finds is »7«.

IMPORTANT: this function relates solely to model names, not those of the manufacturers.

Pressing ⇥ allows you to jump around the list alphabetically in ascending order. ⇧⇥ does the same in reverse.

Scanning



Click the Scan button to start the process. You can also press ↵ or double-click the name. SoundSurfer now analyzes your MIDI system and automatically installs the devices it finds together with the correct connection settings.

IMPORTANT: this option is to be preferred to manual installation as SoundDiver is then able to gather the maximum information about the devices, and human-error problems (incorrectly set MIDI parameters or connections) are avoided.

After scanning, a dialog box appears in which you can tell SoundDiver to directly request the memory contents of any device that's been found.

Bear the following in mind: as most of the SoundDiver modules apply to a whole family of models, a scan for a specific device often finds related devices as well, such as finding a TG77 when you wanted a SY99.

SoundDiver supports MIDI patchbays in general and is capable of automatically controlling the overall communication with the patchbay where this is possible. Patchbays, for instance, can be reprogrammed via SysEx to allow devices to be scanned that are not patched with the computer in the current patchbay program.

Important advice when using patchbays:

- The special support for MIDI patchbays is only possible with patchbays for which there is a dedicated module. At the time of publication, these are the Ensoniq KMX-8 and KMX-16, J.L.Cooper Synapse, MIDITEMP PMM-44/88, Roland A-880 and Waldorf MIDIbay.
- If you scan devices individually you should always first scan the patchbays, or the devices connected to it won't be found.
- Before you start scanning you should set the patchbay in such a way that there are no MIDI loops with the computer. If there are, scanning takes much longer, besides which incorrect connections prevent devices from being found.
- When a patchbay has been found, SoundDiver finds out which of the patchbay's ins and outs are connected to the computer. This can take a while. You can abort this procedure by pressing ⌘. or esc.

After scanning has finished, and some devices were found, a dialog appears:



If you click OK, the newly scanned devices' memory locations. This dialog won't appear if you have aborted the scan function.

If no devices are found, you get the following message.



Check if your devices are connected, switched on and setup correctly, then click »Retry«. SoundDiver then repeats the scan process with the same selection.

Manually adding devices to the Setup 

You can also manually add the selected devices to the Setup. In this case you have to manually set parameters such as their Device IDs and connections.

IMPORTANT: you should add a device manually only when it cannot be scanned (e.g. if it has no MIDI Out port or doesn't support scanning), or for test purposes.

To manually add the selected devices to the Setup, click the »Add« button, press ⌘D, or ⌥-double click one of them.

IMPORTANT: if there's already a compatible device in the Setup, you will be asked whether you really want to add the new device. The newly-added device will be given a new Device ID by SoundDiver: you will need to manually alter the ID in the device itself to the same number.

NOTE: the message »No more Device IDs« signifies that all the available IDs are being used on the current output (or the device doesn't have a Device ID). In this case you should connect one of the existing devices to a different output of the computer.

Done



Once you have completed the scanning or installation of the devices, click »Done«. The window closes. You may also press esc or ⌘U.

Help



In the Install window, SoundDiver's Online Help shows you the Help message for whichever is the first selected model. To open the Help, press help or click the Help button.

If you open the Help using ⌥help, it becomes a »floating window«. More on this in *The Help window* on page 31 in Chapter 2 *New Features*.

Creating the list of models

You are able to copy all or part of the list of the available models into the clipboard for further work in a word processor or for printing out.

Select the devices you want and choose »Copy« from the Edit menu (⌘C).

Installing the modules and adaptations

You can always see and select the available modules and adaptations in the Install window. These modules and adaptations don't have to be in the Diver folder for this to happen, because if you try to install a module that isn't in the Diver folder, SoundDiver will attempt to load it from disk. The following dialog box appears:



It gives you two alternatives:

Abort aborts the scanning or adding of new devices

OK the file is installed (copied into the Diver folder).

Searching for the Diver folder



If SoundDiver has to install new modules or adaptations it first seeks out the Diver folder in the floppy disk drive (drive »A:« in the Atari) as this is the most probable location for the file. If SoundDiver doesn't find it there the file selector box appears so you can tell SoundDiver where it is.

You need show SoundDiver where the folder is just once, as SoundDiver automatically uses the given path next time. Only when the program cannot find the desired file (i.e. if the file is on a different floppy) does the file selector appear again.

NOTE for Atari users: when a manual or scanned installation takes place, the files belonging to the module or adaptation (e.g. Help text) are copied as well.

With the Macintosh, all the data is contained within the one file.

Later installation of new adaptations

It's easy to install new adaptations. SoundDiver looks up the names of the modules and adaptations that came with the program from a list and shows them in the Install window – including those that aren't in the Diver folder. If you copy a new adaptation into the Diver folder the list is updated as soon as you restart SoundDiver. You can scan or manually add the model directly from the Install window.

Removing unwanted adaptations from the list

You are able to remove from the list display the names of new adaptations that you have removed from the Diver folder or have renamed. To do this, delete the file »Universal Module Preferences« (called »UNI.PRF« in the Atari) from the Diver folder. This forces the Universal module to rebuild its list adaptations. This operation takes a little time.

The next time you quit SoundDiver an updated list of adaptations is created and saved to disk at the same location as the old file.

This possibility of removing names from the list applies only to those adaptations you have added manually, not to those that come with the program.

Chapter 2

New Features

This chapter describes SoundSurfer and SoundDiver features that arrived after publication of the SoundSurfer manual. Please read the sections carefully so you can take full advantage of all SoundDiver's features.

NOTE: in this chapter, for »SoundDiver« read »SoundSurfer and SoundDiver« unless indicated to the contrary.

The look of SoundDiver

As you can see from the illustrations in this manual, SoundDiver has now acquired the EMAGIC family »look«.

Boxes and buttons are now in 3-D, and the Finder's background on the Macintosh has acquired a light grey 3-D appearance.

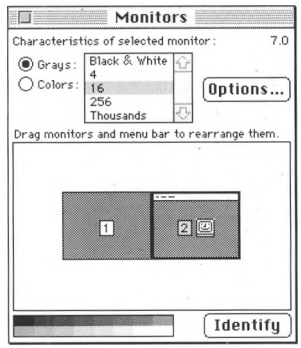




It looks better but costs computer »thinking time«, something which can be noticeable with the slower computers.

TIP: you can accelerate SoundDiver if you:

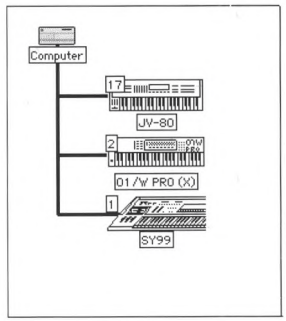
- disable »3-D Background« in the Preferences
- set the colour of the monitor to sixteen or four colours, or black-and-white. In the Macintosh this is done using the »Monitors« control panel.



The Setup window

Unlike SoundSurfer 1.2, the device icons now always appear, even when the corresponding module or adaptation hasn't yet been loaded (until now, only a rectangle appeared).

The Setup window's display can now be zoomed. The highest zoom factor shows the devices as icons as usual, and at the opposite extreme you have a list.



JV-80	M	1	17
01/W PRO (X)	M	1	1
SY99	M	1	1
Prophet10	M	0	1
HAMMOND XB-2	M	0	1
microWAVE	M	0	0
Monitor	M	0	1
DX7IIE!	M	0	1
FADERMASTER	M	0	
300	M	1	1
Wavestation	M	0	1
SDD-3300	M	0	1
MIDIVERB III	M	1	1
S3200	M	1	1
S3000	M	0	2
bit01	M	0	1

As you can see, the list display is not quite as informative as a graphical representation of the Setup, but you see far more devices within the same amount of space.

Each device in the list has a name, MIDI port and Device ID.

The zoom button upper right of the Setup window is used to change the text size, and hence the number of devices you can see.

In the text display mode, there's a little space to the left where you can click to deselect all the devices.

The New menu

The »Devices« menu item in the local New menu is now called »Install...«, and its key command is ⌘D. This change is to take into account the fact that you can now scan a number of selected devices from the Install window. See also chapter 1.

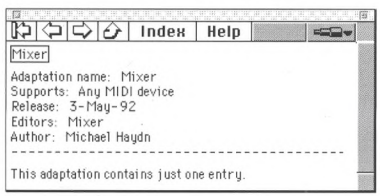
The »Scan« menu item is now called »Scan all models«, and its key command is ⌘⌥D.

The Help window



The Help window's buttons look different, and there are a few new features to make the Online Help easier to use:

- this new button scrolls to the first page of the selected Help file. This is where you normally find a description of the module or adaptation
- the display within the Help window can now be zoomed
- the page-scrolling is now graphically animated and shows you in which direction you are moving through the Online Help
- if you open the Help window using ⌂ (Atari) or ⌥ (Macintosh) it becomes a »floating window«. The key commands cease to be active.



User Interface

Automatic scrolling

If you enlarge a window, SoundDiver automatically corrects the section being shown to show as much of the window's contents as possible. This also happens when the contents of a window change and the new contents are fewer. This also applies to the zooming.

Operating background windows

A click held longer than half-a-second on an inactive window no longer activates and tops it.

TIP: this is very helpful when all you want to do is copy something from the inactive into the active window, or alter something in the inactive one's Parameter box.

Opening windows

All Windows menu items in bold type are preceded by the term »Open« if no windows of that class are currently open or if more than one window of that class can be open at the same time.

TIP: this makes it easy to see if a window is closed, or is open but hidden behind another one.

Opening Libraries

If no Library has been loaded the Windows menu item »Open Library« remains active. You can use it to open a Library (the function is the same as »Open...« in the File menu).

Closing windows

⌥-clicking the Library window's close box closes all the Library's windows without closing the Library itself. This feature is similar to that in LOGIC.

⌥-clicking the close box of a window that is not the Library's closes all the windows that don't belong to the Library.

⌥⇧-clicking the close box of any window closes all windows.

Block selection

To contradict what Appendix C of the SoundSurfer manual says, a block selection is achieved on the Macintosh as well with ctrl-click, not ⌘-click, as the latter is used to simulate the right mouse button (which is used to invert the Autosurf setting).

AutoSurf

⇧-clicking now prevents AutoSurfing (both in the Memory Manager and in the Library). This allows you to achieve a multiple selection without having every clicked entry transmitted.

AutoPlay

Autoplay is triggered only when the Device Parameter box is edited in stand-alone mode (without AutoLink, SoftLink, etc), as the MIDI Thru channel is only used by the built-in sequencer and therefore the AutoPlay function is helpful only in stand-alone mode.

Definable preferences

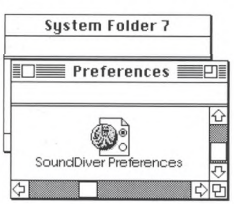
Let's assume that you use SoundDiver equally between home and the studio with different MIDI systems in each. Or you would like to use SoundDiver, sometimes with one module, sometimes using all your MIDI devices at the same time – in short, you want to be able to have SoundDiver adapt to different situations.

This is possible thanks to the new option of starting SoundDiver with a user-definable Preferences file, whereby SoundDiver is configured according to the Preferences file it has loaded.

Creating the Preferences file

When you quit SoundDiver, its current state (for more details see the SoundSurfer manual page 91) is saved to disk as follows:

- in the »Preferences« folder of the Macintosh's System Folder as »SoundDiver Preferences« (SoundSurfer's one is imaginatively called »SoundSurfer Preferences«)
- in the Atari file DIVER\DIVER.PRF or SURFER\SURFER.PRF.



To create a new Preferences file, invoke the File menu item »Save Prefs as...«. You can choose the desired folder and enter the file name in the appearing file select box.

If you now double-click this file, SoundDiver starts from here and also saves alterations to its settings in this file.

On the Atari you either have drag the file onto the program icon or install SoundDiver for PRF files (see the Atari's manual). Because the Atari allows only one file type to be

installed for an application, you therefore have to renounce the chance of opening a library via a double-click on its icon.

Loading preferences

Even in the middle of working, you can load other preferences – for example those of a colleague – by choosing »Open« from the File menu, and SoundDiver is immediately reconfigured.

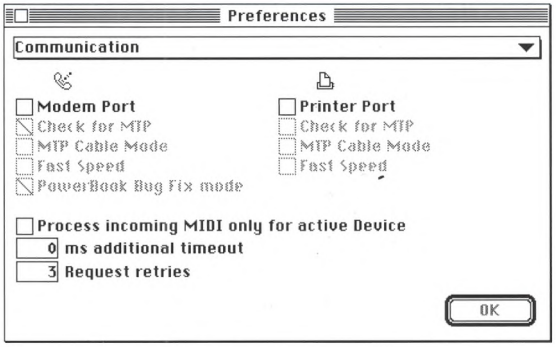
A message will ask you whether you want to save the existing preferences first.

On the Macintosh new preferences can also be loaded by a simple double-click on their icon.

The preferences

SoundDiver's preferences have been added to a fair amount. As in LOGIC, EMAGIC's sequencer, the three screen pages can be chosen via a flip-menu.

Communication



The following sections apply to the Macintosh only. In the Atari you can only set the additional TimeOut.

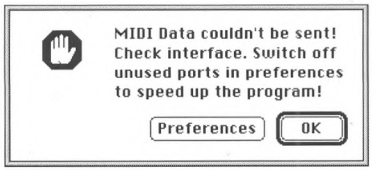
This page is based on the one by the same name in LOGIC; it controls the MIDI communication between SoundDiver and the interface.

IMPORTANT NOTE: AppleTalk must be disabled when using SoundDiver or you may suffer from communications problems.

Modem Port/Printer Port

Enable the port(s) you want SoundDiver to use for its MIDI communication. If you are not using one of the ports for SoundDiver, disable it to allow another program to use it.

If SoundDiver doesn't find a MIDI interface at the enabled port(s), a dialog box appears drawing your attention to this and giving you the opportunity of altering the preferences.



If this happens, check whether the MIDI interface is

- connected
- connected to the correct port
- switched on.

NOTE: this warning message applies only to the communication between the MIDI interface and SoundDiver, not to any MIDI devices that may be connected.

TIP: to stop the message from repeatedly appearing – such as when you are experimenting with something, simply disable both ports in the preferences.

The following three options apply only to Mark of the Unicorn's »MIDI Time Piece« (Version I or II) interface and compatible interfaces such as Opcode's Studio 4 and Studio 5. This interface supports up to eight separate MIDI systems of sixteen channels each. If you have a different interface, these settings are irrelevant.

Check for MTP

If this is active, SoundDiver scans for any MIDI Time Piece that might be connected and automatically activates »MTP Cable Mode« when it finds one. Two MTPs can be connected to one port (one set to »1–8« and the other to »9–16«), and SoundDiver will recognize this.

WARNING: if you are using an Opcode Studio 4 or Studio 5 this function is not possible. You must manually disable »Check for MTP« and enable »MTP Cable Mode«. The program then assumes you have a Studio 5 and activates cables 1 to 16.

MTP Cable Mode

If this is enabled, SoundDiver can address all the MTP outputs separately. As before, »M0« allows all modem port outputs and »P0« all printer port outputs to be addressed simultaneously, though this does not usually make much sense.

Fast Speed

This switches the MTP to its »Fast Speed« mode, where the communication between Macintosh and MTP is about five times faster than MIDI. Bear in mind, though, that it doesn't accelerate communication between the MTP and the MIDI devices connected to it.

P-Book Bug Fix mode

Activate this if you are using SoundDiver on a Macintosh PowerBook. It minimizes MIDI communication problems.

Process incoming MIDI only for active device

Here you can opt to process the MIDI input only for the currently active device. When disabled, SoundDiver processes and updates the data of other devices, even if they are not the currently active one. This can lead to the sudden loading of modules and adaptations for the incoming data to allow SoundDiver to allocate the data to the right device. If you find this annoying, enable the option.

NOTE: SoundDiver is quite smart about how it decides which inactive virtual device has to be »tried out«: only SysEx messages is processed for inactive devices, and only when the Manufacturer ID matches.

Additional Timeout

This value adds an additional global amount of waiting-time to incoming MIDI messages. It is of use when you have a MIDI device inserted between the interface and end device (Patchbay, Thru-Box, other MIDI processor) that delays the MIDI communication.

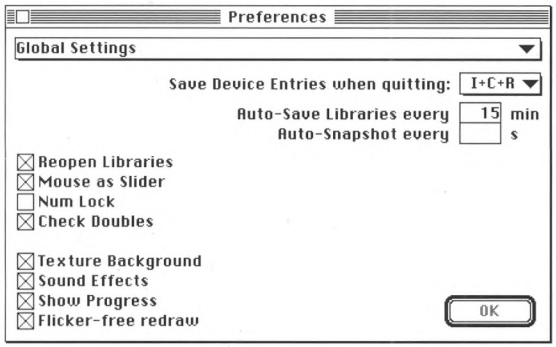
You have to raise this value especially if devices cannot be found via scanning.

Request retries

This determines how often SoundDiver tries to request entries until a fail-message appears. With some devices, it's worth trying more than once as they are slow to react. The waiting-time, however, becomes unnecessarily long if the device refuses to

answer at all (e.g. if it's switched off). You can now decide if there's a limit to your patience.

Global settings



You will find the following new options here:

Save device entries when quitting

You are now able to precisely specify what is to be saved. Please also read the description of the »Auto Request« device parameter in the SoundSurfer manual. The button that was in SoundSurfer had the same effect as »I+C+R« has now. This setting is the default, i.e. internal memory entries, card entries and ROM entries are saved in the Preferences.

Bear in mind, though, that next time you start SoundDiver there might be a difference between the data in the computer and that in the device (see page 91 of the SoundSurfer manual).

TIP: your attention is now drawn to this possible new situation by a safety message – though it can be disabled (see »Safety messages« below).

Auto-Save Libraries every x min

if you enter a value (x) greater than zero, libraries that have been edited are regularly saved every x minutes. Where new libraries are involved, you may be asked for a file name. This new function makes your data that much safer.

Bear in mind, though, that the File menu item »Revert« is no longer of much use – you can only load the last save, automatic or manual.

TIP: to be quite sure about the safety of your data, set it to 1 min.

NOTE: this function works on all libraries that contain edits (even the Snapshot library), even if their windows are closed.

NOTE: to disable this function, enter a zero (displayed as a blank field).

Auto Snapshot every x s

This parameter is available for Sound*Diver* only. If you enter a value (x) greater than zero, Edit Buffers that are being edited are regularly saved in the Snapshots library every x seconds (see *Snapshot* on page 80).

TIP: it's often the case that you're experimenting with various parameters and are too busy to remember to invoke the manual Snapshot routine, so you lose some of your ideas. This function ensures you lose nothing.

TIP: because the library also stores the time of each snapshot, you can see when the snapshot was made, just like one of those new digital telephone answering machines.

NOTE: this function affects all edited entries, whether or not the corresponding editor window is open. This means you're free to open and close windows, change Edit Buffers or edit different devices.

NOTE: to disable this function, enter a zero (displayed as a blank field).

Reopen Libraries

On quitting, SoundDiver makes a note of the open libraries in the Preferences, and these are automatically opened again when the program is restarted (or when the Preferences file is reloaded). If you don't want this to happen, disable the button.

Num Lock

This is a duplicate of the function described in *Number-input mode* on page 73.

3-D Background (Macintosh only)

SoundDiver is easier on the eye when this is activated, as described above. SoundDiver is, however, quicker with the neutral grey background.

Sound effects (Macintosh only)

SoundDiver Macintosh has a range of audible signals that announce e.g. start-up, the appearance of warnings or the completion of a process. These are enabled here.

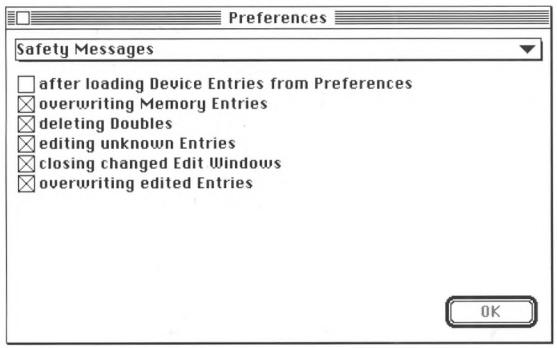
Beam display of waiting time

When active, SoundDiver shows how a calculation or an incoming/outgoing operation is progressing via a time-beam. This slows the program down a little, but at least you now know how long you have to wait.

Flicker-free display

If SoundDiver's screen display shows problems disable this option. Particularly on the Atari, some graphics cards can cause screen-stress.

Safety messages

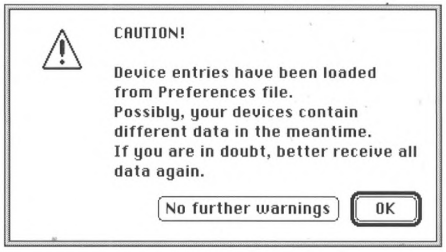


In addition to the safety messages described in the SoundSurfer manual page 92, SoundDiver has some extra options that apply to edited entries. If you don't yet feel quite at home with SoundDiver, activate all these messages to avoid accidentally losing your data.

Only when you feel more secure should you disable the safety messages to speed up your work.

Safety message after: loading Device Entries from Preferences

After Preferences that contain device entries have been loaded (see *Save device entries when quitting* on page 37), this message appears:



If you don't need to see it, click the button »No further warnings« or disable »after loading Device Entries from Preferences« in the Preferences.

Safety message before: editing unknown entries

If you double-click an empty (unknown) entry, by activating this message you can determine whether SoundDiver should create an initialized entry or request it from the device.

If this message is disabled, the entry is automatically requested from the device. If the device cannot be addressed, the entry is initialized.

Safety message before: closing altered Editor windows

If you have edited an entry in the editor and wish to close the last Editor window, SoundDiver normally automatically saves the changes.

If this safety message is active, a dialog appears in which you can

- OK the saving
- select a different target entry for saving
- close the window without saving
- decide not to close the window after all.

When inactive, SoundDiver saves the changes in the source entry, if it's available. This can also be a library entry if you opened the editor from a library.

Safety message before: overwriting edited entries

If you have edited an entry in the editor but haven't yet saved it, it might get overwritten at some stage. This can happen during a »Surf!« operation or where you want to open the Editor window of another entry which is using the same Edit Buffer. At this point you can decide what SoundDiver should do.

If »Overwriting edited entries« is active, a dialog box appears. Confirm with OK if you want to overwrite the entry. You then lose all your editing. If you choose »Cancel« the overwriting is aborted and you can save your editing in your own time.

When inactive, the edited entry is overwritten without warning.

Entry Dependency Management

SoundDiver's »Entry Dependency Management« now functions in adaptations and in modules. This means that adaptations are also able to check which entries (e.g. sounds) are being used by other things like Multis and Combi and can as a consequence keep track of sort, copy or delete operations.

Bear in mind that these dependencies must be defined in the adaptations. As this occurs with special objects in the editors, only SoundDiver, not SoundSurfer, can do this.

Most of the adaptations delivered with SoundSurfer 1.5 contain these dependency objects; you cannot however see nor edit them. To do this you need an upgrade to SoundDiver.

Patchbay support

Ensoniq models

In addition to those MIDI patchbays already in the SoundSurfer manual, you now have Ensoniq models KMX-8 and KMX-16.

Please bear the following in mind when installing them:

- The computer must be connected with MIDI Inputs 1 (and possibly 2) of the patchbay, not Inputs 3 to 8 or 16.
- With the KMX-16, also check that the computer MIDI Input and Output are connected with the same port of the patchbay. Thus, if the computer's MIDI Out goes to MIDI In 1 of the KMX-16, the computer's MIDI In must go to MIDI Out 1 of the KMX-16.

- You must set the KMX-16's MIDI channel and Device ID to identical values in SoundDiver.

The Setup window

Buttons for requesting/transmitting 

The receiving and sending of entries has been possible until now via use of the MIDI menu or a key command. There are now two additional buttons which you can click.

»Request« is symbolized by a question mark and an arrow pointing away from the device, »Transmit« by an exclamation mark and an arrow pointing to the device.

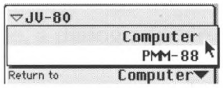
NOTE: the functions »Request« and »Transmit« in the Setup window act on all the memory locations of the selected device.

New parameters in the Device Parameter box

In the Setup window's Device Parameter box you now have the parameters »Connected to«, »Return to« and »Input«. These device parameters tell how SoundDiver is connected with the device. These parameters were already part of the earlier versions, but were invisible. Although they are automatically set by the Scan function you are now able to set them manually if, say, there are alterations in the cabling.

Connected to.../Output

You see this parameter only if at least one patchbay is installed. It allows you to determine how the device is connected to SoundDiver – such as via a patchbay or directly with the computer.



Click-hold the »Connected to« line in the parameter box to make a flip-menu appear for selecting the desired device.

The »Output« parameter determines the computer or patchbay output to which the device is connected.

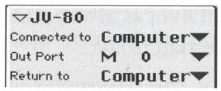
Return to/Input

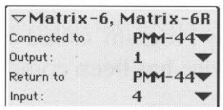
You see this parameter only if at least one patchbay is installed. This is where you choose whether the device's MIDI Out is connected to the computer or patchbay. If it's a patchbay, »Input« allows you to define its MIDI In. This parameter is not needed if the

device is connected direct to the computer as all computer inputs are active all the time and are merged.

BEAR THIS IN MIND: SoundDiver naturally allows you to have several patchbays connected in series. It is however not allowed to have the output of a patchbay directly or indirectly connected to the input of the first patchbay. A warning message will appear if this is detected.

Here are two examples of cabling: in the first example, the JV-80 is directly connected with the computer in both directions:

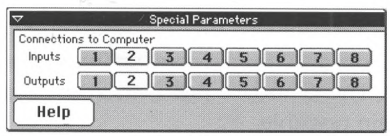




The MIDI In of the Matrix 6 in the second example is connected to output 1 of a PMM-44, and its MIDI Out goes to the PMM's input 4.

Special parameters for patchbays

The Setup window's Special Parameter box now shows the patchbay's inputs and outputs that are directly or indirectly connected to the computer. These were already included in SoundSurfer 1.2's Scan function but were not editable.



The first of the patchbay's active inputs and outputs are used by the computer when a device wants to communicate via the patchbay. Each active input and output is of course ignored by the Scan function.

You can use these buttons to manually install a patchbay or if you've changed the cabling between the patchbay and the computer.

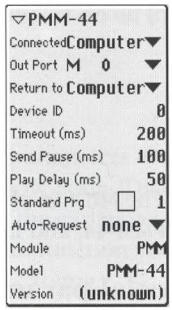
BEAR THIS IN MIND:

- At least one input and output must be active, otherwise devices attached to the patchbay won't be addressed.
- It stands to reason that these settings must correspond with the actual cabling.
- Changes to the button settings cannot be undone using »Undo parameter change«.

Patchbay Program and Standard Program

In the Setup window's Parameter box, each device has the »Patchbay Program« parameter. This ensures that SoundDiver is always able to address the device by selecting the appropriate program in the patchbay.

If the device is itself a patchbay, the parameter is called »Standard Prg« (formerly: »Default Prg«).



Here, you can enter a Patchbay Program, called up every time a data transfer with a device has been completed.

Normally a patchbay has a standard program that's used with a sequencer. Its structure is usually:

- Master keyboard → Computer
- Computer → various devices (depending on the situation several computer outputs can be connected with the patchbay, each of which is internally patched with several outputs)

Set the MIDI Program number of this patchbay program in the »Standard Prg« parameter. SoundDiver then automatically checks that this patchbay program is the normally active one. During communication with a different device (i.e. entries are being requested or sent) the patchbay is reprogrammed or switched (using the device's »Patchbay Prg«). The »Standard Prg« is then automatically recalled so that sequencer activity is again possible.

TIP: this automatic switching is even possible while the sequencer is running. This means you can, for instance, try out different sounds in a library using AutoSurf. If a note starts droning it means that the patchbay unfortunately sends no »All Notes Off« messages before switching, or that the device doesn't understand »All Notes Off«. In this case, access the device only with the sequencer stopped.

NOTE: when a device is being edited the patchbay's Default Program remains active. To ensure parameter changes get to the device this program should be set in such a way as to provide a connection from the computer to the edited device.

The Memory Manager

Append to Library

This new menu item in the local Entry menu appends the selected entries to the active library. Key command: ⌘⌥L.

Q: What is the »active library«?

A: The most recently selected library. It has a tick by it in the Windows menu.

TIP: this function is especially helpful when you are receiving various banks from a device (e.g. because you want to convert the contents of several ROM cards or disks into a SoundDiver library):

1. Create a new library (⌘N)
2. Select the corresponding banks in the Memory Manager
3. Load the data in the device
4. »Request« (⌘R)
5. »Append to library« (⌘⌥L)
6. Repeat items 3. to 5.

Next device/Previous device

There are new items in the local Options menu:

- »Next device« (⌘→|)
- »Previous device« (⌘⌥→|)

These functions let you quickly select devices without opening the Setup window or creating various screensets. The sequence of selection is the same as the one you established in the Setup window's list.

TIP: if you have to use this function several times to get to the desired device, hold ⌘ while selecting. It displays the title-lines of the new devices but not their window contents. These are shown only when you release ⌘. If you overshoot, pressing ⌘⌥→| allows you to go in reverse.

NOTE: the window's Link function is automatically enabled when this function is used.

NOTE: the Atari's corresponding key commands are ctrl tab and ctrl shift tab.

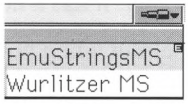
Buttons for requesting/transmitting



The Memory Manager now also has the new Request/Transmit buttons that were described earlier under *The Setup window* on page 42.

NOTE: the »Request« and »Transmit« functions in the Memory Manager act on all the selected memory slots of the corresponding device.

Zoom functions



The Memory Manager display can also now be zoomed. Click on the zoom button in the top-right corner of the Memory Manager window to get a closer view of the section or for seeing the entries in a larger typeface.

NOTE: if banks overlap or are too far apart in an adaptation, the adaptation has to be adapted to the new format. To do this, open the Adaptation Editor (⌥E).

The Link Box

The Link Box now shows the memory location number in the lefthand margin of each entry. If an entry has no name, its data-type name is shown instead (e.g. »Program Change Map«).

AutoSurf

⇧-click prevents any AutoSurfing from taking place, allowing you to achieve a multiple selection without having each clicked entry individually transmitted.

The Store dialog

This box appears in various situations:

- when an editor is closed after edits have taken place
- when a location is to be overwritten (if »overwriting memory locations« is active)
- when an as-yet unsaved Edit Buffer is to be overwritten (if »overwriting edited Entries« is active)
- when the target location isn't of the same data-type as the one of the entry to be pasted.

The functions of the box's buttons depend on the current situation at the time of closing.

Don't store closes the window without saving the entry (this button only appears in Sound*Diver*)

Cancel cancels the operation, e.g. stops the window from closing

Store the entry is stored in the desired location. In other situations, the button is called »Overwrite«.

Entries that are already being used are in bold type (as in the Memory Manager); there's also a tick beneath the title »already used:«.

For further explanations, see *Closing the editor window* on page 85.

»Remote-control« adaptations

The following feature applies to SoundDiver only, not SoundSurfer.

Some adaptations have just one editor that doesn't correspond to the Edit Buffer of a particular device, but allows the remote-control or display of specific operating elements. These kinds of adaptations are called »remote-control« adaptations.

Because remote-control adaptations have no Dump that can be received or sent, a Memory Manager display is not required. Therefore it's not the Memory Manager that's shown in the Setup window when this type of adaptation is opened, but the Editor window with initialized values. Examples of this are the »Mixer«, »Monitor«, »Transmission Formats« and »Roland Addresses« adaptations.

There are, however, »normal« adaptations that have an additional remote-control editor (e.g. the Dynacord DRP 15). Here, the Memory Manager opens as usual. When the appropriate entry is opened in the Memory Manager, it automatically opens (without a message) with initialized values.

The Library

Surf and AutoSurf

If an entry requires other dependent entries to be transmitted with it, the safety message dialog box now has a button called »All«. Clicking this allows each copying operation to take place without reconfirmation.

⇧-click prevents any AutoSurfing from taking place, allowing you to achieve a multiple selection without having each clicked entry individually transmitted.

Closing all windows of a Library

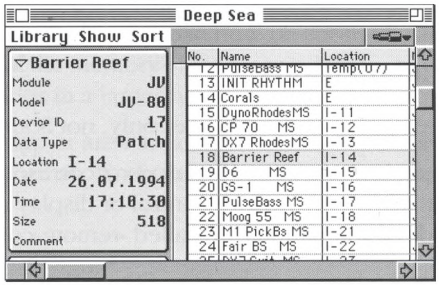
⌥-clicking the window's close box closes all the library's windows without closing the library itself. This feature is known from LOGIC.

Date and time

The library dates and times in the Macintosh are shown in the local country's format.

The location column

There's an important new feature in the library: the memory location column.



SoundDiver immediately notes the Memory Manager location of an entry (sound, program) when it was copied into the library. This location appears in the library and is always included in all operations within SoundDiver.

The new parameter makes it easier to carry out many practical operations.

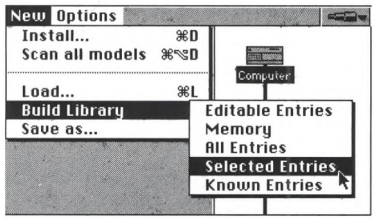
Saving a sound bank as a library

You can now manage your devices' sounds in libraries without losing their memory allocations.

- Select the desired device in the Setup window. You can also select several devices if you want to save their contents in a single library.
- Choose »Build Library« from the Setup window's local New menu. As described in SoundSurfer's manual, SoundDiver now requests all the desired memory locations in the device and copies them into a new library.

NOTE: »Build Library« is now also in the Memory Manager's local Entry menu – you don't have to change to the Setup window. The difference is that this new menu acts only on the entries of the current device, not all the selected devices.

There's also a new sub-menu for selecting the entries SoundDiver is to use for the library.



Editable entries

The library is created out of all the device's directly editable entries. This includes the Edit Buffers as well as the entries in the memory locations that are directly editable such as the Yamaha SY77's Pan settings, the JD-800's Multi-Setup or S-1000 Programs. In the broadest sense, this option stores the current state of the device thus allowing you to load it again later.

The Entry Dependency Management is active here as well. If you, say, write into the library a Multi-Setup that addresses sounds, these sounds will also be included.

Bear in mind that all the entries of some adaptations fall into this category as the Edit Buffers cannot be directly addressed via MIDI.

Memory locations

This option acts on all the memory locations including those of cards, but not ROM entries. This is the default option that was offered by SoundSurfer 1.2 under »Build Library«. This option is specially useful where you address all the sounds via a Program Change in the sequencer and don't want to transfer Edit Buffers into the library.

All entries

This option creates the library out of all the entries (except ROM). Choose »All Entries« when you want to create an entire backup of the device including its Edit Buffers.

Selected entries

Selected entries only (except ROM) are put in the library. It allows you to manually determine what the library is to contain.

Known entries

This creates the library out of the entries already requested in the Memory Manager. Use this option when you want to create a safety copy from a specific number of entries (e.g. just locations 1 to 30, just the Multis, etc.).

»Save as...«

This new menu item in the Setup window's local New menu works the same way as »Create Library«, but saves the created library directly to disk once you have entered its name and path in the file selector.

This option is also available in the Memory Manager; it acts only on the entries of the current device.

New menu item: »Load«

You'll find this in the Setup window's local New menu and in the Memory Manager's local Entry menu.

It allows a library to be loaded from disk and directly sent to the appropriate device(s). If you have used »Create Library« to make a copy of all or part of the memory contents of your Setup, »Load« gets them back again.

If you select a number of devices, the entries of those devices only will be accepted.

NOTE: strictly speaking, »Load« is a Macro that loads a library without opening a window, selects everything, sends it all to the device(s) and then closes the library again.

Library entries that are blank in the location field are copied as usual to the next available location. If the Preference »Safety message overwriting memory locations« is active, a dialog box appears where you can choose a different target.

If a library contains several entries for the same memory location, only the last one is accepted.

The process may be aborted using esc or ⌘.. ⌘Z undoes the load.

After you have loaded a Library, you are asked if you want to transmit the loaded data to the corresponding devices. This prevents you from overwriting the devices' memory by loading the wrong file by accident.

WARNING: If you cancel this dialog, the data in the devices don't match any more with the one in the computer, so be warned.

Loading for a single device

»Load« is also to be found in the Memory Manager's local Entry menu.

If you use this menu command, the process is limited to the current device only.

EXAMPLE: after completing a production you have made a safety copy of your entire sound palette in the form of a SoundDiver library, and now wish to load the sounds of just the Oberheim Xpander for a new production. In this situation choose »Load« from the Xpander's Memory Manager. The other devices' data will be ignored.

Importing alien formats

You can also use the »Load« function to import alien formats and Standard MIDI Files. The contents of the loaded files are likewise sent to the appropriate devices.

Standard MIDI Files get a dialog box before the data is sent: »Do you want to transmit the loaded entries or move them into a library?«. Select »Transmit« or press ↵ to confirm the operation. If you choose »Library« the entries are moved to a library. »Cancel« aborts the operation.

NOTE: If you load a Standard MIDI File, and there is no SysEx data which can be assigned to any Device in the Setup, you get a warning.

TIP: you are even able to extract sounds out of a Standard MIDI File. As an example: you are working on a production that was first produced by someone else. The first guy has sent you the song as a MIDI File disk. The song also contains the sounds of the instruments used. You can use the »Load« function to load the song file into SoundDiver and send the sounds direct to the relevant keyboards. The remaining data (Notes, Controllers) is ignored.

NOTE: on the Macintosh, MIDI Files must have file type »MIDI«; the Atari needs files that end in »*.MID«. SoundDiver is able to read all MIDI File formats 0, 1, 2 and is therefore compatible with any sequencer that can create MIDI Files. All the sequences within a MIDI File are evaluated.

What's more, the »Load« function as usual limits its action to the current device when it's loading from an alien format into the Memory Manager.

Sending entries from the library

If you select an entry in the library and choose »Transmit« from the MIDI menu, the data is sent to the location defined under »Location«.

Changing the location

If you want to copy a library entry to a memory location that differs from the one stated in the location field, simply drag it with the mouse to that position. By using this method you can explicitly specify the new target location so that the location field in the library is ignored. If several entries are copied this way, the entries that come after it are copied to the subsequent locations.

Deleting the location field

Sometimes it is specifically *not* desirable for SoundDiver to take into account an entry's location field when using the »Transmit« function. This, for instance, is the case when you generate a universal, large library from many different sound banks. In this case you can delete the location field:

- select the library entries whose locations you wish to delete
- click the Location parameter in the Parameter Box and delete it with ⌫ or esc. This deletes the location numbers of the selected entries in the library.

If you finish by sending the entries from the library to the devices, SoundDiver distributes the entries according to their positions in the library.

EXAMPLE: let's assume that you want to send five sounds from the library to a synthesizer, where they are to occupy locations 24 to 28.

Here, you have to select the entries in the library and choose »Transmit« from the MIDI menu. In the dialog box that appears as a consequence choose location »24« and then click the ALL button. SoundDiver sends the five sounds and places them one after the other in the device, starting with location 24.

The Edit Buffers

Until now Edit Buffers did not get location numbers when copying in the library, unless the Edit Buffers themselves had a number. When copying into a library, therefore, these entries got no location identity. This led to problems when sending an entire library, where SoundSurfer would try to send to a memory location instead of copying it into the Edit Buffer again.

Now, entries that have no location number are assigned an »E« in the library and are transferred back to the appropriate Edit Buffer in the device. This means you have the possibility of making a complete backup of the entire memory contents – including all the Edit Buffers – in SoundDiver.

NOTE: you have to manually insert the »E« in older libraries. To do this it's best to use the Find function:

- Choose »More Options«.
- Enter the condition »The location« »is« (empty)
- Choose the option »Show all«.
- At this point all the entries without location numbers are selected. Click the location parameter in the Parameter box and enter »E«.

Printing libraries and Help files on the Macintosh

In the Macintosh, each library has a different page format so that individual libraries get their own print-out.

SoundDiver prints a library as »WYSIWYG« (What You See Is What You Get) and supports TrueType for the best results.

NOTE: unlike the Atari the Macintosh Help text's line-wrapping is determined by the width of the page that you set under »Page Setup...« in the File menu, not the width of the On-Line Help window.

In the Macintosh margins are expressed in $^1/_{72}$ inches, not in characters or lines. The paper format is built into the Macintosh's Page Setup dialog box.

Selecting a block in the library

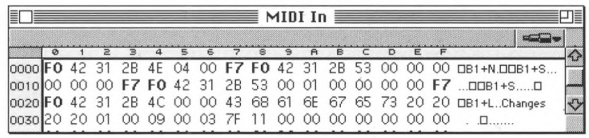
If you click a heading within the library while pressing ⌥, all the entries that follow that heading will be selected as far as the next one. This is a very easy way of selecting blocks.

The sequencer

You can now call up SoundDiver's sequencer via ⌘7. This is more logical for LOGIC users as this command calls that sequencer's Transport window.

MIDI In and MIDI Out

SoundDiver has two new windows: »MIDI In« and »MIDI Out«.



These windows display the flow of MIDI data and are primarily intended for checking the MIDI connections. To open one of the windows click the In or Out display in the Sequencer window.

Alternatively, press ⌘8 for the MIDI In window and ⌘9 for the MIDI Out one. If you press ⌥ (Atari: ⇧) at the same time, the windows open as »floating windows«.

The »MIDI In« window shows all the data arriving at the computer, over all inputs. The »MIDI Out« window shows the data that SoundDiver is sending, over all outputs. The look of both windows is identical.

The MIDI data is shown in hexadecimal to the left and in ASCII. Status bytes are in bold type (in the illustration, compare the SysEx Status bytes F0 and F7).

The windows' displays can be zoomed, and SoundDiver automatically selects the size of the typeface to suit. The contents of the windows scroll as well.

These windows can show up to 32 kBytes. To erase the buffer contents and therefore that of the windows press ⌫ or choose »Clear«.

NOTE for advanced users: the vertical column next to the data window gives the offset of the first Byte in Hexadecimal.

TIP: an open MIDI In or Out window slows down the MIDI processing and could lead to communication problems, so shut the windows when you are not using them.

M•ROS

If you are operating SoundDiver under M•ROS, commands ctrl⇧-F1 ... F10 are not valid as they are reserved for M•ROS partition-switching.

If the names of MIDI ports are shown in grey, they relate to MIDI outputs that are not active in M•ROS (disabled or not connected) even if there's a driver for them.

Converting files between the Macintosh and Atari

SoundDiver's Atari and Macintosh versions are data-compatible. This is very useful if you happen to be using SoundDiver on an Atari and an Apple Macintosh or are collaborating with other SoundDiver users. SoundDiver and SoundSurfer data is totally compatible, of course.

Libraries, Adaptations, and Help source files are compatible and need only be copied from one computer to the other. You need a Macintosh program such as DOS Mounter, Access PC, PC Exchange or Smart Link to enable the Macintosh to read DOS floppy disks. PC Exchange comes with Performa and Power Mac models. Apple File Exchange also works, but it's not as elegant.

So that the Macintosh can recognize Atari files without restrictions, you have to alter the Type and Creator of a file coming from an Atari.

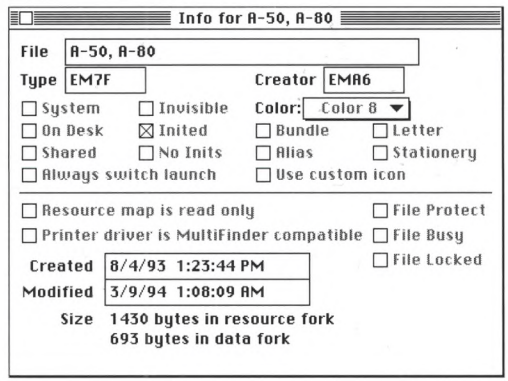
Many newer versions of DOS disk mounters automatically allow this after you have entered the Atari file extender and the Macintosh Creator and Type. More details in the program's manual.

If you don't have such a program, but have ResEdit, File Buddy, FastFind or similar that allows you to manually alter the File Type and Creator, this works as well.

Table 1 Atari file name extensions and Macintosh Type/Creator

File type	*Atari Extension*	*Macintosh Type*	*Macintosh Creator (SoundSurfer)*	*(SoundDiver)*
Library	.LIB	EM9F	EMA5	EMA6
Adaptation	.ADA	EM7F	EMA5	EMA6
Help source file	.ADT	TEXT	any (e.g. ttxt or MSWD)	

This illustration shows the ResEdit Get Info window with the correct entries for a SoundDiver adaptation:



Chapter 3

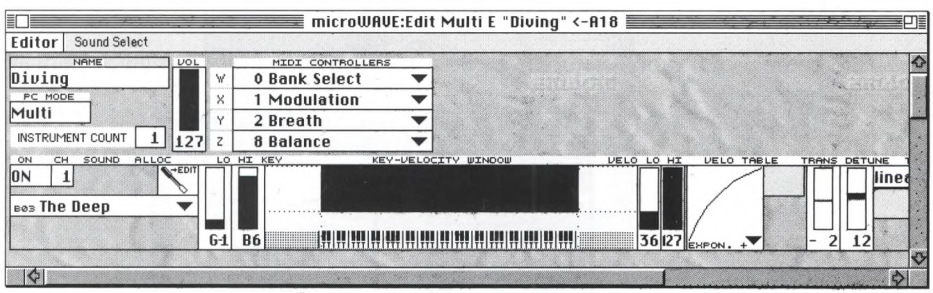
Tutorial

If you have read the SoundSurfer manual and the previous chapters of this complete manual you should now be familiar with SoundSurfer's concept and operation.

It's time to dive deeper with SoundDiver: in addition to SoundSurfer's powerful management functions, there are now graphic editors for all devices, which allow easy and organized editing of your sounds via the screen.

The Editors

The principle is easy to explain: every module and most of the adaptations in SoundSurfer which already use the Memory Manager, Setup and Library now also have a complete editor for the relevant device.



You will probably already be familiar with the term »editor software«. A program like this was previously usually specially-written for a specific device. There was a DX7 editor, a Korg M1 editor and so on. If you used several devices, you had to load a different program for each device. A few years ago this was not really a problem since the average setup did not usually contain many devices.

In a larger MIDI setup consisting of many smaller synthesizers plus effects and MIDI patchbays, this process is too cumbersome. Say you have just finished a session and you want to store the sounds of all your devices in the computer. You would have to load the program, save the sounds, load the program for the next device and so on...

SoundSurfer already allows you to organize your sounds universally for all devices. During a production session, however, you often need to change or edit the sounds

in an arrangement, with the sequencer running if possible, and without having to continually start and quit programs.

SoundDiver allows you to do just that. You can simultaneously open several editors, each of which contains several windows offering different views of the sound parameters. This enables you to zoom in on the envelope of an 01/W on the screen, while another window will show you the complete effects section.

The storable window configurations let you make optimum use of these options, even on small screens.

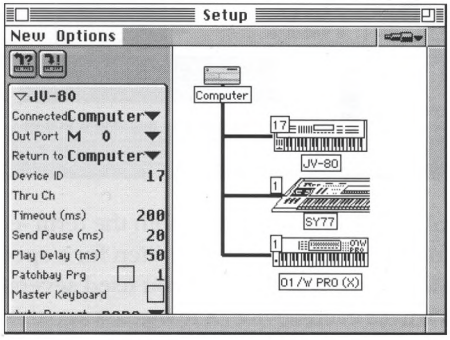
Let's take a closer look at SoundDiver.

Remember our quick tour around SoundSurfer in chapter 3 of the SoundSurfer manual? We are now going to supplement this with a brief excursion into SoundDiver.

As soon as you start, you will notice that SoundDiver (and of course SoundSurfer) looks different and can make sounds, too – certain situations are now accompanied by a sound effect – but unfortunately only on the Macintosh; the Atari is still mute.

Let's start...

Remember our sample setup in the SoundSurfer manual? In the new SoundDiver this looks even better:

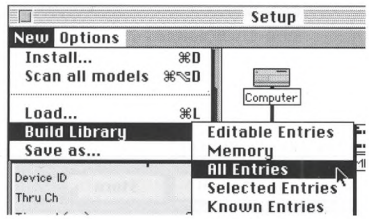


Notice the two new buttons for sending and receiving; their function is identical to those in the MIDI menu.

... in the Library

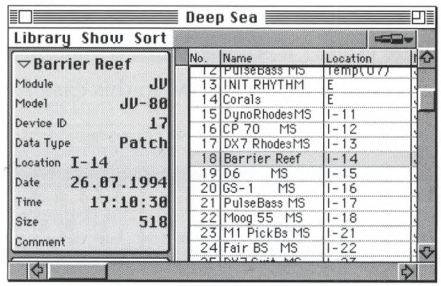
The sounds are in the computer. To begin with let's compile a library. The JV-80 has been selected, so choose »Build Library« from the local New menu of the Setup win-

dow. As with all options relating to entries, this one has a flip-menu where you can select specific groups of entries:



We want to select all entries, so (surprise, surprise) choose »All Entries«.

SoundDiver automatically carries out a number of operations: it receives the sounds, creates and opens a new library and then copies the received entries into it. We are already familiar with this from SoundSurfer. A new feature is the memory location column in the library and its associated line in the parameter box.



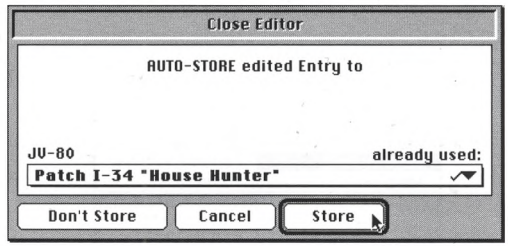
We covered the memory location parameters in chapter 2. You can also sort the library display according to location and allocate any entry a new location. But now it's time to dive into SoundDiver itself.

Welcome to pleasure-programming...

When you double-click an entry in SoundSurfer, you can edit its name. If you click an entry in SoundDiver it opens the editor (see above diagram). Once you have connected a synthesizer, don't miss what comes next:

- first activate the »AutoSurf« and »AutoPlay« options in the MIDI menu
- double-click a sound to open the editor. Experiment at random with the various operating elements – move the sliders, redraw the envelopes and switch the functions on and off. You will be able to simultaneously audition your editing

- quit the editor by clicking the close box in the upper left corner of the window.

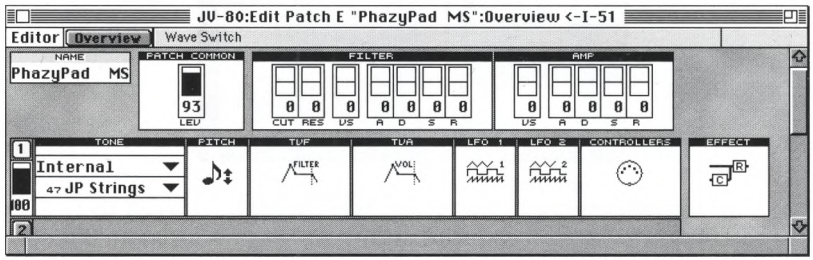


If you like the result of your random programming, click OK in the dialog box that appears. You can also select a different location for the edited sound in the flip-menu of the dialog box. On this occasion, it is probably safer to click »Don't Store«.

A handful of editing functions...

We are now going to experiment with the editor in more detail. Have you connected a device and opened the editor? If so, you should be able to see an editor window.

The diagram shows a typical editor window, in this case for a JV-80:



Here you can see the Overview that initially appears with more complex devices. This shows you all the elements of a sound or program at a single glance.

In the top half, you'll find several macro parameters that can be used to edit the sound quickly and easily. This is the »Easy Page«.

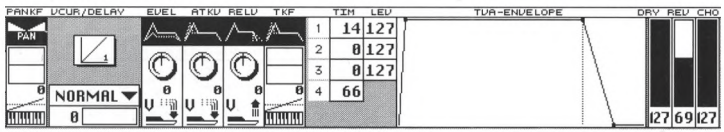


Use these to edit a sound without having to go into too much detail. In the example given in the diagram, the cutoff frequency was raised, the resonance lowered slightly and the attack lengthened.

Say we wanted to edit the filter envelope for tone 1. Click this button in the Overview display, and SoundDiver switches to the »detailed display«.

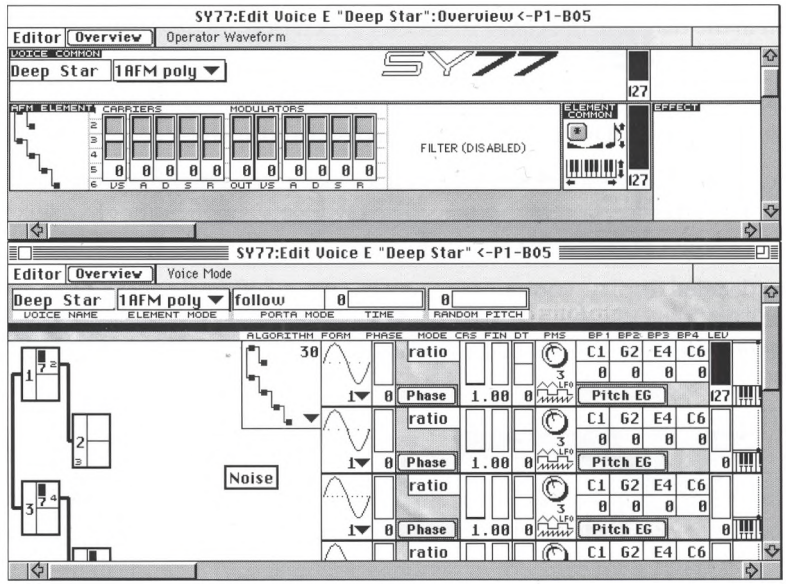
Basically you can view a SoundDiver editor like a street map. The Editor window is a view of a certain section of this map. The Overview, on the other hand, is the entire map in a larger scale.

In the detailed display, you can see every parameter of the device, although compared to the device itself, these are presented in a far more convenient and manageable form. Envelopes may be edited graphically, and there are knobs, beam displays and flip-menus.



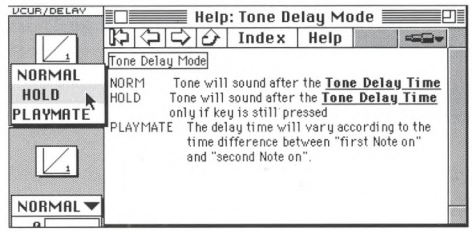
The diagram shows a section of the detailed display of the JV-80 editor, where you can see all the major controls at once.

In every editor you can open several windows showing whatever section you want. Say you want to see just the left and right edges of the detailed editor at the same time. Instead of continually scrolling back and forth between the two sections, just open a second window by choosing »Open Editor« from the global Windows menu. Position this next to the first and scroll to the desired section. What if you want to simultaneously see the overview and the detailed display of a sound, as shown in the diagram? No problem.

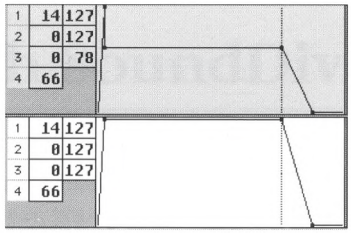


The switchable screensets allow you to instantly call up the different editor displays.

If you don't know what a parameter means, just click it and press help. SoundDiver's Online help will immediately display the relevant information.



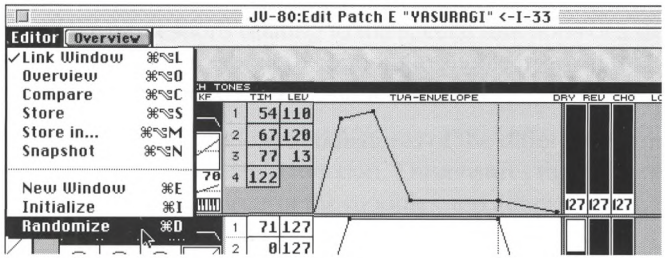
But that's not all! The functions of the Edit menu are also available in the editor. This means that the sound components and parameter groups may be copied at will, even between different entries. Just click the grey area within a parameter group to select it.



The above diagram shows a selected envelope. You can use the copy, cut and paste functions of the Edit menu to copy it via the Edit Buffer into other components of the sound (tones, elements, voices) and of course into other sounds.

Randomize

If you don't have the urge to program yourself or you need some creative impetus, try SoundDiver's randomizing function. Not only can it create entire sounds by chance, but also individual parameter groups. A random envelope in an effect sound, a random new wave form in a pad sound – and the sound becomes unrecognizable.



The diagram shows the menu item »Random value« in the Editor menu and next to it a randomly generated envelope – it doesn't look too bad really…

In the next chapter we will systematically get to grips with the fine details of SoundDiver's editor functions and other operations.

Chapter 4

Editing with SoundDiver

This chapter deals with the features that distinguish SoundDiver from SoundSurfer: the editors. In SoundDiver, you can do more than just organize your sounds – you can edit them directly on the screen.

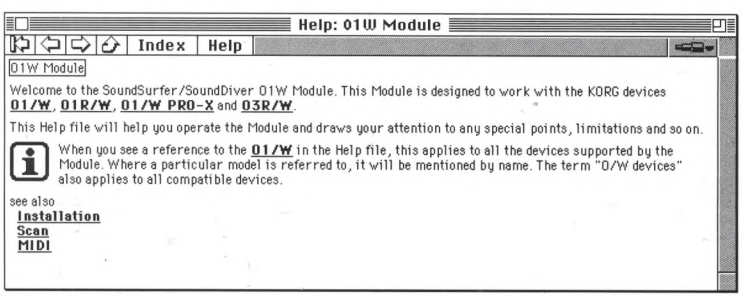
General

Since SoundDiver contains modules and adaptations for more than 200 devices, most of which use at least one editor, not all the special functions can be adequately described in a single manual. This manual therefore describes SoundDiver's general editor functions, common to all editors.

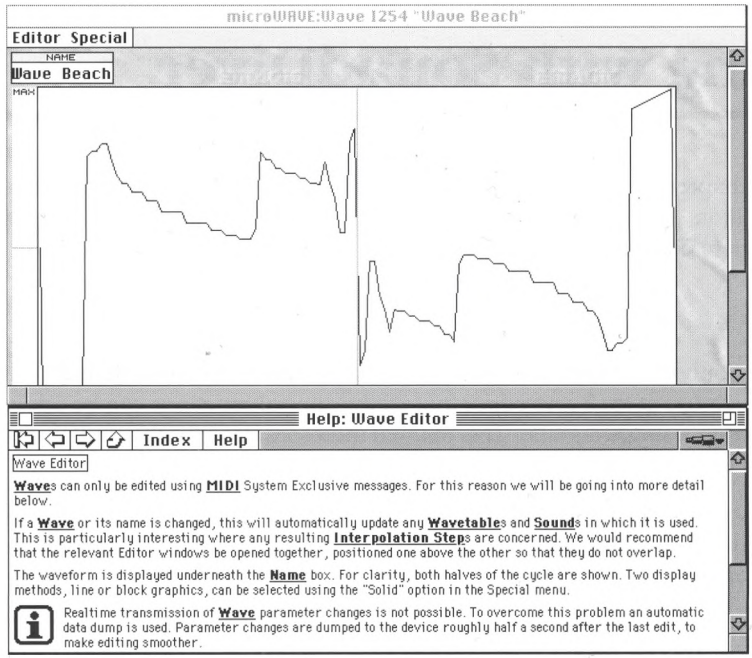
The general form, operation and basic options are identical in all SoundDiver editors. You therefore only need to learn how to use a SoundDiver editor once, and you can then operate all the editors.

If you still have questions relating to the special functions of a device or you want to get more precise details about the options available in an editor, you can make use of the information provided by the Online Help.

The special functions, options and features of the different editors are individually described in the relevant Help function. This ensures that if there are any alterations, improvements or expansions of the modules and adaptations the instructions remain relevant by having updated Help text.



For example, this is the first page of the Online Help for the expander Korg 03R/W. As you can see, the Online Help contains detailed information on the specific devices.



Yet another example: the editor for the Waldorf MicroWave also contains an editor for waveforms that would be completely useless for other devices. The Online Help describes such special features in detail, while the basic functions are the same as those found in every SoundDiver editor.

Calling up the editor

To select an entry for editing either:

- double-click it
- select an entry and press ⌘E or ↵, or
- select an entry and choose »Dive!« from the local Entry menu in the Memory Manager, or the local Library menu in the library.

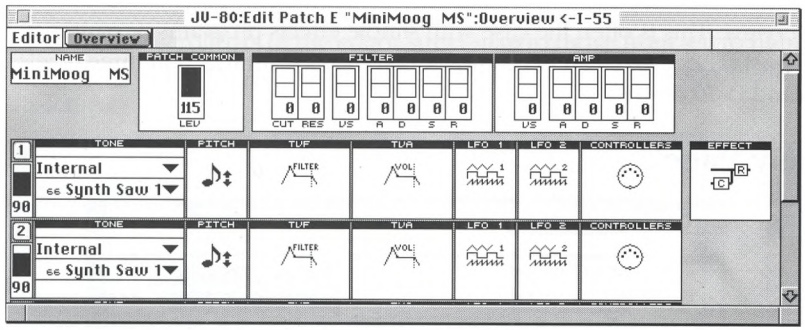
If the entry's contents to be edited are not yet known, depending on the situation a dialog box appears, giving you some or all of the following options:

- cancel the operation

- initialize the entry. The initialization data is then sent to the device, and the editor is opened with this data
- request the entry from the device first.

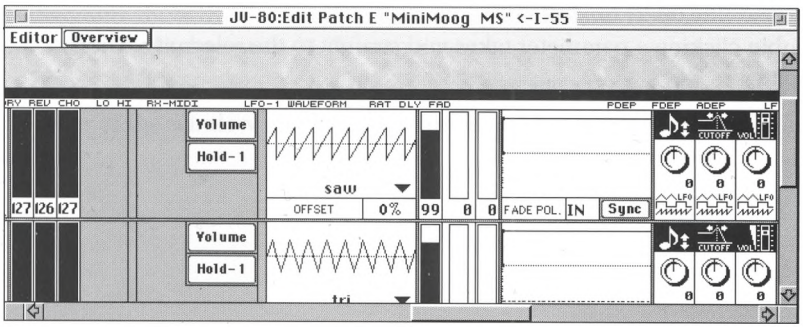
NOTE: sometimes there will be no data available for an open Editor window. You will then get a message saying »(Data unknown)«. You can receive the editor data by choosing »Request« from the MIDI menu or initialize them with »Initialize« from the local Editor menu.

The Overview



SoundDiver opens a new editor window in Overview mode. The Overview allows you to see all the function areas of your device at once. With synthesizers this gives you a very good indication of the sound-generating structure, such as the elements of pitch, TVF, TVA, LFO and so on. Since with many devices it's not possible to view all the parameters at once, the Overview gives you a very convenient way of choosing the area you want to edit.

Say you want to edit the LFO parameters of the JV-80 sound shown in the diagram. Click the LFO box in the Overview, and the detailed display of the LFO appears.



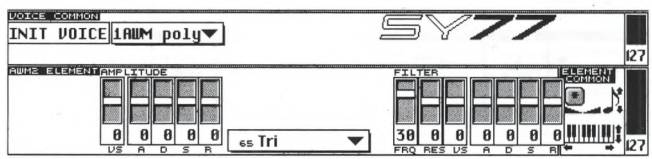
To switch back to the Overview: r Overview

- click the relevant button in the Editor window
- or choose »Overview« from the local Editor menu
- or press ⌘⌥O.

The Overview and the detailed display act like a two-level zoom function. You can alternate between the Overview and the detailed display and so quickly target the desired parameters. When you toggle between the two your position in the street map is retained.

NOTE: if the entry you are editing only contains a few parameters, there will be no Overview. This is often the case with simple effects programs or multi patches. By contrast other editors are so complex that they are arranged in three levels (e.g. Roland D-70 drums).

The Easy Page



One part of the Overview contains macro parameters for making coarse alterations to the sound without having to go into too much detail. These alterations, which are known as Easy Page, always affect the entire sound. Say you want to use the Easy Page to alter the filter frequency in a Yamaha SY77, all the elements are available here. If you want to alter the filter frequency of an individual sound component, you can do this in the detailed display.

NOTE: when you alter a parameter in the detailed display, all the Easy Page parameters are reset to 0.

Double-clicking a parameter takes you straight to the relevant section of the detailed display.

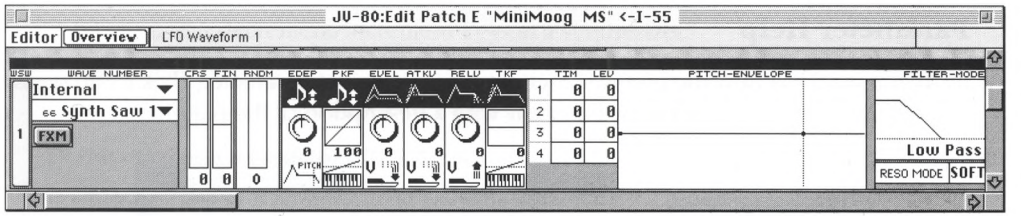
Getting around the editor window

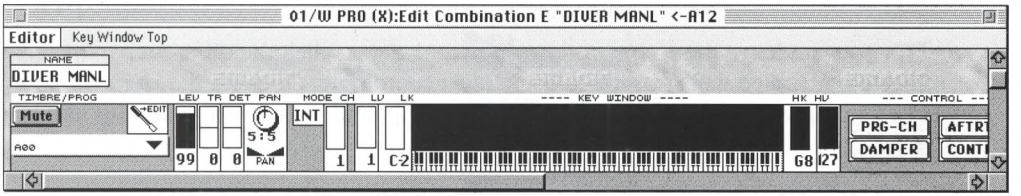
You can picture the editor as a large street map, on which all the parameters are laid out. The Editor window shows you one section of this map, which you select using the various navigational functions.

Switching between the overview and the detailed display was covered in the previous section.

You can access areas outside the editor window using the scrollbars. The parameters of a program component – what makes up a sound – are usually arranged horizontally.

Using the lower scrollbars of the editor street map to move from left to right, you can follow the signal path of the device or the structure of a combination, performance or multi-setup.





The diagrams show the parameters of a tone in the Roland JV-80 and beneath it the parameters of a timbre in an 01/W combination.

SoundDiver arranges other tones or timbres vertically. The x/y element in the bottom left corner of the window allows you to move quickly in any direction around the map.

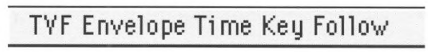
Selecting the parameter to edit

If a parameter has the cursor on it, this means it can be edited.

You can either click the parameter directly with the mouse or move the cursor in any direction using the arrow keys, in which case the window section automatically moves as well.

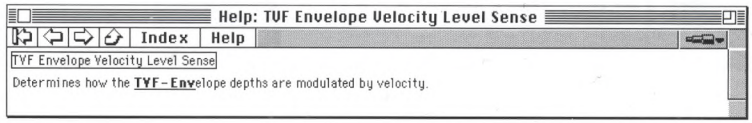
NOTE: clicking an object moves the window view to allow the whole object to be seen. The window view won't be moved, though, if the object is already in full view or is too big for it, as happens with very big objects like the vertical keyboard table in drum editors.

The info line of the Editor window always contains a description of the parameter:



Parameter Help

If you want to know the precise function of an individual parameter, click it and press help, and the Help window will appear with a description of the parameter.



TIP: you can leave the Help window open and as you click the different parameters the Help message will automatically change accordingly. Opening the Help window as a floating window (by holding down ⌘, or ⌥ on the Atari) is a good idea in this case.

Cursor Position

SoundDiver always stores the cursor position, even if you move the window into the background or select a different window configuration.

MIDI Thru Channel

Some modules automatically update the MIDI Thru channel in certain editors when you select a parameter and if it is not set to 0 (original). This function is available in most multi-editors to enable you to play the edited part.

Editing parameters with the mouse

The editing of parameters was covered in the SoundSurfer manual, but the editors contain some additional functions. For example, you can edit parameters using knobs. For the sake of the Overview, here is another description of the various methods available for editing parameters.

Using the mouse as a slider

To set parameter values directly with the mouse, click-hold the number. You can then alter the value in either direction by moving the mouse vertically. This function is called »mouse-as-slider« and may be switched off in the Preferences.

Using the mouse to decrement/increment

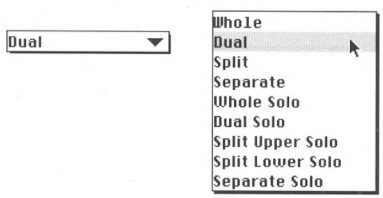
If you have deactivated the »Mouse-as-slider« option in the Preferences, the mouse will function as a decrement/increment key on a synthesizer.

Atari left-clicking increases the value, right-clicking decreases it. If you simultaneously hold down ⌂, SoundDiver alters the value in units of ten.

Macintosh clicking increases the value, clicking while holding down ⌘ decreases it.

Click-holding will continuously alter the value.

Flip-menus



You can choose from a selection of preset or named values – such as waveform names or switch settings – with the help of flip-menus. Most flip-menus (if space allows) are marked by a downward-pointing arrow on the right side and are also shaded.

You open one of these flip-menus by click-holding it. You can then alter the value by vertically moving the mouse pointer – the value is set once you release the mouse button.

If the flip-menu contains more values than will fit in the menu, you will see a slider on the right. Move the mouse pointer up or down to bring the other values into view.

If you hold down ⇧ after opening the flip-menu, it will stay open after you release the mouse button. The slider can then be moved with the mouse. Important: don't hold down ⇧ until after you have clicked (⇧-click selects the next level up of parameter groups, see below).

TIP: if you click the flip-menu while holding down ctrl, it will not be opened. Instead you can set the value using »Mouse-as-slider«.

Editing with graphic objects

To alter a parameter using its graphic display, click-hold it. Depending on the type of parameter...



- ...you can set the value using a knob whose position may altered by vertically moving the mouse.

TIP: holding down ctrl gives you a higher resolution: moving the mouse pointer one pixel alters the value by 1. This is particularly useful for small knobs with a large value range.

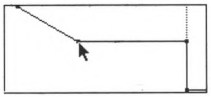
- The slider works in a similar way to the knob – you alter the value by pushing the mouse up and down.



Horizontal sliders work exactly the same way, but you move the mouse horizontally.



TIP: with sliders you can also make fine value adjustments by simultaneously holding down ctrl.



- Envelopes may be graphically edited by dragging the points in the desired direction. Any alterations will be reflected in the numerical display.

Depending on the structure of the envelope the point may be moved in one or both directions. With some envelopes there are restrictions on where the point may be positioned. This is due to the structure of the envelope (e.g. with the Yamaha DX7).

Points lying outside the rectangle of the envelope's graphic display are indicated by a small arrow. Such points may be edited by clicking the arrow.

Inputting values via the keyboard

Number-input mode

Parameter values may also be entered directly via the numerical keypad on the Atari or Macintosh. The number keys are normally used to switch between SoundDiver's different window configurations, while [0] starts the sequencer. You can bypass this by

- switching on [⌧] on the Macintosh, or
- pressing [/] on the Atari numerical keypad.

This function is also known as »NumLock«.
If number-input mode is active this is shown in SoundDiver's info line:



This message appears in all windows with an info line.

Please note that any pause between the individual digits must be less than one second. Negative values should be preceded by [-]. Here too any pause should not exceed one second.

When NumLock is active, the sequencer functions can be operated by pressing [⇧][0] and [⇧][↖].

Pressing the relevant key again will switch number-input mode back off. The current setting of number-input mode can be saved under Preferences.

If you don't want to use number-input mode – if, for example, you often switch between window configurations, just double-click the parameter value. A small window then appears in which you type the desired value, and press [↵] to confirm.

TIP: this function is only available with »Mouse-as-slider« switched on.

Increasing or decreasing values

To increase or decrease a value in single steps, press [+] or [-].

Simultaneously holding down [⇧] makes SoundDiver alter the value in units of ten.

To input a negative value, first press [-] (initially, the value decreases by 1) and then enter the amount.

MIDI transmission and reception

How the Parameter Change is transmitted

In most cases, the changed value is immediately transmitted to the device's edit buffer using System Exclusive Parameter Change messages so that you can hear the change by playing on the keyboard or using AutoPlay (see below).

Some devices however don't support Parameter Change messages. In this case, the whole edit buffer is transmitted after a short pause.

NOTE: some devices need some extra pause between two messages, even although they support Parameter Change messages. Otherwise, they would not accept the message or even crash. This is taken into account by SoundDiver automatically. You can adjust the delay with the parameter »Send Pause« in the Device Parameter box.

AutoPlay

If AutoPlay is active, the built-in sequencer automatically plays the test sequence in Cycle mode. With AutoLink, SoftLink and M•ROS, the sequencer plays from the left locator for the period set under »AutoPlay duration«.

With drum editors, the edited note is played instead for the period set under »Drum AutoPlay duration« (this does not apply to adaptations).

Inputting values via MIDI

Many parameters reflect specific MIDI values like notes, velocities, controller numbers etc. In many editors you can directly input these values (not adaptations). This function is called »Listen to MIDI«.

Place the cursor on the parameter, hold down ⌂ and play the MIDI event on the keyboard. For example, in a multi-editor you could directly define the key range of a part by hitting the lowest and highest keys, or you could set the breath controller as the modulation source by holding down ⌂ and blowing.

Parameters which allow such an input are marked with this symbol:



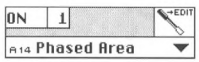
Request and Transmit

You can request or transmit the edit buffer's contents anytime using the corresponding menu items in the global MIDI menu.

TIP: requesting the edit buffer is necessary when you manually select a different sound at the device and want to edit it with SoundDiver. Transmitting the edit buffer is necessary when you changed the edit buffer manually at the device, but want to continue editing the data shown in the edit window.

NOTE: some devices do not allow to request the edit buffer.

Edit switch

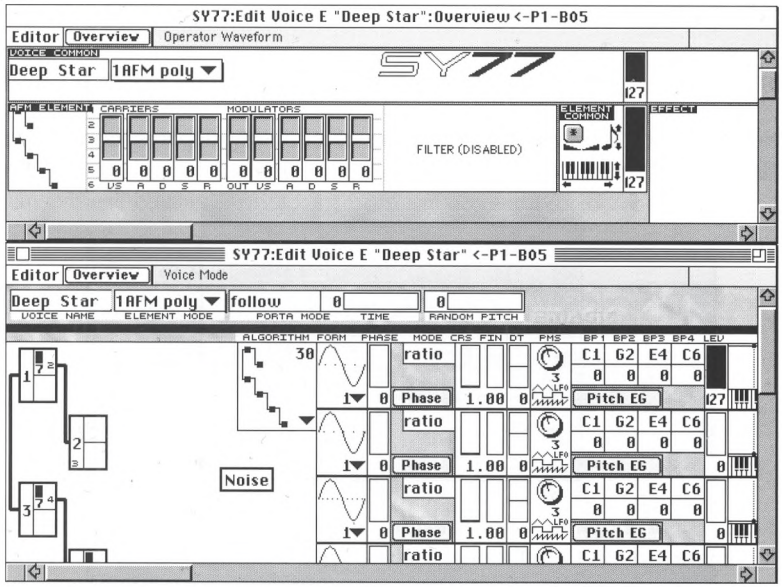


Certain flip-menus display the names of other entries (cross-reference). For example, flip-menus in a multi-setup will display the sounds of the devices.

If these entries are not recognized, only the storage location number is displayed. There will often be an edit switch next to it . If you click this, the corresponding editor will open. This simultaneously deactivates »Link Window« in the old and new windows. With some parameter values the edit switch will be deactivated (grey).

More than one editor window

You can open several editor windows for a single entry, one of which could show the Overview, another the filter envelope.



If several windows are open for a single entry, all the windows will show the parameters for that entry, but in different displays. Any alterations will always be shown in all windows where the relevant parameter is visible.

Please note that displaying the alterations in several windows always increases the time the program takes to react to any input.

The Edit Buffer

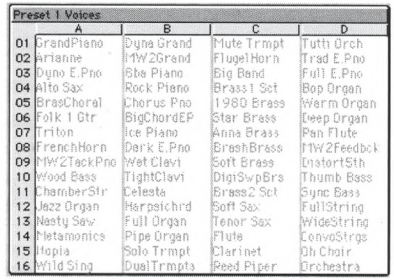
The SoundDiver editor must copy data into an Edit Buffer which corresponds to the one in the device itself. You can therefore see the available Edit Buffer in the Memory Manager. The entry which you are currently listening to or editing is marked with a small »E«. The E also determines the current mode (e.g. performance, patch, multi, single mode) of the device.

This small E – which is assigned to only one entry per device – tells you whether an entry is directly editable: it only appears when you click an entry. Certain storage locations are also directly editable, e.g. SY77 pan and micro tunings.

When you double-click an entry, SoundDiver searches – like SoundSurfer – for a suitable Edit Buffer and copies the sound into it. Of course, you can also choose the Edit Buffer used by SoundDiver by manually copying the entry into it or clicking it first.

ROM sounds

SoundDiver also receives the ROM entries of a device, displays them in the Memory Manager and allows you to copy them into the library.



ROM entries are shown in grey instead of black. These entries may be edited (providing there is an Edit Buffer of the same data type), although they cannot be stored back in their original location because this cannot be overwritten. The names are shown

even when SoundDiver does not know their actual data. If they are requested, however, the actual name is shown. This may differ from the grey name, if the manufacturer has stored different ROM sounds in a new version of the device.

Naturally you can use a ROM sound as the startpoint for one of your own creations, by double-clicking it and storing it in a free RAM place. For more details, see *Store* on page 79.

More than one Edit Buffer

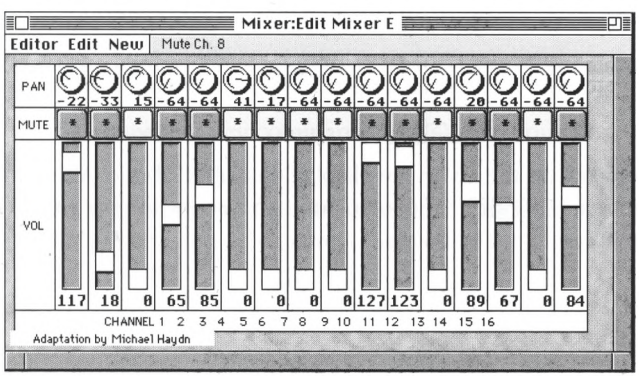
When you select an entry for editing, it is automatically copied into a free Edit Buffer. You can create several Edit Buffers for an entry by each time preselecting another Edit Buffer of the same type and double-clicking the entry to be edited. The number of Edit Buffers varies according to the device.

Remember that the MIDI Thru function for the Edit Buffer can be intelligently dealt with by modules (not by adaptations): if the Thru channel is set to a value between 1 and 16, whenever you change Edit Buffers, it is automatically set to this value so that you can listen to this buffer. This only works if the relevant multi or global setup data of the device is available, because this is where the required channel information stems from.

NOTE: this function is not available if you are running under M•ROS.

Remote-control and monitors

Adaptations representing remote-controls or monitors for MIDI devices or functions initialize the Editor window as soon as you open it (MIDI monitor, MIDI mixer). This is because these editors cannot start from known settings in the device.



The same applies to devices with no Edit Buffer or whose contents cannot be sent via MIDI dump, because here too SoundDiver has no start points for parameters and so it is best to begin with a neutral setting.

The Editor menu



The editor window contains a local menu with various options for working with the editor.

Link Window

When this option is activated, SoundDiver automatically changes the content of the relevant Editor window whenever you select another entry in the library or Memory Manager; it doesn't matter if this relates to a different device.

This way you can quickly switch between the different Edit Buffers of a device, by simply clicking them in the Memory Manager.

If AutoSurf is switched on, the entry is immediately displayed in the Editor window and is simultaneously sent to the device. This is particularly useful when you are searching through a mixed library.

NOTE: if you want to simultaneously display more than one editor, for example a JV-80 and an 01/W, deactivate this option before opening the next window.

The key command for this option is ⌘⌥L (which stands for »Link Window«).

Overview

Use this to switch off the Overview display described above. Alternatively you can use the key command ⌘⌥O. Of course you can also switch back from the Overview to the street map.

The Compare function

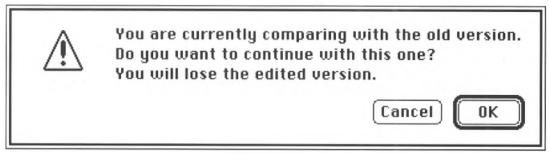
Often when you are editing a sound you can get to the stage where you can't tell if it's any better than the original.

SoundDiver therefore contains a function which is similar to the compare function on a synthesizer.

Choose »Compare« from the local Editor menu of the Editor window. The message »Original version« appears in the info line.

If the menu item has a tick by it, you hear the original version. By choosing »Compare« again you call up the edited version. To save time, it's better to use the key command ⌘⌥C. The info line then reads »Edited version«.

You can't edit the original version and an alert box appears if you try.



If you click »OK« here, you discard the edited version and continue working on the original. If you mistakenly try to edit the original version, press »Cancel« to quit the box.

Store

Choose this menu item when you want to save the result of your editing. The edited version overwrites the original one, which is thereby lost. This function corresponds to the »Write« or »Store« function of a synthesizer.

TIP: the memory location of the source entry is shown at the end of the editor window's title bar. If the source entry comes from a Library, the title bar reads »←Library«.

This option, or the equivalent key command ⌘⌥S, is the quickest way of updating your work.

If you just want to keep a copy of the edited version, it is better to use the »Snapshot« function (see below) because you can create several of these and you don't have to overwrite the original entry.

Store in...

If you want to save the edited version in a different location without closing the Editor window, choose »Store in...«. This function is the same as »Store«, except that a dialog box opens where you can enter a different location.

To do this, open the flip-menu in the dialog box by click-holding it and choose a different location.

If any entries are used by another entry (performance or multi) you will be told.



Snapshot

SoundDiver allows you to save the current stage of your editing whenever you like. When you create a snapshot the contents of the Edit Buffer which you are working on are added to the library called »Snapshots«. If this is not available SoundDiver will

- automatically create it
- or, if available on disk, load it.

The snapshot function is extremely useful in the following situations:

- you like the result of your editing so far and you want to keep it
- you have several variations of an edited sound and you want to find the best one
- you are using the randomize function and want to save as many versions as you can.

When you quit SoundDiver the snapshot library is automatically saved in the »Libraries« folder. If this is not available, you will find the snapshots in the same folder as SoundDiver.

The remaining functions in the editor menu relate to a selected parameter group and are described in *Clipboard functions in the editor* on page 82.

Other local menus

Some editors have other local menus, depending on the respective menu.

Edit/New

These menus appear with adaptations and are used to define and alter editor objects. There is no room here for a detailed description of the available functions, which are covered in the Programmers' manual for the Universal Module; you can obtain this from EMAGIC.

Of course there is nothing to stop you experimenting to your heart's content, but you'll have more success with the help of this programming manual. Here's a small tip: ⌥ plays a key roll...

Range

Some editors have a local »Range« menu with sub-functions for editing tuning or velocity tables. These are described below.

Full range

In the editor there are two parameters which set an upper and lower limit for the range which is to be edited. These could be notes or velocities.

The »Full range« function sets this range to include all values in the table.

Initialize

initializes the values within the range.

Mirror vertically

The values within the range are inverted: the new value = maximum – old value.

Mirror horizontally

The values within the range are pivoted around the middle of the range: the first value is exchanged with the last, the second with the penultimate, etc.

Interpolate

There is a linear interpolation between the first and last values in the range, producing a straight line.

This is useful for creating oriental $^1/_4$ or $^1/_8$ tone tunings: for example, set the range to two octaves (say C2 to C4). Set the value of C2 to C2 and the value of C4 to C3. Now choose »Interpolate« and you have quarter-tone tuning.

Extrapolate

The values within the range are continued below and above the range.

This means if you set the tuning for just one octave you can instantly transfer it to all other octaves.

Other menus

Other menu titles vary depending on the respective module. To find out what they mean, consult the module's Help file.

Clipboard functions in the editor

If the editor was supplied by a module (not by an adaptation of the Universal Module), you can select parameter groups within the editor and then copy or initialize them, as well as many other functions.

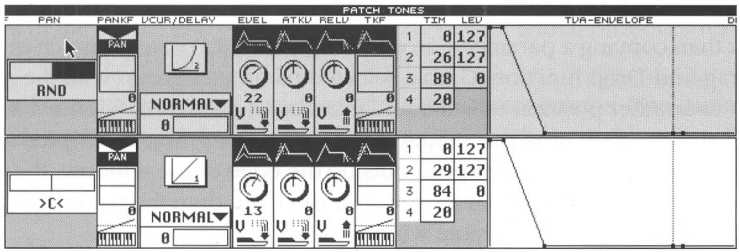
Selecting a parameter group

To select a parameter group, click the grey area within the parameter group or hold down ⌂ and click a parameter from this group. Use the latter method if you can't see the grey area within the parameter group.

The parameter groups in SoundDiver are organized into a hierarchy. For example, you can select an entire tone (element or voice) or a single envelope, an LFO or an effect or any collective sound components as a group.

NOTE: to select a parameter group from further up the hierarchy, click a point that belongs to this higher parameter group but not to a lower one. For example, in an oscillator or partial hierarchy, click between the individual function groups (envelopes, filters etc.).

NOTE: there is usually a list of the parameter groups in the Help file.



The selected group will be inverted, or on a colour screen (only Macintosh) it will be highlighted with the colour set in the »Colour« control panel. The above diagram shows a selected and below it a non-selected TVA envelope from the JV-80 synthesizer.

To deselect an individual parameter, just click it again.

Clipboard functions for selected groups

The following three operations apply to the clipboard. These functions (cut, copy and paste) are also universally applicable to different windows or entries. For example, you could copy the filter envelope from the JV-80 »Piano« sound onto the filter envelope of the JV-80 »Strings« sound.

Cutting a parameter group

The parameter group is copied into the clipboard and initialized.

If you just want to initialize the parameters *without* copying them into the clipboard, choose »Initialize« from the Editor menu.

Copying a parameter group

The values of the parameter group are copied into the clipboard and may then be pasted somewhere else.

Pasting a parameter group

The content of the clipboard is pasted to the selected parameter group, providing both are compatible. For example, you couldn't copy the filter envelope from an 01/W into the effects settings of the JV-80.

Drag-and-Drop function

Rather than copying a parameter group using copy and paste it's much quicker to use the Drag-and-Drop function. Grab a selected parameter group with the mouse and drag it to another position which could even be in a different window. When you release the mouse button the values of the parameter group are copied to the target position. If the mouse pointer goes outside the edge of the window, the window section automatically moves with it so you can even drag the parameter group to a target position outside the visible window section.

Deleting a parameter group

Choosing »Clear« from the Edit menu initializes the parameter group. This function is identical to the »Initialize« function in the Editor menu.

New window

This is especially useful: select a parameter group and then choose »New window« from the Editor menu; a new Editor window opens with the parameter group in the visible section. For example, you could »lift out« the amplitude envelope from the current editor and continue editing it in its own window. Of course you can then alter the size and sectional position of the window.

NOTE: the »Link Window« function is automatically deactivated in the old and new windows.

Initialize

This function initializes a group of parameters or the whole entry.

First you have to select the parameter group to be initialized. For more details refer to the section below *Clipboard functions in the editor* on page 82. If there is nothing selected in the editor, the whole entry is initialized, which means that SoundDiver resets all the parameters to their original values. Key command: ⌘I.

Random values

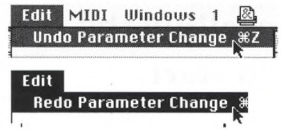
SoundDiver can create random values for selected parameter groups and so provide inspiration for new sounds or introduce unforeseen variations.

This means that every parameter in the parameter group is assigned a random value.

If nothing is selected – some editors allow you to select the entire entry – all parameters of the whole entry are set to random values, which produces results that are always original although not always usable.

Remember the hierarchical structure of the parameter groups. You can edit anything from the entire sound down to a single envelope with the random function.

Undo edit



Like anywhere else in SoundDiver, you can reverse the last edit made in the editor (Undo function).

Choose »Undo« from the Edit menu or press ⌘Z.

Of course, if you use the Undo function by accident you can reinstate the edit by pressing ⌘Z again.

Closing the editor window

If you close the editor window without saving your work first, a dialog box appears. Here you can choose whether to save the edit (and where) or whether to discard it.



The options are:

Don't Store the Editor window is closed without the changes being saved first. The Edit Buffer remains intact, and you can copy it manually in the Memory Manager to a desired location (remember to hold down ⌥, otherwise the Edit Buffer will be exchanged with the storage location; see the SoundSurfer manual page 56).

Cancel the Editor window is not closed

Store the Edit Buffer is stored in the given location, and the window is closed.

When an editor is closed that was originally opened from a library, the options

- *Entry in Library xxx* replaces the original entry

- *Append to Library xxx* appends the entry to the end of the designated library, while retaining the original entry.

NOTE: if, in the meantime, the original library has been closed, the first option doesn't show, and the second option offers appending to the current library.

NOTE: this latter option is also otherwise available (except when there's no library available).

Recalling the contents of the editor window the next time you start

If you quit SoundDiver while an Editor window is open, the next time you start SoundDiver it will be empty and display the message »No data« until you select an entry for editing, either by choosing Request, Initialize or Surf! or by copying an entry into the edit buffer.

If you want the contents of the Editor window to reappear the next time you start SoundDiver, activate »Save device entries when quitting« in the Preferences by setting the flip-menu to »all«.

Chapter 5

AutoLink

If you use both SoundSurfer/SoundDiver and EMAGIC's sequencer »LOGIC«, the Auto-Link feature allows you to link these two programs. If you don't (yet) use LOGIC ignore this chapter (or read it to see what you're missing!).

What is AutoLink?

AutoLink provides – as the name suggests – an internal link between SoundDiver and LOGIC. With both programs active, you can control your sound management while LOGIC is running.

The »Name Provider« transfers the names of the sounds being used to LOGIC, so that the latter's Instruments reflect the current sound names, and you can choose them there.

»MIDI Processing« allows LOGIC to record all your manipulation of SoundDiver editors via AutoLink. SoundDiver creates SysEx data when you edit parameters in the Editor window and sends it to LOGIC, where it is recorded directly onto the current track. This gives you automated dynamic sound editing.

AutoLink requires no external system expansion as SoundDiver and LOGIC control all the communication amongst themselves.

How do you start AutoLink?

Simple: first start LOGIC followed by SoundDiver. Keep to that sequence. SoundDiver must find an active LOGIC program to be able to activate AutoLink.

The Atari requires at least 2 (better 4) MB RAM and Mag!X, MagiC[1] or MultiTOS[2].

The Macintosh requires System 7.

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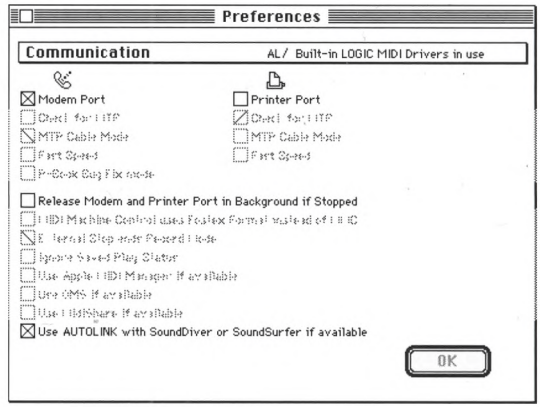
1 Available from Application Systems Heidelberg, Postfach 102646, D-69016 Heidelberg, Germany MagiC! is appreciably faster than MultiTOS (it even accelerates an Atari with a normal TOS!), is dead easy to install and is compatible with almost every normal Atari program. The price is DM 99.
TIP: MagiC! also allows more windows to be open at a time. To do this, alter the MAGX.INF file: change the number after »#_WND« to 64 to allow, say, 64 simultaneous windows.

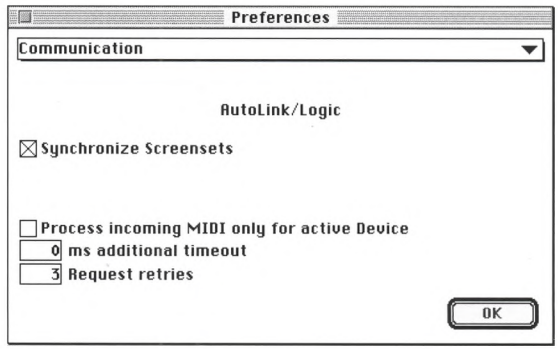
2 Available from Atari dealers and bundled with the Falcon.

Enable the AutoLink option in LOGIC's »Preferences«. Then start SoundDiver.



Activate the option »Use AutoLink with SoundDiver or SoundSurfer if available« in the LOGIC Preferences. You must disable »Release Modem and Printer Port in Background if Stopped« or LOGIC switches off all MIDI communication when you toggle to SoundDiver, and AutoLink ceases to function.

SoundDiver now uses LOGIC for the MIDI input and output. You can check this using the »Preferences« window which is no longer showing the two MIDI ports, but now looks like this:



When AutoLink is active, SoundDiver no longer uses the MIDI ports set in the Preferences, but communicates internally with LOGIC. All the data sent from and received by SoundDiver is first passed through LOGIC which is now acting as the MIDI interface. SoundDiver, then, only has access to the active ports and cables in LOGIC.

All the data that arrives at any of the computer's MIDI inputs is passed on to SoundDiver. Conversely, SoundDiver's MIDI output is included in that of LOGIC.

NOTE: if you quit LOGIC, SoundDiver automatically takes over normal control of its MIDI management.

The sound names in LOGIC Instruments

You normally have to manually enter into LOGIC the names of your sounds as LOGIC cannot guess what they are called in the MIDI devices.

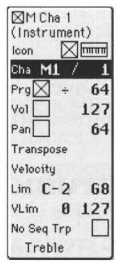
However, they are stored in SoundDiver's Memory Manager. SoundDiver knows which device is on which channel and what its sounds are, and is able to communicate this to LOGIC via AutoLink. LOGIC in turn inserts the appropriate sound names to the Instrument column and names fresh recordings accordingly. Instead of »Sequence recorded«, the sequence name might be »E-Piano 1 recorded«.

AutoLink allows you to choose the right sound for a track at the right time without having to look in the device or rummage around in SoundDiver.

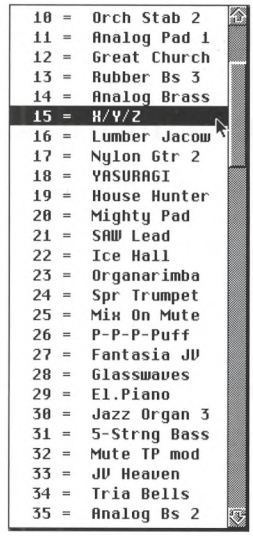
Choosing a sound in LOGIC

For LOGIC to know which sound you have given to an Instrument, you have to enter its corresponding Program Change command in the Instrument Parameter box.

To do this, activate the Program Change in the Instrument Parameter box with a checkbox.



If you now click-hold the Program number, a flip-menu opens with the current sound names:



This is where you select a sound. The one you choose automatically appears from now on in the Arrange window's Instrument column:



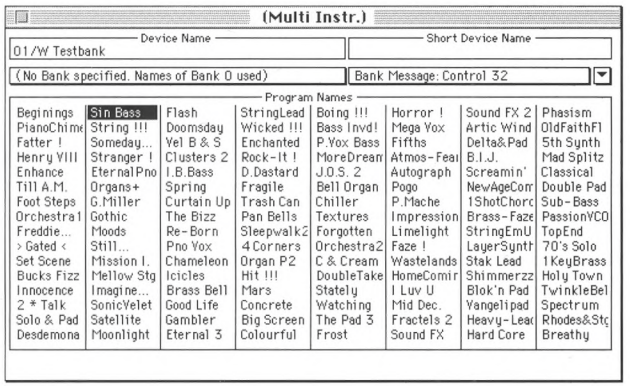
You see at a glance which sound is being controlled by which track.

Please bear in mind that these names are not saved as part of the Song. They are displayed for only as long as SoundDiver and LOGIC are actively AutoLinked.

NOTE: if you alter an entry in SoundDiver, delete a device or alter its MIDI configuration, this has an immediate effect on the display in LOGIC.

Sound names in a multi-instrument

You can use LOGIC's Environment to create a multi-instrument for a multi-timbral device. Its sound names are displayed together in the one window. Here, too, AutoLink is used to set the correct names.





Choose »Update using AutoLink« from the Multi-Instrument window's local flip-menu.

NOTE: with multi-instruments, their sound names *are* saved as part of a LOGIC Song, and are visible even if SoundDiver is deactivated. By the same taken, changes made in SoundDiver are not automatically reflected: you have to manually use »Update Using Autolink«.

If AutoLink won't work...

If the »Name Provider« doesn't appear to function as expected at the first go, don't panic. There is a whole raft of conditions that have to be fulfilled for LOGIC and SoundDiver to talk freely together. It may require a little patience until it's all up and running. Please check whether...

- The MIDI output, cable and device's MIDI channel are correct and identical in LOGIC's Environment and SoundDiver's Setup. If you are using »MTP Cable Mode«, you should not be using the »ALL« option – either in SoundDiver or in LOGIC.
- The correct Bank Select number is set (if the device supports this MIDI command).
- SoundDiver knows, if a multi-timbral device is involved, its send and receive channels. To do this SoundDiver normally needs the »Global Data« or »System Settings«, the current Multi/Combi program and any Program Change table the device may have. If LOGIC is showing blank or incorrect sound names, request this data again using SoundDiver. If this data is not available, the SoundDiver module assumes that the device can receive on the set MIDI Thru channel only. To be quite sure, request the entire Memory Manager contents into SoundDiver again.

- SoundDiver knows the device's current mode. Many devices have more than one mode (e.g. Program and Combination) in which incoming Program Changes are variously processed. To tell SoundDiver what the desired mode is (and to switch the device to that mode), you only need to click the appropriate Edit Buffer in the Memory Manager.
  Some devices recognize certain Bank Select or Program Change commands and change mode accordingly. If you transmit these, SoundDiver delivers the desired names without further action on your part.
- If several devices receive on the same channel, the program names of just *one* of these devices will be shown, the device that was first added to the Setup window. We therefore recommend that you separate the devices by MIDI channel unless there's a good reason for not doing so.

If none of this helps, it could be because the settings needed in the SoundDiver adaptation have not yet been completed. You can easily do this yourself.

- Open the Adaptation Editor from the Memory Manager using alt E or ⌥ E and open the desired bank's »Bank Driver«.
- In it, find the parameter called »Program Change recognition«.

  CHAN gives the MIDI channel,

  BANK MSB or *LSB* a Bank Select command if required,

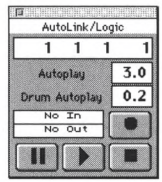
  FIXED a fixed Program Change that's sent first, if required,

  OFFSET the Program Change number used to select the first entry in the bank.

More details in the Universal Module Programmer's Manual, available from EMAGIC.

Remote-controlling LOGIC by SoundDiver

AutoLink disables SoundDiver's internal sequencer and lets LOGIC take over. The window is called »AutoLink/LOGIC«. The Transport functions in SoundDiver's Sequencer window remote-control LOGIC. This allows you, for instance, to prepare a Cycle mode sequence in LOGIC and then seek out the appropriate sound in SoundDiver for that particular track.



Even recording can be remote-controlled from SoundDiver.

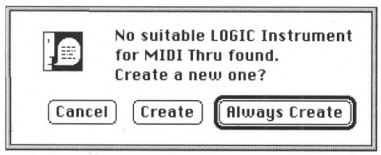
Please bear in mind that the recording track's Instrument is defined in LOGIC and so cannot be changed in SoundDiver. Even changing the MIDI Thru channel in SoundDiver doesn't affect LOGIC. We therefore recommend that you select the device in LOGIC using the Instrument, and then use SoundDiver to find a sound for this device.

MIDI Thru

LOGIC's MIDI Thru output and channel is automatically remote-controlled by SoundDiver.

To achieve MIDI Thru on a specific channel and MIDI Output, you require a corresponding Instrument in the LOGIC Song. SoundDiver and LOGIC do this automatically:

- SoundDiver looks for a suitable Instrument or Multi Instrument in the current LOGIC song.
- If there isn't one, the following dialog box appears:



Cancel an Instrument is not created. But then the MIDI Thru won't be correct.

Create an Instrument is created. Next time, this dialog will reappear.

Always Create an Instrument is created. In future, new Instruments will always be created without prior display of this dialog.

- If MIDI Thru is disabled, the »No Output« Instrument is automatically used (this one is always present).

NOTE: when sending SysEx data to the devices, no Instrument is used, unlike with MIDI Thru; instead, the outputs are directly addressed.

- When LOGIC is activated, MIDI Thru swaps to the selected track's Instrument, something familiar to many of you.
- When SoundDiver is activated, this again selects the Instrument required for MIDI Thru to the active device.
- New Instruments appear in the Environment's »Instruments« layer. More on this in the new LOGIC version's Readme file.

- The name of the new Instruments contains:
  - the device's name
  - its MIDI channel (or »All«)
  - the identification »(SoundDiver)« or »(SoundSurfer)«.

Recording parameter changes in LOGIC

NOTE: this function exists only in Sound*Diver*.

We have covered the transfer of sound names – AutoLink is also responsible for the real-time recording of parameter changes. What this means is that you are able to record all the parameter editing you do in the SoundDiver editor directly in LOGIC, allowing, say, filter sweeps over arpeggio runs, or real-time pulsewidth changes during a solo. Exactly how a device reacts to being manipulated via SysEx while it's playing depends on the device. More on this in the following two sections.

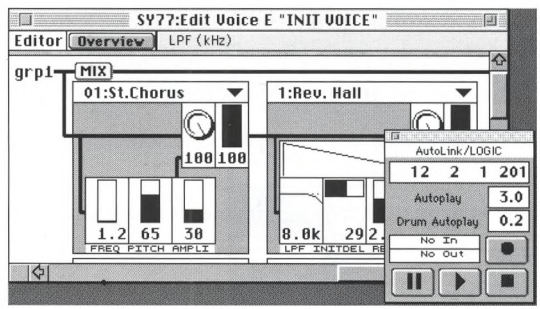
To record the SoundDiver editor in LOGIC:

- Enable »MIDI Options« in LOGIC's Song Settings to allow SysEx to be recorded.
- Locate the Song Position Line to the desired starting point and select the desired recording track. We also recommend a somewhat longer count-in (two bars) for LOGIC as you have to switch back to SoundDiver once the sequencer is recording. The Count-in is to be found in LOGIC's Song Settings under »Recording Options«:



- Switch over to SoundDiver and open the Sequencer window.

SoundDiver's Easy Page provides a bird's-eye view over the main parameters. Here's an example of how to lay out the various windows:



Beneath the SoundDiver SY77 editor you see SoundDiver's sequencer window.

To now record the parameter changes:

- start recording by clicking the Record button,
- manipulate the parameter(s),
- finish by clicking the Stop button.

All the LOGIC functions such as Cycle-Record and Autodrop are freely available.

NOTE: the definition of SysEx sliders in LOGIC by sending parameter changes from SoundDiver is not yet possible.

What to look out for with real-time SysEx editing

SysEx parameter changes are extremely data-intensive. SoundDiver and LOGIC have special prioritization routines that ensure that the timing of notes and other MIDI events is not affected by even complex SysEx editing. Despite this, problems can arise that are almost without exception down to the device:

- The reaction time of many devices slows down when they receive notes and SysEx at the same time. If you suspect this, try allocating the offending parameter to a MIDI Controller (e.g. Modulation). MIDI Controllers are much better processed by MIDI devices and don't, as a rule, affect the timing. This is because SysEx data has a subsidiary timing priority and is treated by many devices as being of secondary importance, unlike MIDI Controllers where the opposite is true. In any case you must of course check to see whether the desired function in your device can be reached via MIDI Controller.
- Some devices deal with parameter changes only when notes are being played. In other words: filter sweeps are not possible when notes are being held, only when they are played. If this is the case, try the MIDI Controller trick as described above.

Recording Dumps in LOGIC

If you prefer to save the actual sound data in a Song rather than rely on Program Changes, AutoLink makes it easy to record Dumps from SoundDiver to LOGIC.

The procedure is the same as described above in *Recording parameter changes in LOGIC* on page 94. However, it's also possible with SoundSurfer.

Instead of editing in editor windows, select the entry in its desired location and transmit it. AutoSurf allows this to be done automatically, though you can also preselect the entry or entries and transmit them at the desired Song location using the »Transmit«

function. Bear in mind that the sound immediately becomes active with AutoSurf; when sending memory locations, on the other hand, these have to be chosen in the Song through the use of Program Changes.

There's more information on MIDItasking in SoundDiver in the SoundSurfer manual on pages 42f.

Synchronizing screensets

If you recall a particular screenset in SoundDiver (see page 67 in the SoundSurfer manual), the corresponding one will open in LOGIC, and *vice versa*. Both programs act as one, allowing you to truly integrate your work.

Bear in mind, however, that the window hierarchy (i.e. which one is below and which above) is managed separately in both programs. By the same token, copying a screenset is possible only within its host program.

If all this automation starts to get to you, you can disable it in SoundDiver's Preferences (»Communication« page).

Chapter 6
Troubleshooting

This chapter gives the answers to the most frequent queries that arise through working with SoundDiver.

General

How do I get hold of the latest versions of SoundSurfer or SoundDiver?

- Please contact EMAGIC.
- If you have a modem, go fish in the **SoundDiverBox**, the Service Mailbox for SoundSurfer and SoundDiver users. The number is +49-8121-49912. It supports V.32*bis* (14.400 bps) and TeleFinder. Use of it is free; you only pay for your call charges. For more information see the relevant information on the program disk.

How do I get hold of new adaptations?

You can get these and new libraries in the **SoundDiverBox** as well.

I've created an adaptation. How can I make it available to other SoundDiver users?

There's an Adaptations Pool in the **SoundDiverBox**.

Scanning

Scanning doesn't find some devices.

- Is the device on and correctly connected in both directions?
- Is the device SysEx-ready?
- Check that compatible devices are set to different IDs. This also applies to devices that are quite different, but support the Universal Device Inquiry.
- Patchbays that are not supported by a special module cannot be fully scanned by SoundDiver. Only the current setting of the patchbay is scanned. Program your patchbay such that as many outputs as possible (except those to the computer) are patched to the input from the computer, and that as many inputs as possible (except those from the computer) are patched to the input to the computer. Now do a Scan and insert, for the found device, the current Program number of the

patchbay in the »Patchbay Prg« parameter, together with the other relevant parameters (see SoundSurfer manual page 104).

- You may be using a patchbay or Thru box that is delaying the MIDI data. If this is the case, increase the value of the »Additional Timeout« parameter in the Preferences.

When I scan a patchbay, I get the message »No patchbay connection found«.

Follow the advice in the Help file (key words »Installation« and »Scan«) on which of the patchbay's ports the computer should be connected, and how the patchbay should be configured.

Some patchbays (e.g. the MIDITEMP PMM-44/88) don't react to SysEx on the »Control Input« but on every input for which a connection to an output has been defined. However, as soon as SoundDiver starts scanning and sends a SysEx message that reprograms the patchbay, the connection could be broken and the patchbay remains mute. If the »Control Inputs« have been incorrectly set, you may have a situation where the patchbay begins to react, but SoundDiver can no longer determine to which inputs and outputs the computer is connected.

MIDI communication

I get the message »The Modem/Printer Port is used by another program«

Check whether another program is using the port in question. It might be a modem terminal program, or fax software. The modem or printer ports must be free before SoundDiver is started.

TIP: if you use FaxSTF you can very quickly free-up the port using the program »Fax State« that comes with the program.

If AppleTalk is active and is running over LocalTalk (this will always be the case so long as you don't have EtherNet), the printer port is reserved. You may find it wise to disable AppleTalk before starting SoundDiver.

I get the message »MIDI data could not be sent...«

SoundDiver could not find a MIDI interface on this port. Follow the advice in *Modem Port/Printer Port* on page 35.

I sometimes get transmission or checksum errors.

- AppleTalk must be disabled. AppleTalk interferes with MIDI, and this becomes apparent with SysEx communications.
- If the device sometimes fails to react to requests, increase the »Timeout« parameter

- If the device sometimes fails to receive a Dump, increase the »Send Pause« parameter.
- With the Macintosh, it is just conceivable that unmounted SCSI drives (e.g. CD-ROM, removable hard disk or MO) might interfere with MIDI as the drive is continually looking to see whether a media is present. Insert the media. Or switch off the drive and restart the Macintosh.

AutoLink

When started, LOGIC announces »The Modem/Printer Port is used by another Program«.

You must always start LOGIC first, then SoundDiver.

A device's sound names are shown blank or incorrect.

See the advice given in *If AutoLink won't work...* on page 91.

When I record SysEx from SoundDiver into LOGIC, the device doesn't recognize it.

SoundDiver is normally able to tell LOGIC exactly which port and cable are to be used to send a MIDI message. This is not possible during recording. Instead, during Record mode, all data is sent via the Instrument of the current track. It therefore has to be set correctly.

Editor

What does a particular parameter do, and how do I use it?

Click the parameter and press help to make a Help window appear giving information on that parameter.

And what does »No help available« mean in the Help window?

It means that there's no Help file yet for this adaptation. Please contact EMAGIC or the adaptation's author.

I cannot grab an envelope point (it lies outside the frame).

In this situation a little arrow appears that points to it. Click the arrow.

I cannot see an envelope's point.

That can happen if the time between two points is zero. With some devices, one of the envelope's lines disappears when both points share the same level.

When I use the knobs or sliders I can't get a particular value because the mouse movement is too coarse.

Press ctrl while moving the mouse. Or click the parameter so it flashes and enter the value via the numeric keypad and/or + and -.

Opening a flip-menu takes too long.

Press ctrl when clicking and move the mouse up or down.

The flip-menu is so long, it takes ages to scroll through it.

Hold ⇧ while scrolling.

Or: while the flip-menu is open, press ⇧ and release the mouse. You can now also release ⇧ and manipulate the scroll bar, box and arrows with the mouse. Select a value by clicking it.

I cannot enter any numbers.

Is NumLock on (see *Number-input mode* on page 73 in Chapter 4 *Editing with SoundDiver*)? Disable it, then enter the numbers.

With some parameters I get incorrect or too few values; some parameters aren't even visible.

- Has the correct model been installed/scanned?
- Does the module know that particular model (see above)?

I cannot hear what I'm editing.

- Has the device entered a different mode?
- It could be that the entry must first be activated in a different editor (e.g. for Pans, Tuning Tables, Wavetables, Waves, etc.). To do this, some modules offer a special »Monitoring« mode.
- If the device is connected to a patchbay, and the patchbay is set to a Default Prg, this program must provide connections from the computer to the device.
- Some devices crash if they receive rapid successions of parameter changes. The modules and adaptations, however, take this into account. You may find it useful to increase the »Send Pause« value.
- The MIDI Thru channel may not be correct. In modules, it should not be set to »original« (blank) as a module automatically takes the Thru channel into account only if the value is between 1 and 16. What's more, this may only be possible if the Edit Buffer for Multis or Combis and/or the device's Global data or System Settings are known. More details on this in the Help file.

»Paste« is not possible

The Types of the source and target parameter groups do not agree. They sometimes look similar, but can contain small differences.

The selected parameter group is hardly recognizable.

Set the Macintosh's »Colour« Control Panel to »B&W«.

When changing Edit Buffers I get a message about pressing a key.

Later versions of some devices have new SysEx implementations that can be processed by the module only if the module knows that the device is of this later version. This device must be installed through scanning (not manually).

I cannot find a particular parameter.

Some parameters appear only if SoundDiver knows for sure that the device also knows them. SoundDiver can tell this by looking at the device's software version number. For SoundDiver to know the version number, the device must be installed via »Scan« (not manually). Look in the Device Parameter box to see if that particular version is supported.

When I edit a single parameter, all the Easy Page parameters are set to 0.

This is a requirement of the program for technical reasons, and is quite normal.

Appendix

Summary of the New Menus

Editor menu

Link Window couples the window contents to the selection in the Memory Manager or library.

Overview switches to the Overview display.

Compare enables the function that compares the current state of the editing with the original.

Store saves the edited entry and overwrites the original.

Store in... saves the edited entry into a definable location.

Snapshot appends the contents of the Edit Buffer to the Snapshot library.

New window opens a new window containing the selected parameter group.

Initialize initializes the selected parameter group, or the entire entry if nothing is selected.

Randomize sets random values in the selected parameter group, or the entire entry if nothing is selected.

Range menu

This menu is to be found in some Editors.

Full range sets a range in such a way that it includes all the values in the table.

Initialize initializes the values in the range.

Mirror vertically inverts the values within the range.

Mirror horizontally the values within the range are inverted using the middle of the range as a pivot.

Interpolate interpolates between the first and last values within the range.

Extrapolate the values set within the range are extrapolated beyond the range in both directions.

Key Commands

Key command symbols

Table 2 Key command symbols

Symbol	*Macintosh*	*Atari*
ctrl	–	Control
alt	–	Alternate
⌘	Command	–
⌥	Option	–
⇧	Shift	
↑ ↓ ← →	Cursor keys	
⇞, ⇟	Page up, down	–
↖, ↘	Top left, bottom right corner	–
↵	Return (alphanumeric keypad)	
⌅	Enter (calculator keypad)	
␣	Spacebar	
esc	Escape	
⌫	Backspace/delete backwards	
⌦	Delete/delete forwards	
⇥	Tabulator	
help	Help	Help
undo	–	Undo
clrh	–	ClrHome
⌧	NumLock	–
0 … 9, - + * etc.	Numeric keypad keys	
0′ … 9′, A … Z, , . ; ' / - etc.	Alphanumeric keypad keys	

NOTE: ctrl ⇧ on the Atari corresponds to ⌘ ⌥ on the Macintosh. This corresponds to the Macintosh convention where ⌥, not ⇧ is used to modify another key. However, Atari does not recommend the use of ctrl alt so as to avoid combinations such as ctrl alt del that would reset the computer.

The »NumLock function« (⌧ on the Macintosh, on the Atari SoundDiver uses / in the numeric keypad) switches the mode of the numeric keypad. If it's *on*, you can enter values via the numeric keypad. If it's *off*, you can use these keys for choosing the screen sets and for controlling the sequencer.

SoundDiver's key commands

All windows

Atari	*Macintosh*	*Operation*
esc	esc, ⌘ .	Abort MIDI communication
help	help, ⌘ ⇧ / ?	Open relevant On-line Help window for context-sensitive assistance
⇧ help	⌥ help	Open Help window (Floating)
ctrl help	⌘ help	Send »All Notes Off«
ctrl ⇧ help	⌘ ⇧ help	Reset Controllers
⌦	⌫	Clear
⇧ ←, ⇧ →	⇧ ←, ⇧ →	Scroll one page left, right
⇧ ↑ and ⇧ ↓	⇧ ↑, ↕ and ⇧ ↓, ↕	Scroll one page up, down
clrh	↖	Scroll to top left corner
⇧ clrh	↘	Scroll to bottom right corner
ctrl Z, undo	⌘ Z	Undo
ctrl 1 !	⌘ 1 !	Open new library window
ctrl 2 @	⌘ 2 @	Open Setup window
ctrl 3 #	⌘ 3 #	Open Memory Manager
ctrl 7 &	⌘ 7 &	Open sequencer
ctrl 8 *	⌘ 8 *	Open MIDI In window
ctrl ⇧ 8 *	⌘ ⇧ 8 *	Open MIDI In window (Floating)
ctrl 9 (	⌘ 9 (	Open MIDI Out window
ctrl ⇧ 8 *	⌘ ⇧ 8 *	Open MIDI Out window (Floating)

(cont.) **All windows**

Atari	*Macintosh*	*Operation*
ctrl A	⌘ A	Select all
ctrl ⇧ A	⌘ ⌥ A	Toggle selection
ctrl C	⌘ C	Copy
ctrl F	⌘ F	Find...
ctrl G	⌘ G	Find again
ctrl M	⌘ M	Save as...
ctrl N	⌘ N	New
ctrl O	⌘ O	Open
ctrl P	⌘ P	Print
ctrl ⇧ P	⌘ ⌥ P	AutoPlay on/off
ctrl Q	⌘ Q	Quit SoundSurfer, saving preferences
ctrl ⇧ Q	⌘ ⌥ Q	Quit SoundSurfer, not saving preferences
ctrl R	⌘ R	Request
ctrl S	⌘ S	Save
ctrl ⇧ S	⌘ ⌥ S	AutoSurf on/off
ctrl T	⌘ T	Transmit
ctrl ⇧ T	⌘ ⌥ T	MIDI Thru on/off
ctrl U	⌘ U	Close window
ctrl V	⌘ V	Paste
ctrl W	⌘ W	Close library
ctrl ⇧ W	⌘ ⌥ W	Tile windows
ctrl X	⌘ X	Cut
(	⌧	NumLock on/off
F1 ... F9	1′ ... 9′	Recall screen sets 1...9
ctrl F1 ... ctrl F9	ctrl 1′ ... ctrl 9′	(twice) Recall screen sets 11...99
⇧ F1 ... ⇧ F9	⇧ 1′ ... ⇧ 9′	Store current screen configuration as screen set 1...9
⇧ ctrl F1 ... ⇧ ctrl F9	⇧ ctrl 1′ ... ⇧ ctrl 9′	(twice) Store current window configuration as screen set 11...99
1 ... 9	1 ... 9	Recall screen set 1...9 (NumLock *on*)
ctrl 1 ... ctrl 9	ctrl 1 ... ctrl 9	(twice) Recall screen set 11...99 (NumLock *on*)

(cont.) **All windows**

Atari	*Macintosh*	*Operation*
⇧1...⇧9	⇧1...⇧9	Store current window configuration as screen set 1...9 (NumLock *on*)
⇧ctrl1... ⇧ctrl9	⇧ctrl1... ⇧ctrl9	(twice) Store current window configuration as screen set 11...99 (NumLock *on*)

Library, Setup, Install, Memory Manager

Atari	*Macintosh*	*Operation*
A...Z	A...Z	Select object that begins with the typed character
⇥	⇥	Select next object in the alphabetical order
⇧⇥	⇧⇥	Select previous object in the alphabetical order

Library window

Atari	*Macintosh*	*Operation*
ctrlD	⌘D	Surf! (send the entry to the edit buffer, with AutoPlay if enabled)
ctrlE	⌘E	Dive! (SoundDiver only)
ctrl⇧T, ins	⌘⌥T	Insert title
altH	⌥H	Parameter en/disable
↑	↑	Select previous entry
↓	↓	Select next entry
⇧↑ and ⇧↓	⇧↑, ⇞ and ⇧↓, ⇟	As above, for whole page
clrh	↖	Select first entry
⇧clrh	↘	Select last entry

Setup window

Atari	*Macintosh*	*Operation*
ctrlD	⌘D	Scan...
ctrl⇧D	⌘⌥D	Opens Add New Devices window
altH	⌥H	Parameters on/off

(cont.) **Setup window**

Atari	*Macintosh*	*Operation*
↵	↵	Open Memory Manager for selected devices
↑↓←→	↑↓←→	Select device in given direction

Install

Atari	*Macintosh*	*Operation*
↵	↵	Scan selected device
ctrl D	⌘ D	Manually add selected devices
↑/↓	↑/↓	Cursor up/down
help	help, ⌘ ⇧ /	Open Help window for installing selected device
esc	esc	Close window

Memory Manager window

Atari	*Macintosh*	*Operation*
ctrl L	⌘ L	Load...
ctrl I	⌘ I	Initialize
ctrl ⇧ N	⌘ ⌥ N	Rename
↵	↵	Rename (SoundSurfer only)
ctrl D	⌘ D	Surf!
ctrl E, ↵	⌘ E, ↵	Dive! (SoundDiver only)
alt H	⌥ H	Parameters on/off
↑↓←→	↑↓←→	Select next object in given direction

Sequencer window (all these keys are in the calculator keypad; if NumLock is *off*, ⇧ isn't needed)

Atari	*Macintosh*	*Operation*
⇧ 0	⇧ 0	Play
⇧ .	⇧ .	Pause
⇧ -	⇧ -	Stop
⇧ *	⇧ *	Record

Find window

Atari	*Macintosh*	*Operation*
esc	esc	Close window
↵	↵	Start Find

Help window

Atari	*Macintosh*	*Operation*
←	←	Previous page
→	→	Next page
undo	⌘Z, ⌫	Go back to last-selected page
↑↓	↑↓	One line up/down
⇧↑/⇧↓	↕/↕	One page up/down
esc	esc	Index display on/off
help	help, ⌘⇧/?	Help about the Help system

Editor

Atari	*Macintosh*	*Operation*
ctrl⇧L	⌘⌥L	Link window
ctrl⇧O	⌘⌥O	Overview
ctrl⇧C	⌘⌥C	Compare
ctrl⇧S	⌘⌥S	Store
ctrl⇧M	⌘⌥M	Store in...
ctrl⇧N	⌘⌥N	Snapshot
ctrlE	⌘E	New window
ctrli	⌘I	Initialize
ctrlD	⌘D	Randomize
↑↓←→	↑↓←→	Select next parameter
0...9	–	Input value
0...9	0...9	Input value (NumLock *on*)
+, - +, -	+, - +, -	Value +1/–1
⇧+, ⇧- ⇧+, ⇧-	⇧+, ⇧- ⇧+, ⇧-	Value +10/–10

Glossary

This glossary expands on that of SoundSurfer's manual in *Appendix D* by providing terms specific to SoundDiver, and new terms.

3-D background A three-dimensional-looking background pattern to SoundDiver's displays.

AutoLink The internal connection between → LOGIC and SoundDiver. AutoLink is used in the direct exchange of sound names and MIDI data between the two programs.

Authorization The installation of SoundDiver's copy-protection onto hard disk; also, the name for the copy-protection file itself. SoundDiver comes with two Authorizations, allowing two systems to run simultaneously.

Compare A comparison function: by swapping between the original and edited versions you are able to check the progress of your editing.

Cursor The blinking border around a parameter.

Detailed display A viewing mode in the → Editor in which parameters are shown in detail. → Overview.

Easy Page Forms part of the → Overview in the → Editor. The ~ contains a selection of the main sound parameters that provide »instant gratification« in sound editing.

Editor A SoundDiver window showing the sound and program parameters of a device in graphic and alphanumeric detail, where entries can be edited.

Entry Dependency Management Used to be called »Item Link Management«; a SoundDiver function that controls the inter-dependency or cross-referencing of entries. The ~ modifies e.g. a Multi-Program when its sounds are moved to different locations within the Memory Managers.

Initializing The process whereby an entry's parameters are set to neutral or zero values. Many MIDI devices include an initialization function.

Install window The new ~ is where SoundDiver manages the devices that are required for the Setup. This is where SoundDiver modules and adaptations are installed onto hard disk and models of device added or removed.

Listen to MIDI A function in the → Editor, while pressing ⌂ incoming MIDI events directly alter the value of the current parameter.

Location A new library parameter that contains an entry's memory location address. This is one of the factors taken into account when an entry is sent. This parameter

ensures that the entries' locations within the device are safe-guarded, even when you are editing the library.

LOGIC EMAGIC's flagship sequencer and notation program, able to communicate via → AutoLink with SoundDiver.

Overview A viewing mode in the → Editor: it gives a bird's-eye view of the groupings of editing parameters, facilitating your navigation around the Editor. Additionally, clicking a parameter group acts as an entry to that group's →detailed display.

Name Provider A component of → AutoLink. The ~ provides the names of entries to an Instrument in →LOGIC.

Snapshot A temporary buffer containing the entry currently being worked on in the Editor. The ~ is copied into a library of the same name. The ~ function allows many interim stages of your editing to be stored for later retrieval.

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