

A large, glowing red starburst graphic is positioned in the upper right quadrant of the page, partially overlapping the main title text. The starburst has multiple points and a soft, ethereal glow.

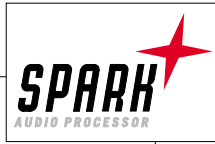
# SPARK

AUDIO PROCESSOR **LE**

VERSION 2.6

USER MANUAL





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# INTRODUCTION - WELCOME

Welcome to **SPARK LE – TC WORKS'** entry-level application for digital audio editing.

SPARK LE's new design concept, high-end processing tools, and "one window approach" turn formerly complex edits into a creative experience. Now you can do things you thought weren't possible, at a speed you didn't dare dream of!

If you'd like even more features and power, check out SPARK LE's big brother SPARK! As a registered user of SPARK LE, you are entitled to a special upgrade offer. Contact your local TC WORKS distributor for details.

If you would like to get in touch with us, contact our local distribution partner or write to:

**TC WORKS Soft- & Hardware GmbH**  
**Customer Support**  
**Flughafenstrasse 52B**  
**22335 Hamburg**  
**Germany**

www.tcworks.de  
e-mail: [info@tcworks.de](mailto:info@tcworks.de)

For the US:

**TC Electronic Inc.**  
**TC Works Customer Support**  
**742-A Hampshire Rd.**  
**Westlake Village, CA 91361**

www.tcworks.de  
e-mail: [us@tcworks.de](mailto:us@tcworks.de)

# GETTING STARTED



## SYSTEM REQUIREMENTS

- Power Macintosh with G3 processor or higher
- MacOS 9.0 or higher, MacOS X (10.1 or higher)
- 128 MB
- ASIO compatible sound card for optimal audio capabilities recommended (ASIO 2.0 supported)
- CD Recorder and Roxio Toast, Jam or Apple iTunes software for CD recording



## INSTALLATION

Run the SPARK LE installer and follow the instructions on screen:

1 First, you'll see this Welcome Screen. Please click on "Continue".



2 On the Second screen, you'll find the license agreement. Before proceeding further, make sure you read, understand and agree to the terms. Then click "Accept".



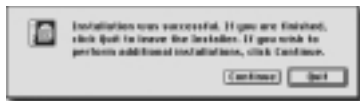
3 This screen presents you with the ReadMe file – read it, save it if you like, then click on “Continue”.



4 Now you're ready for the actual installation. Select “Easy Install” and pick a location for SPARK LE by clicking on the location pop-up dialog at the bottom of the screen. If you don't set anything, SPARK LE will be installed to the root directory of your internal hard disk into a folder also named “SPARK LE”.



5 Now the installation is performed, and you'll be presented with the final dialog, saying that installation was successful. Click on “Quit” and you're done!



6 Now you're ready to start using SPARK LE! The Folder on your hard disk should contain the items you see pictured here:



**Don't forget to send in your registration card, or to register online!**

## OPEN ARCHITECTURE: VST, ASIO

SPARK LE supports VST Plug-Ins and the Steinberg ASIO interfaces for maximum compatibility.

Most current digital audio cards are supplied with **ASIO drivers** and all the big names in Plug-Ins make VST Plug-Ins! Both these formats are quickly becoming standards on the Macintosh, and are already supported by the likes of Emagic, Opcode, Cakewalk – and of course Steinberg – on the host application side and by Sonorus, KORG, RME, MOTU, Lexicon and many others on the card side.

## THE USER INTERFACE CONCEPT

SPARK LE integrates the whole editing, processing and mastering process into only two windows: The Browser View and the Master View.

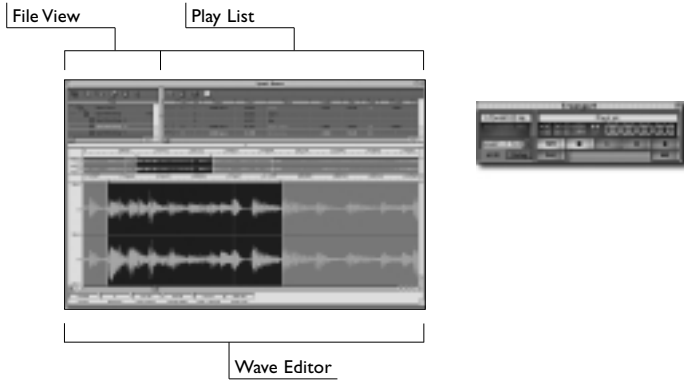
In the **Browser View**, you'll find the project file database, the audio editor and the Play List – all at one glance and with a fully customizable view. Your window setting is saved with the Project file.

The **Master View** includes all the realtime processing and mixing – with the unique FXmachine that enables you to route up to 4 Plug-Ins into the signal path, the high-resolution master faders and export features to apply the processing to your files permanently.

Thanks to this unique approach, you won't be surfing the menus desperately looking for key-features. They are all right where you need them!

# BROWSER VIEW

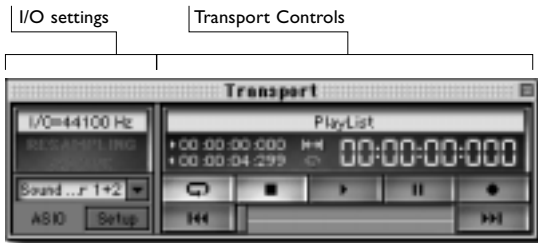
This chapter describes the BrowserView and the Transport Window.



Before we go into the BrowserView details, let's have a look at the Transport Window:

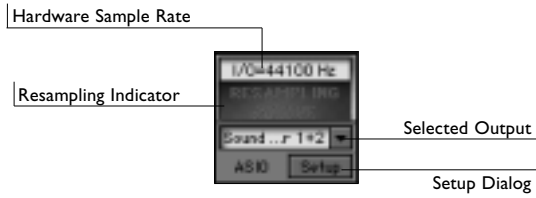
## TRANSPORT WINDOW

The Transport Window provides all the transport controls you need to navigate through your audio file or Play List, as well as some basic audio output information.



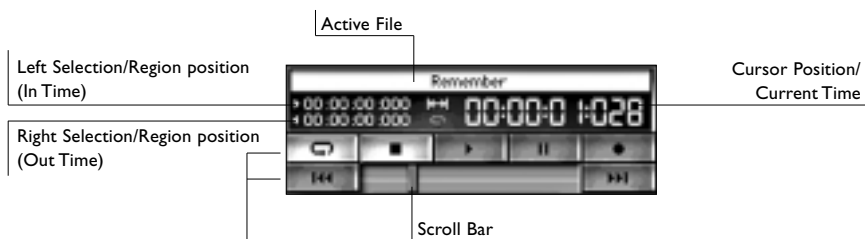
## INPUT/OUTPUT SETTINGS

On the left of the Transport Window, you will find your current output setting and the currently active I/O sampling rate. If SPARK LE's real-time resampling algorithm is active, this will also be indicated here.










- HARDWARE SAMPLING RATE** – Indicates the sample rate settings of your audio hardware.
- RESAMPLING INDICATOR** – Lit if waveform’s sampling rate and actual output sampling rate are different, so SPARK LE’s software resampling algorithm is active.
- SELECTED OUTPUT** – Allows you to change the set of output channels used, if multiple are available.
- SETUP DIALOG** – Click on the “Setup” button to change your audio device settings. If the audio device doesn’t offer a setup page, this button will be disabled. For details on how to setup your audio device, refer to the documentation of your audio card.

## TRANSPORT CONTROLS



### Transport Controls (from left to right)

-  Cycle – Switches automatic repetition of the current selection on/off. Alternatively, press </>.
-  Stop – One click stops Playback. Pressing Play afterwards will play from the current cursor position. Double click moves the cursor back to the start of the Region/File.
-  Play – Starts Playback. Pressing the <SPACE BAR> toggles between Stop and Play.
-  Pause – Stops Playback, but Playback will continue from current position. To enter the Pause mode from the keyboard, press <ENTER>.
-  Record – Opens the Recording Dialog. Check the I/O settings in your **SPARKle** Preferences, if the Recording Dialog doesn't open - the selected I/O device might not offer a recording possibility. Key command for recording is <\*>.
-   Fast Rewind/Fast Forward – Jump to previous/next marker. In Play List mode this is used for track up/down navigation (<COMMAND + CURSOR UP/DOWN>)

### SCRUBBING VIA KEYBOARD COMMANDS

It is possible to use the scrub function via keyboard shortcuts. Enter this mode by pressing PAUSE in the transport bar (or pressing the <ENTER> key on the numerical keypad).

Now, the scrubbing speed can be set by pressing the <CURSOR LEFT / RIGHT> keys.

This will change the speed in 5% steps. For fine trimming the speed, press

<SHIFT + CURSOR LEFT / RIGHT>. This allows to change the speed in 1% steps.

<OPTION + CURSOR LEFT / RIGHT> will change the scrubbing direction, but keep the scrubbing speed.

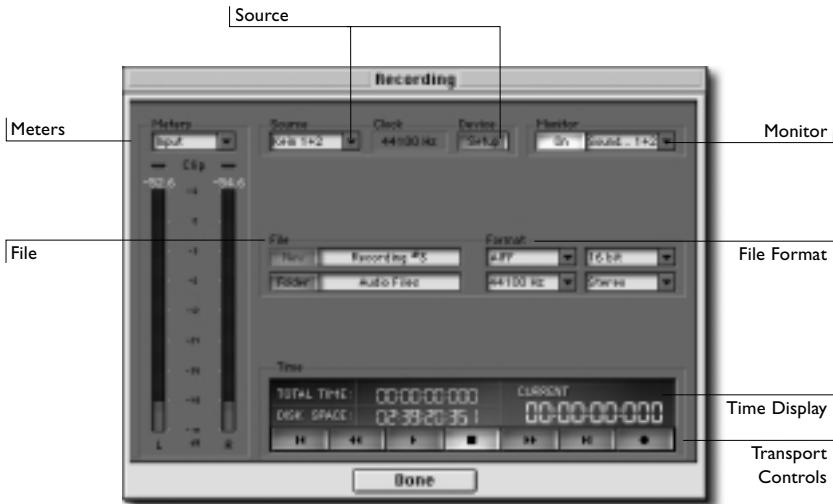
To stop the scrubbing immediately, press the <SPACE BAR>. To leave the <PAUSE> mode, press the <ENTER> key again.

## RECORDING DIALOG

SPARK LE offers flexible recording facilities. The recording dialog allows you to keep adding takes into the same file and to set your audio Inputs/Outputs right there.

Click on the “Record” button in the Transport Window and the Recording Dialog will open:

*NOTE: The Recording dialog will not open if the selected audio device can not accept audio inputs. For example, “SoundManager” does not feature recording capabilities. Instead, select the “ASIO SoundManager” or your optional audio card’s driver in the “I/O” page of the Preferences dialog.*



### METERS

The Recording Meters enable you to display the signal level input. When you click on the Meters or the Clip Indication, the system displays a pop-up menu with peak-hold options.

### SOURCE

You can select your recording input device in the Source section. The Clock indicates the input sampling rate. Click the “Setup” button to display options for your audio device. This settings dialog (“I/O; Setup Audio Device”) can also be accessed from the preferences dialog and the transport bar.

### MONITOR

The Monitor enables you to preview the audio before actually recording it. Turn the Monitor on and select the desired audio source in the “Source” pop-up. By pressing <M> on the keyboard, you can switch monitoring on or off.

### FILE

Here you set the file properties such as your recording’s filename and destination. Click “New” to create a new file. A default name with an incrementing number will automatically be assigned to the file if you don’t type anything.

## FILE FORMAT: AIFF, SD2 AND WAV

Select the File Format you prefer. In addition to the File type, you can adjust the Sampling frequency, bit depth, and mono/stereo settings. There is no “quality difference” between the different available file formats. The most common on the Mac is “AIFF”.

If you select a sampling rate that is different from the sampling rate of your audio device, the resampling function will be activated.

For high quality recordings it is not recommended to resample on the fly. Perform the resampling off-line after recording instead.

*NOTE: Explanations of the different file formats can be found on page 26 in this manual.*

## TIME DISPLAY

The Time Display supplies you with three different time read outs:

**Total Time** – Indicates the total length of your recording

**Disk Space** – Indicates the available disk space for recording in minutes. If you change the file settings, the available disk space will be recalculated according to the file attributes (recording with higher bit depths and sample rates require more room on your hard disk).

**Current** – This displays the current time position in your recording. This is helpful, when you play back an already recorded file for verification purposes.

## TRANSPORT CONTROLS

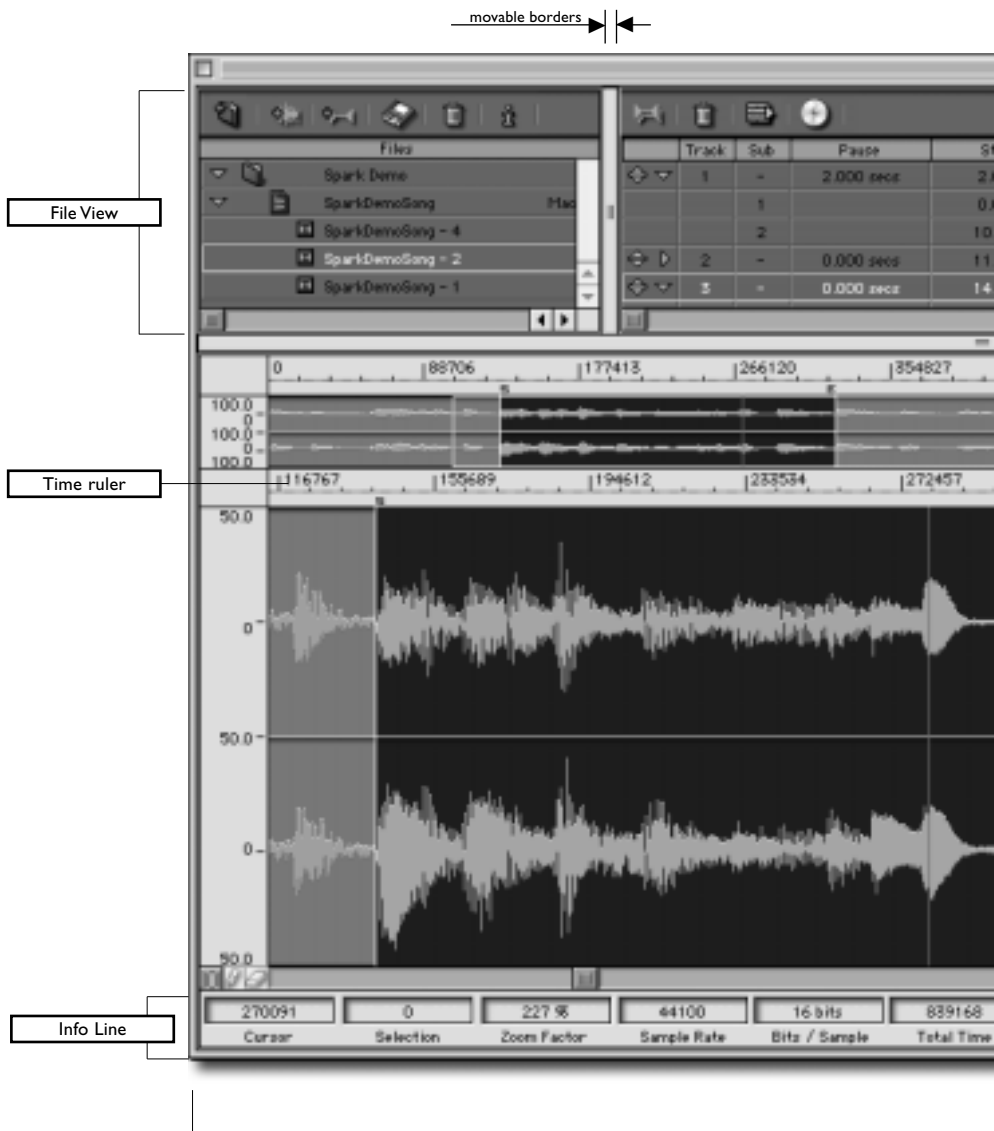
The Transport Controls enable you to move around in a recorded audio file, for example, to rehearse a part of your recording, or to replace it with a new recording.

Click the “Record” button or press <\*> to start recording at the current position. To stop recording, click “Stop” or press <\*>.

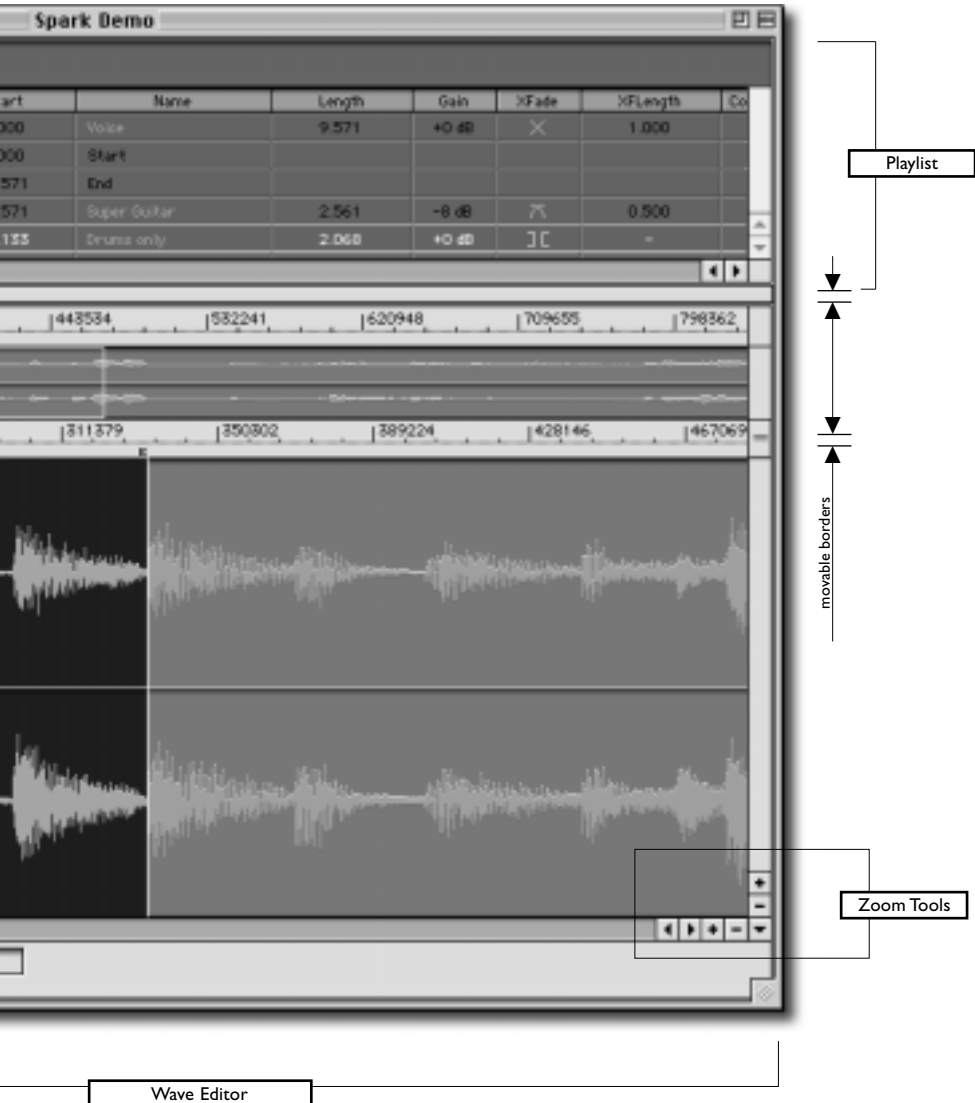
After you have finished your recordings, select “Done”.

## THE BROWSER VIEW

The Browser View is one of the many innovations in SPARK LE's user interface concept. For the first time, the File database, Play List and Wave Editor are all integrated into one window. The Browser View features dynamic movable borders to adjust the section's sizes to your needs – and an unparalleled level of transparency!



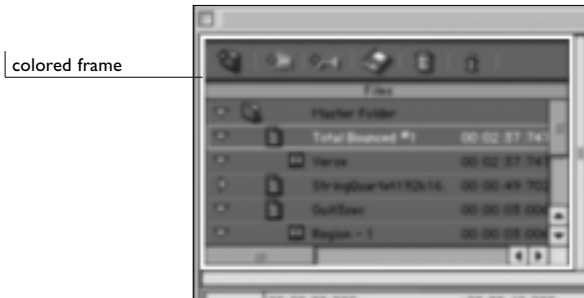
The **Browser View** consists of three parts: The **File View** with all your audio files and Regions used in your Project, the **Play List** where you arrange the Regions and define Crossfades, and the **Wave Editor** to edit your audio and create Regions.



## ACTIVE PART OF THE WINDOW

The selected part of the BrowserView is marked by a colored frame – that way you will always know whether you have focussed the FileView, the Play List or the Wave Editor. To change between these three parts, simply click on the desired part, or press <TAB > / <SHIFT + TAB> to change your focus.

The keyboard commands are always assigned to the active part of the window!



*Note: There are some options in the Preferences (Edit; Preferences; Editor) on how this colored frame should be indicated. Try the different options to find the one you prefer most.*

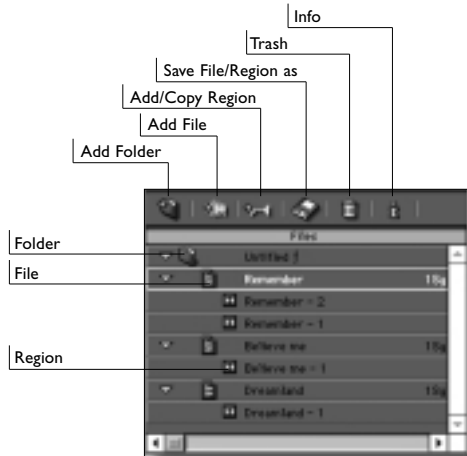
## FILE VIEW

The File View represents your virtual file database and includes references to the audio files used in your project. You can build your own hierarchical order by creating virtual folders for a better overview.

Of course, SPARK LE also supports drag & drop to and from the desktop, making it really easy to load files or export regions into files. When you need to cut one long track into many separate ones, this feature will save you hours! You can even import complete folders with audio files just by dragging and dropping them to the File View!

Please note that the file tree that you build in your File View does not represent the actual location or order of your files on your hard disks – audio viewed in the same folder could be on totally different hard disks. So you can easily build different views of your files without actually having to move them around.

New files will always be opened into the currently selected folder. Files can not be moved from one folder to another. Also, it is not possible to rename audio files within SPARK LE.



- Add Folder** – This will create a new virtual folder.
- Add File** – Click this button to add audio files to the File View.
- Add/Copy Region** – By clicking on this button, you will create a Region based on the current selection in your audio file. Alternatively press <COMMAND + R>.
- Save File/Region as** – This allows you to copy the selected file or export a selected region a discrete file on your hard disk. Dragging the file/region to the desktop will create a discrete file of the same file type as the original file.
- Trash** – To Trash a File View entry, select this entry and click on the FileView's trash bin or press <BACKSPACE>. The file on your hard disk is not affected by this action, only the reference in the FileView is removed. However, if you have applied any kind of processing to this file, you will be asked if you want to save the changes to the file before it is deleted from the FileView.
- Info** – This will open an info screen for the selected entry. In this info screen you can, for example, change the region or folder name, or lock the region start point and length. <COMMAND + I>

Use the cursor keys to navigate inside the File View. <CURSOR UP/DOWN> will select the previous/next FileView entry, <CURSOR LEFT/RIGHT> will open/close a folder. When you select a File/Region in the File View, the waveform will be displayed in the Wave Editor immediately.

## FOLDERS



Folders will help you to structure your audio material in the File View. At least one folder must exist in the File View. Change the folder name by double-clicking on the folder name or pressing <COMMAND + I>; this will bring up a dialog where you can enter a new name.

## FILES



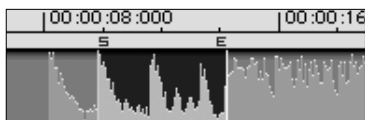
If you click on the “Add File” button a file open dialog will pop-up. The selected audio files will be opened into the File View. If you are working with split stereo files (named \*.L and \*.R), SPARK LE will automatically open them as a stereo file, even if you select just one of the files! To prevent SPARK LE from doing this, keep the <SHIFT> key pressed while loading the file.

*Note: To select multiple files in the “Add File” dialog hold the “shift” key while selecting the files. To select all files press <COMMAND + A>.*

## REGIONS



A Region marks a section of your audio file. The borders (marked with a small “S” and “E”) define the start and end points for playback.



You can have as many regions referencing the same file as you like. Regions do not affect your audio file. By creating, editing or deleting them, the audio file on your hard disk is not touched or changed!

As Regions belong to certain audio files, they will always appear as sub-entries of the related audio file.

### • DEFINING A REGION

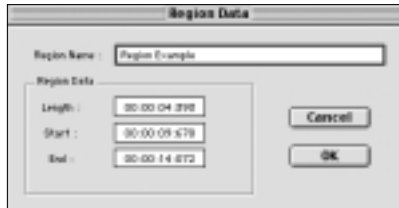
There are two ways to define a Region:

- Make a selection in a waveform, click on the File View’s “Add Region” – a new Region appears in the File View!
- Make a selection in a waveform and press <COMMAND + R> on your keyboard – a new Region appears in the File View!

- EDITING A REGION

Click on the left or right Region marker in the Edit Window and move it around. To move the whole region, press <CTRL + SHIFT + CURSOR LEFT/RIGHT>.

By double clicking on the Region name in the File View, you will get a Region Info screen, where you can change the Region name as well as the Region Start- and End point (Alternatively press <COMMAND + I> or click on the info button.).



- SELECTING A REGION

“Select Region” from the “Edit” menu will mark your Region for further editing. Alternatively, double-click in between the region start and end markers of your file.

- EXPORTING A REGION INTO A NEW FILE

You may export any Region into a discrete file at any time by simply moving it to the desktop, or by selecting the “Save as” button in the File View.

## FILE FORMATS

SPARK LE supports several file formats – and for maximum compatibility you can even import any file format supported by QuickTime.

All of the key formats may be used for professional recording – there is no “quality difference”, as you might be used to from having to choose the right kind of tape.

Let’s have a look at the formats in more detail:

- **AIFF** – the Audio Interchange File Format was developed by Apple and is the most widely used on the Mac. AIFF supports all of today’s important sample rates and bit depths.

*Note: There is also a compressed AIFF format, called AIFc. This format must be imported using the “Import Quicktime” feature from the File menu.*

- **SDII** – The SoundDesigner II format was developed by Digidesign and is also a popular file format on the Mac, as it is Pro Tools’ default file format. SDII supports all of today’s important sample rates and bit depths.

- **WAV** – Don’t be scared, although this format was created by Microsoft and IBM! The Windows WAVE format is standard on the PC and will make sure your audio files are compatible with the other 95% of the computer market ;-)

The WAV format supports all of the important sample rates and bit depths, too.

## QUICKTIME IMPORT/EXPORT

**SPARK** has the capability of importing and exporting files via Apple's QuickTime. This gives you the possibility to import all sorts of audio formats into **SPARK**, and also exporting audio files in QuickTime formats (the available export formats depend on the QuickTime version you are using, e.g. QuickTime Pro).

### TO IMPORT QUICKTIME FILES INTO SPARK:

- 1 Drag & Drop the desired QuickTime movie into **SPARK**'s File View.
- 2 The movie will be imported and an temporary audio file of the movies audio track generated. A movie window will be present while this file is selected in **SPARK**.
- 3 Now you can start editing the audio file of the QuickTime movie.

As alternative, you can import a QuickTime movie via the "Import QuickTime" option in **SPARK**'s "File" menu, which will create an separate audio file:

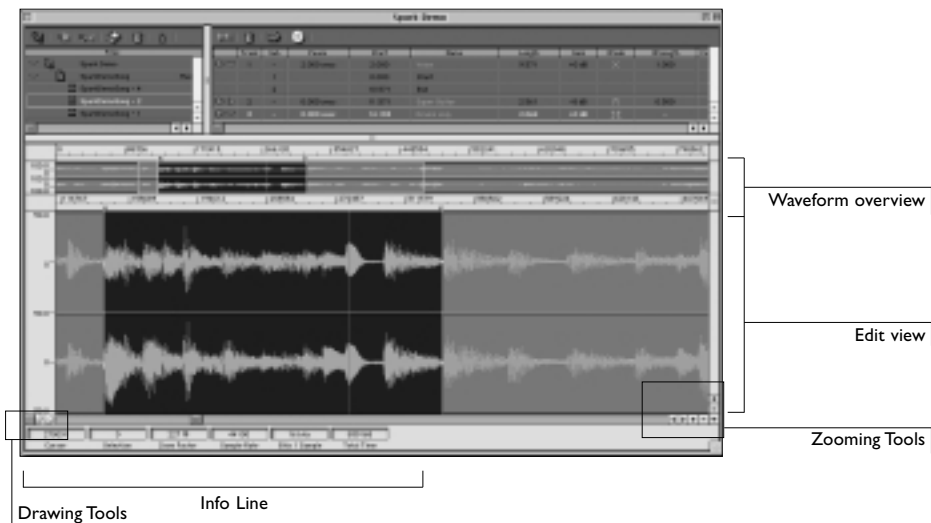
- 1 Select "File" / "Import QuickTime..."
- 2 Select the movie file you want to import into **SPARK** and press "Convert..."
- 3 Select a destination file name and press "Save"
- 4 The movie will be imported and an extra audio file created in the specified folder.
- 5 Now you can start editing the audio file of the QuickTime movie.

### TO EXPORT FILES IN QUICKTIME FORMAT:

- 1 To save an edited QuickTime movie from **SPARK**, just select "Save As..." (or "Save") and select the desired file name.
- 2 **SPARK** will ask if the same encoder should be used for the audio file that was used in the original (imported) file. Select "Yes" if the audio encoder should be the same, or "No" in case you want to use a different encoder and encoder quality – you will then be transferred to the "Sound Settings" screen where you can set the encoding options.
- 3 The QuickTime file (including the movie) will be saved to the specified location.

# WAVE EDITOR

## The Waveform Display



The waveform display is the heart of any audio editor. The loaded audio file is displayed by an amplitude graph over time. For a mono file you will see one graph; for stereo files, two. The “0” line in the center of each graph marks the lowest, the “100” at the top and bottom represent the highest possible signal level.

The upper part of the waveform display is the waveform overview, the lower part is the edit view where the editing takes place.

### OVERVIEW

The overview section of the waveform is for navigation through your audio file. You cannot make any changes or edits in the OVERVIEW except to move the cursor.

### CURSORS

SPARK LE features two cursors: The red PLAYBACK CURSOR will show the current playback position, and the green EDIT CURSOR displays the current edit position.

When you start playback, the EDIT CURSOR will remain at the start position until you set it to a different location by single clicking elsewhere on the waveform.

When you start playback, the PLAYBACK CURSOR will scroll through the audio during playback. When you press “Stop” on the transport, the PLAYBACK CURSOR will rest at the last playback position.

When you move the position of the PLAYBACK CURSOR, the EDIT CURSOR will jump to the same position.

## INSTANT PLAYBACK

If you click on the waveform while keeping the <COMMAND> key pressed, the playback will instantly start from the selected position. If you are in stop mode, the playback will only play as long as the mouse button is pressed. Afterwards the playback cursor will jump back to the previous position.

If you are in play mode, the playback will continue playing from the selected position.



## HOW TO MAKE A SELECTION

Making selections is the basic task before you can do further editing. There are different ways to make selections:

1. Point and click with the mouse to the waveform to mark the selection's start position. Press and hold the mouse button and drag it to the left or right until you have marked the desired area.
2. To make a selection in the waveform overview, keep the <OPTION> key pressed and mark the selection by clicking/moving the mouse on the waveform overview. Selections can be made on single channels as well: If you select mark the selection in the upper part of the left channel, only the left channel will be selected. If you mark the selection in the lower part of the right channel, the right channel will be selected. If you mark the region in the middle (between the two 0-lines of the channels), both channels will be selected.
3. During playback you can set the selection start by pressing <OPTION + CURSOR UP > and the end by pressing <OPTION + CURSOR DOWN>.
4. Double-click inbetween two Markers will make a selection between these two Markers.
5. With a triple-click on the waveform, the whole file will be selected. Alternatively, press <COMMAND + A>.

### TO TRIM A SELECTION:

To trim the selection borders, it is quite helpful to zoom in first. To zoom to a selection, press <CTRL + "+">. <CTRL + "-"> will zoom out completely.

When you hold the <SHIFT> key while clicking left or right of the start or end of the selection, the cursor will get a small arrow and you can trim the selection. Hit <SPACE> to monitor it and to verify if start and end point are properly set. Now you can turn this selection into a region (<COMMAND + R>) or add processing.

The whole selection can be moved by pressing <OPTION + SHIFT> and moving the selection with the mouse or with the <CURSOR LEFT/RIGHT> keys.

## EDIT TOOLS



The Edit tools are only selectable when you have zoomed in to drawing resolution, otherwise the bar is grayed out and the Selection Tool is active.

**Selection** – This is the default tool, allowing you to select parts of your audio file.

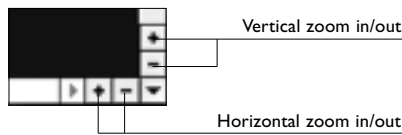
**Pencil** – With the pencil tool you can draw changes into your waveform. A great tool for manual click removal. When you hold the <SHIFT> key while performing the edit, it will be applied to both channels.

**Eraser** – The Eraser makes it easy to apply silence anywhere in your recording.

*Note: If you select the Use Pencil/Use Eraser option from the “Option” menu, you will get an automatic zoom-in to drawing resolution.*

## ZOOMING

Use the “+” and “-” zoom buttons in the lower right corner of the Edit Window to change the waveform display’s zoom factor. You have one set of buttons for the horizontal – and one for the vertical dimension. Horizontal zooming can also be done by pressing the <+> and <-> keys.



Horizontal zoom-in: <+>

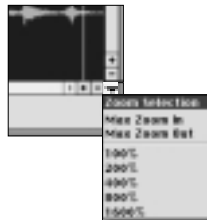
Horizontal zoom out: <->

Zoom-in to selection: <CTRL + “+”>

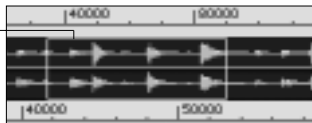
Zoom-out completely: <CTRL + “-”>

Zoom-in to sample level: <OPTION + “+”>

Clicking on the triangle inbetween the horizontal and vertical “+”/“-” buttons will open a pop-up display with zoom presets as pictured here.



An alternative method of zooming is to use the rectangle in the overview: by clicking and dragging in the overview you set the zoom level, if you click into the rectangle you will see a hand which lets you move it around without changing the set zoom factor. The Wave Editor's detailed view will follow your every move!



If you move the zoom rectangle out of the wave overview, you will zoom out completely.

By pressing <OPTION> in the waveform edit view, the cursor will change to a magnifying-glass and will allow you to draw the zoom area in here.

*Note: To have the waveform view following the playback cursor, switch on the "Follow Cursor" option in the "Option" menu (or press <F>). With the "Playback Cursor Centered" option (<SHIFT + F>), you can even get a centered playback cursor with a scrolling waveform.*

## INFO LINE

At the bottom of the Edit Window you will find the Info Line with information about the audio file and your selection:



**CURSOR** – Displays the cursor position. Double-clicking will bring up a numerical input field for editing. This field can also be selected by pressing <COMMAND + , >.

**SELECTION** – Displays the length of your selection. Double-clicking will bring up a numerical input field for editing. This field can also be selected by pressing <SHIFT + COMMAND + ; >.

**ZOOM FACTOR** – Displays the chosen zoom factor

**SAMPLING RATE** – Displays the audio's sampling rate

**BITS/SAMPLE** – Displays the audio's bit depth

**TOTAL TIME** – Displays the audio's total playing time

*Note: All time lengths can be displayed in the following formats: sample frames, Hours:Min:Sec, msec, milliseconds or seconds. This is set in the Preferences dialog's "Editor" setting.*

## UNDO/REDO

SPARK LE offers a powerful Undo/Redo mechanism: Unlimited undo/redo is possible (if set in the preferences) The Undo/Redo is organized in "Clients". Clients are for example the File View, the Play List, the Master View or the Wave Editor. All these clients have their own undo history, so even when change something in the Master View (e.g. inserting a new Plug-In) and you switch to the Wave Editor, the undo command will undo the last edit you have made in the Wave Editor.

To undo the last action select “Undo” from the “Edit” menu or press <COMMAND + Z>. Select this option again will undo one more step and so on. To redo an action, press <SHIFT + COMMAND + Z>.

As the undo function is client based, you also need to take care that the right “Client” is selected when you perform the undo action. E.g. if you are in the Play List, you can’t undo the last action in the MasterView. But as you can always redo the action again, this will never cause any serious damage.

If the number of “undo stages per client” in SPARK LE’s preferences is set to something different than “unlimited”, undo steps will be deleted after the defined number of further actions.

## EDIT FUNCTIONS

In the “Edit” menu you will find besides the undo/redo also the basic Cut/Copy/Paste functions:

“Cut” (<COMMAND + X>) will cut the selection out of the file and keep it in the clipboard.

“Copy” (<COMMAND + C>) will copy the selection to the clipboard

“Paste” (<COMMAND + V>) will paste the clipboard content to the current cursor position.

“Paste Special...” gives you some extra options on how the clipboard content should be inserted: “Mix” will mix the clipboard to the current cursor position, “At End” this will be added at the end of the file, “At start” will add the clipboard in the very beginning of the file.

“Silence” will paste digital zero to the current selection. If no selection is made, you will get a dialog asking for the length of the silence that should be inserted at the cursor position.

“Trim” will remove everything from the file except the current selection.

## PROCESS

SPARK LE's off-line "Process" menu supplies you with the key DSP function for destructive editing. First, select the audio you want to process in the Wave Editor, then choose the desired function:

### FADE...

Create a fade-in or fade-out on a selection. Make a selection at the desired fade position and choose "Fade" from the Process Menu (or press <COMMAND + F>). Select the Fade In/Out type and further adjustments of the fade. Finally, press "OK" to process the fade to the file.

Depending on where you are in an audio file, the direction of the fade will automatically be selected for you. If you are with in the first half of the file, the fade will automatically be set to "Fade In". If you are with in the second half of the file, the fade will automatically be set to "Fade Out".



### FADE OPTIONS

Offset/Damping - With the "Offset" and "Damping" controls, you can adjust the fade curve: "Offset" defines the position in the crossfade. 0% is the beginning of the fade, 100% is the end. With "Damping", the damping at the position defined by "Offset" is set.

"Direction" lets you select if the fade should be a fade-in or fade-out.

There is also a small choice of fade presets, that can be recalled from the "Presets" pop-up.

Also, the selection can be adjusted in the fade dialog itself: Set the selection start time, end time or the fade duration. The "Channels" lets you select if you want to have the fade on the left, right or both channels.

### CHANGE GAIN...

To change the level of the selected audio part, open gain from Process Menu (or press <COMMAND + G>) and set the gain change with the fader. The level can be boosted up to +18dB!



## NORMALIZE

This will optimize the level of your selection to the maximum value you have set by the fader (usually 0dB). Open “Normalize” from the Process Menu (or press <COMMAND + OPTION + N>).



## REVERSE

Reverses the current selection.

## INVERT

Inverts the Phase of your selection. This will invert the phase on all channels! To invert just single channels, use the “Phase Shift” in the FXmachine!

## RESAMPLE...

Select the sample frequency, the desired quality and press “OK”. More information on the resampling algorithm below.



## SAMPLE RATE CONVERSION

Sample rate conversion is one of those seemingly “boring” features – and a true life saver once you run into those classic situations where you need it.

Here’s a scenario: your client hands you a DAT tape and asks you to master it for CD. You put it in your DAT machine, hit play and say “oh no, it’s 48kHz...”

As CDs are still limited to 16 bits / 44.1 kHz, you’ll have to change the sample rate of your material to work on the target media. Of course your source material could also be a 24 bit / 192 kHz file, or any of the other supported sample rates and bit depths.

When you resample a file, you will inevitably “worsen” the sound quality: naturally, as a 48 kHz or 192 kHz file has a better sonic quality – so the quality of the resampling algorithm is quite key!

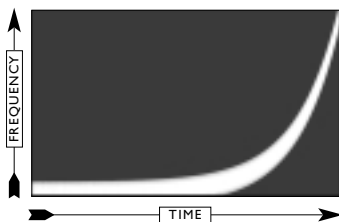
### THE TECHNICAL VIEW

In many common resampling algorithms, you’ll get a stop band attenuation of around 60 dB at the highest quality level. This is not good enough for critical masters!

As a rule of thumb, an attenuation of 80 dB is required to avoid noticeable aliasing (artifacts). SPARK LE offers 3 quality modes for resampling – and the good news is, that all 3 of them have a stop band attenuation which is greater than 90 dB!

What does this mean in real life? Simply put: if a resampling is not performed with high enough a quality, aliasing (so-called “ghost tones”) will appear, spoiling the sound with nasty artifacts. Have a look at the following plots:

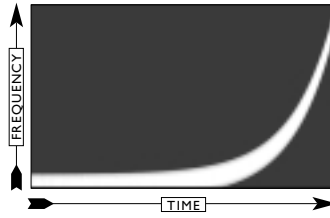
On the following illustration you see a sine sweep from 16Hz – 20 kHz in 44.1 kHz, our original file.



On the following illustration you see the same sweep after upsampling from 44.1 kHz to 48 kHz with a common algorithm. The strange “net” which is now visible on the plot visualize the artifacts which have been added due to the low quality process, those nasty ghost tones! And yes, you’ll hear them, as they are in the audible range of around 10 kHz and up!



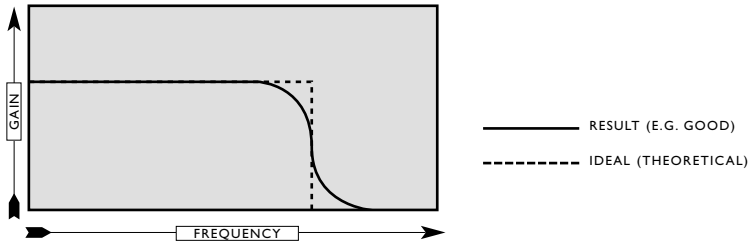
On the following illustration you see the same sine sweep after processing with SPARK LE's resampling algorithm set to "good" quality. No artifacts, no ghost tones!



As you can see from this example, aliasing (or ghost tones) not only occur during downsampling (e.g. 48kHz to 44.1kHz) but even when you resample to higher sampling frequencies.

### THE THREE MODES: GOOD, BETTER AND BEST

The main difference of the three quality levels is the slope of the transition from the pass to the stop band. Have a look at the illustration to get an idea what's going on during resampling.



Choosing "good", you'll get what the mode's name implies, but you'll still lose a bit in the high end of the frequency spectrum, which ideally should pass unaffected.

When "Best" is selected, the transition looks almost like a square, which means this is very close to the theoretical model of loss-less sample rate conversion. Of course, we can't give you a totally loss-less result, but we're pretty sure that you'll be pleased by what you'll hear!

Which mode you should choose depends on your requirements, of course the trade-off with the higher quality modes is a slower processing speed, as many more calculations have to be performed.

## WHICH MODE TO USE?

- First of all, it depends on the speed of your Mac and your patience. If it's fast enough then use "best", as you'll get superior results.
- If you have to save time, the "good" or "better" modes will be fine in most instances. Don't forget: even the lowest quality mode is better than most common algorithms!

Technically speaking, whenever you convert in the "inaudible range" (for example from 88200 to 96000 or vice versa), then "good" will do the job.

When you convert a file in the upper end of the audible range, for example from 48000 to 44100, then "good" will do the job in most cases – however, "better" reduces the risk of aliasing even more. Those aliasing "ghost tones" are extremely annoying, so "better" is safer!

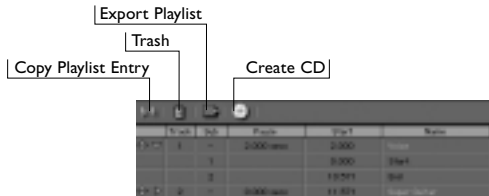
When you want to preserve as much quality as possible when resampling even further down into the audible range (for example from 44100 to 22050), then use "best".

- If you don't want to worry about which quality level to use when, simply use "best", and you'll always be on the safe side!

## PLAY LIST

The Play List is used to arrange your audio material. This could either be for creating a new edit of a song (e.g. a shortened radio-edit of a long album track) or to compile a couple of songs for CD burning. Unlike some other applications, you are not limited to regions referring to one physical audio file when building a Play List – you may freely combine regions from any file in the File View. The only limitation is the sample rate: All regions used in the Play List must have the same sample rate. The Play List's sample rate is defined by the first entry added to the Play List.

Some basics how to arrange audio material in SPARK LE: All arrangements made in the Play List are non-destructive. In other words, the original audio material isn't touched or changed. If you want to create a completely different arrangement using the same files, you can! This is also the fastest way to edit in SPARK LE. If you were to perform cuts in the waveform editor, you would destructively change the audio file, which would alter your original material, once you save the edited file - future editings/rearrangements would be almost impossible.



**Copy Play List Entry:** Press this icon to add the currently selected Region to the Play List. The region will be added at the current Play List position. Alternatively, you can drag and drop a Region from the FileView to the Play List.



**Trash:** To delete the current Play List entry, click on the “Trash” icon. This will not delete any audio material on your hard disk – it will only delete its reference in the Play List!



**Export Play List:** Once you have finished your Play List, you will probably use it as either a new audio file or as a master for CD Burning. To make one file out of the Play List, click on the “Export Play List” icon and enter a new filename. This will save your Play List as a SDII file, including the transitions you have defined in the Play List.



**Create CD:** By clicking on the “Create CD Image” icon, SPARK LE will generate a CD Image that is Adaptec Toast or Jam compatible and start this application afterwards. To enable this feature, you need to show SPARK LE where to find your CD Burning application. This is set in SPARK LE's preferences dialog. Have a look at the CD Burning section on page 41 and the Preferences section for more details.

## PLAY LIST SETTINGS



**Move:** To move a Region inside the Play List, you can grab it with the “Move” icon you will find for each Region in the Play List. Click on it and move the selected entry to the desired position in the Play List.



**Show/Hide Sub-entries:** By clicking on this icon (or <CURSOR LEFT/RIGHT>), sub-entries for each track will be shown or hidden. Sub-entries are Start and Stop Index and Markers. To fold/unfold the sub-entries for the entire Play List, press <COMMAND + CURSOR LEFT/RIGHT>.

**Track:** Track Index on the CD. Each Region in the Play List will automatically get a track index. This index can be disabled by clicking on the track index and selecting “DISABLE” from the pop-up.

**Sub:** sub index of a CD track. Each track has at least two of these entries: Start and Stop. If there are markers set in the region, they will also get a sub index. When you click on the SubIndex of a track, you will pre-listen to that transition. This is an easy way to check the Play List’s transitions before you burn it on CD.

**Pause:** Pause length. According to the Red Book CD Format, the pause belongs to the following CD track, therefore the pause is placed before the actual track start. You can either choose a pause or a crossfade.

**Start:** Indicates the start time of the Play List entry.

**Name:** This is the name of the Play List entry. By default, it is the same name as the region name in the FileView, but this name can be changed.

**Length:** Length of the current Play List entry.

**Gain:** The gain setting for the actual Play List entry. Can be adjusted in 0.1 dB steps from -18.0 to +6.0 dB. Use this parameter to smoothen level differences between Play List entries.

**XFade:** Transition type between the actual Play List entry and the following Play List entry. If this is the last Play List entry, the transition type is fixed to pause.

In the XFade part of the playlist you will set the transition type and length.

There are 8 different transition types:



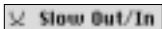
**Pause:** a  $-\infty$  dB signal will be inserted between the regions, without cross fades.



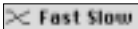
**Linear:** This is a linear crossfade between the regions. Fade In and Fade Out times are the same.



**Equal Power:** This Equal Power crossfade will keep the signal's energy during the crossfade constant. A short crossfade of this type is probably the most often used type to avoid clicking between two regions.



**Slow In/Out:** This crossfade type provides you with slow exponential fade out and fade in times.



**Fast Slow:** This crossfade has a fast fade out time and a slow fade in time. For example, if the total crossfade length is set to 1 sec, the fade out will have a duration of 0.5 sec. and the fade in a duration of 1 sec.



**Slow Fast:** This crossfade has a slow fade out time and a fast fade in time. For example, if the total crossfade length is set to 1 sec, the fade out will have a duration of 1 sec. and the fade in a duration of 0.5 sec.



**HardCut:** A Hard cut has a length of 0. This means, there is no crossfade at all. If you want two regions to follow directly after each other, without any crossfade, this is your choice. But you can also set any other crossfade type to a length of 0. This will have the same effect.



The Overlay transition type will play both regions during the defined overlay length – without any fade in or fade out.

**XLength:** This is the length of the transition between the actual Play List entry and the following entry.

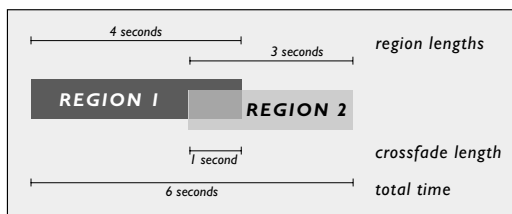
**XPlace:** Depending on the transition mode (XMode), this is either the track index placement or the placement of the extended crossfade.

**XMode:** Can be set to “Overlapping” or “Extending”. This defines the transition mode. “Extending” is a more musical way of setting transitions, as the relation to the beat will be kept.

There are two different modes for the crossfades:

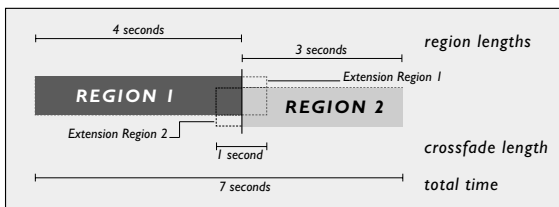
In “Overlapping” mode, the Regions are put on top of each other, meaning that if you have two regions of 4 and 3 seconds, and you choose a 1 second crossfade, you will get a total playing time of 6 seconds:

$$\begin{aligned}
 &4 \text{ sec (first region)} \\
 &+ 3 \text{ sec (second region)} \\
 &- 1 \text{ sec (crossfade duration)} \\
 \hline
 &= 6 \text{ seconds playing time}
 \end{aligned}$$



In “Extending” mode, the crossfade is created outside of the region borders. Depending on the “Place” setting, the regions will be extended at the start or end – or even both. For example, with an extending Crossfade and “Center” Place setting, the first region will be extended at the end by half of the crossfade length; the second region will be extended at the beginning by half of the crossfade length. So, if you have the same 3 and 4 second regions as before, with the same crossfade of one second (but in “Extending” mode), you will get a 7 second playing time:

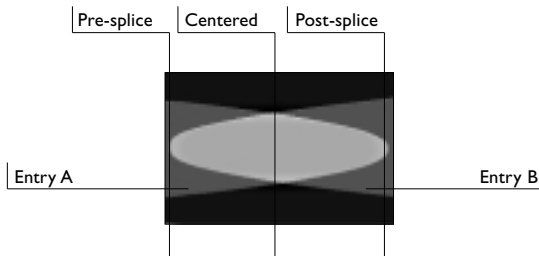
$$\begin{aligned}
 &4 \text{ sec (first region)} \\
 &+ 0.5 \text{ sec (extending region one by } 1/2 \text{ crossfade length)} \\
 &+ 0.5 \text{ sec (extending region two by } 1/2 \text{ crossfade length)} \\
 &+ 3 \text{ sec (second region)} \\
 &- 1 \text{ sec (crossfade duration)} \\
 \hline
 &= 7 \text{ seconds playing time}
 \end{aligned}$$



Which mode you prefer will probably depend on the way you are working, but as you can see, the “Extending” mode might be the better choice for cutting music: You cut your source audio into regions fitting to bars and beats, and with the extending crossfades you then smooth the cuts without changing the music sections’ time position, whereas the “Overlapping” crossfades might be the better choice for speech editing, as you don’t add audio in front or at the end of a region, to make a crossfade – the crossfade will actually move the regions closer together.

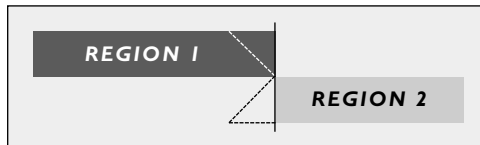
The Place setting allows you to change the track index setting for CD Burning: You can select between three settings:

“Pre” will set the index to the starting point of the crossfade, “Center” will set it to the middle of the crossfade, and “Post” finally will set it right behind the crossfade. In “Overlapping” mode, these settings will not influence the crossfade itself!

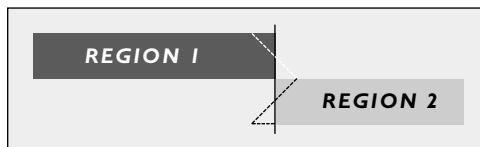


In “Extending” mode, the Place parameter has a different function. It will not set the index placement of the track index, but will define the placement of the crossfade:

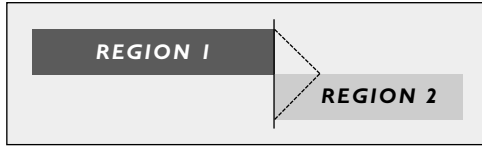
**Pre:** The next entry will be extended forward. The first entry will remain unchanged in length.



**Center:** Both entries will be extended symmetrically.



Post: The transition will be placed behind the first entry.



2

**CopyProt:** If this box is checked, the copy prohibit bit on the CD will be set. This will allow only one digital copy stage of the CD track.

**Emph.:** The emphasis bit for this CD track will be set, if this box is checked.

**Comment:** In this field you can add comments for each Play List entry.

## BUILDING A PLAY LIST

Building a Play List is easy: Simply drag regions from the FileView into the Play List – that’s it. Want to change a sequence? Take an entry, drag it to the desired position, let go – done! Want to delete an entry? Hit backspace or click on the Trash Icon on top of the Play List and it’s gone!

### Play List Examples

#### Building a new track arrangement in the Play List.

- 1 Load the required audio files into SPARK LE’s File View.
- 2 Build Regions for the parts you want to use for your new arrangement.  
You can change the order of the entries even after dragging them into the Play List.
- 3 By dragging the Regions to the Play List, the default transition type defined in SPARK LE’s preferences will be set between the Play List entries.
- 4 Once you have added the Regions to the Play List, you will probably want to fine-tune the transitions between the Play List entries. Open the CutEditor to perform this operation. The handling of the CutEditor is described in detail in the next chapter.
- 5 By clicking on the Region’s Index/Sub columns in the Play List, you will be able to preview the selected Region if Playback is active.
- 6 When you have finished editing, you should create one new audio file from the Play List. To do so, click on the “Export Play List” icon and select a location and name for the new file.

#### Building a CD Play List with several tracks and sub-indices

- 1 Load the audio files for the CD you want to create into your SPARK LE project.
- 2 Create the proper Regions for the songs. In case you have prepared the material as described in the previous example, simply use Regions that have the length of the whole audio files (press <COMMAND + A> to select the whole file and <COMMAND + R> to create a Region).
- 3 Now drag these Regions to the Play List.
- 4 Each Region dragged to the Play List will get its own Track Index.
- 5 Fine-tune the transitions between the single tracks. The Pause length can be easily adjusted in the Play List by clicking on “Pause”.
- 6 When you are finished, click on the “Create CD” icon. You will be asked to enter a name for this CD Image. Afterwards, the CD Image will be created. If you are using Adaptec’s Toast to burn your disc, an audio file for each track will be created. For Adaptec’s Jam, there will be a single image file.
- 7 Your CD Burning software will be launched automatically with the CD Image already loaded. If you are using Adaptec Toast, you should verify the pause length. In Jam, you only need to press the “Burn” button, as it reads all parameters you have set.

## CD-BURNING

If you own a supported CD-writer, you can “burn” your own CDs from a Play List using SPARK LE and the optional Adaptec TOAST or Adaptec JAM applications. Please note that Adaptec Jam is required for Red Book compatible Audio CDs, which is the required format for professional CD duplication.

“Disk at once” mode is one of the requirements of that format.

To burn CDs from SPARK LE, you first need to show SPARK LE the location of your TOAST or JAM application. This is done in the “General” Preferences dialog as shown below:



If you do not assign a compatible application for CD burning, the “Create CD” icon in the Play List will not be active!

When you have finished building your Play List, press the “Create CD” icon on top of the Play List.



Now you will be asked to enter a name and select a folder for the CD image. Please choose a drive that has enough space available for a complete CD image! Remember that a stereo track at 44.1 kHz will use approx. 10 MB hard disk space per minute. This means that a 45-minute image will require about 450 MB-disk space!

Press “OK”. Now SPARK LE will create the CD image. This image includes all the transitions you have defined in the Play List.

*Note: If you are using TOAST, there will be as many files written on your hard disk as your Play List has Tracks! The files will be automatically numbered in the track order of your Play List. If you are using JAM, there will be just one file written.*

Once SPARK LE has finished creating the CD image, Roxio TOAST, JAM or Apple iTunes will be launched and the CD image will be automatically loaded:



Just check the CD burner settings and start burning the CD!

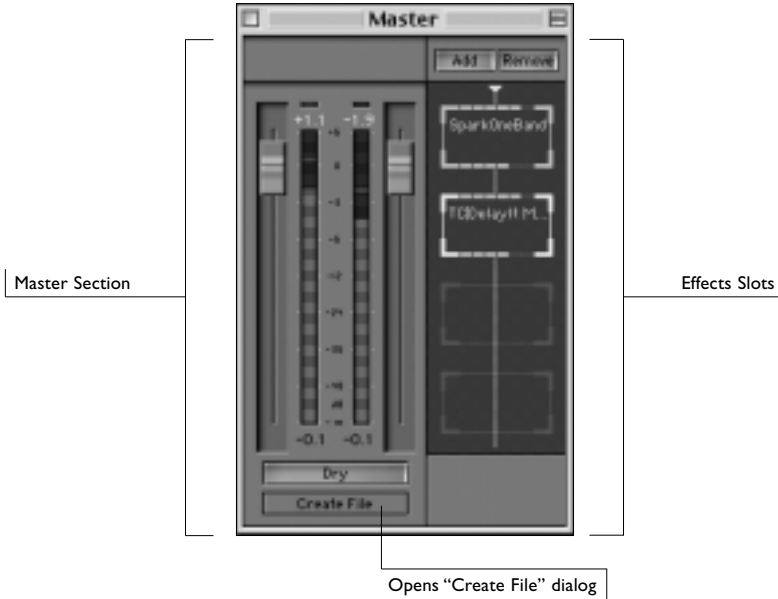
*Note: If you are using Roxio TOAST or Apple iTunes, you should also check the Pause settings between the tracks, as TOAST automatically sets a 2 second pause.*



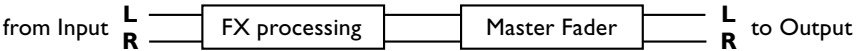
# MASTER VIEW

Open the MasterView by choosing “Show Master” from the Windows menu on SPARK LE’s menu bar or by pressing <COMMAND + 3>.

The MasterWindow consists of two main parts: on the left is the Master Section and on the right the four effects slots.



You can see the MasterView’s signal flow in the following illustration:



## MASTER FADER

The Master Faders control SPARK LE's master audio output. This is the last stage of processing in the signal flow.

The two Master Faders are grouped, so you can easily adjust the level for both channels simultaneously. To ungroup the faders, press the <CONTROL> key while moving the appropriate fader. The offset between the channels will be maintained when you change the levels again without pressing the <CONTROL> key.

A numerical indication of the current fader setting appears below the level meters. The level can be boosted by up to +6 dB.

To reset a fader to its default value of 0 dB, press the <OPTION> key and click on the fader.

If you highlight a master fader by clicking on it or by stepping with the <TAB> key through the different controls, you can adjust the fader settings with the cursor keys:

- <CURSOR UP/DOWN> – small steps
- <PAGE UP/DOWN> – bigger steps
- <HOME> – maximum value (+6 dB)
- <END> – minimum value (-96 dB)



## LEVEL METERS

Watch the PPM (Peak Program Meter) Level Indication in the Master Section to avoid Output Clipping. A numerical readout of the level appears right above the LED meters.

When you click on a meter, you will get the Peak Hold Options for the meters. The options range from “Disable Peak Hold” to “Hold Forever”. Here you will also find the option to reset the Peak/Clip indication.

Above the Level Meters you will also find separate Clip LEDs for the left and right channels. They will light up if the signal level exceeds 0 dB. Click on a Clip Indicator LED to get the Clip Hold Options. These settings are independent from the Peak Hold Options of the Level Meters. For example, you could set a Level Peak Hold time of 6 seconds and an infinite Clip Hold time.



## DRY

Pressing the “Dry” button will bypass the entire FX machine. You can also use the <COMMAND + SPACE> or <D> key command to perform this operation.

*Note: In some configurations of MacOS, the key command <COMMAND + SPACE> is used to switch between different keyboard font settings (e.g. switching between Japanese and Western fonts). If your system is configured this way, please use <D> for switching to “Dry” mode.*



## CREATE FILE

Create File

The Create File dialog enables you to render the FXmachine settings to an audio file. Depending on what screen (File View, Wave Editor or Play List) is active, you can render a portion of a file, the entire file, or the entire Play List.

The Browser View focus determines which screen is active, and which audio will have the effects applied.

To open the “create file” dialog, press the “create file” button or press <OPTION + M> on the keyboard.

If the Browser View focus indicates that you are in the File View, then the following options apply to the active file in the File View.

### SELECTION

Renders the highlighted selection to disk.

### WHOLE FILE

Renders the whole file to disk.

### FX MACHINE

By default, the FXMachine box is checked when creating a file. When disabled, or unchecked, your audio will be created with no plug-in settings from the FX Slots. Disabling your effects settings can be useful when you only wish to change a file type or bit depth for your new audio file. (For example, to convert a 16 bit SDII file to a 32 bit WAV file.)

### ADD TAIL

This option, when selected, will retain the ring out of effects such as reverb and delay. To allow for this, enable the add tail option and select the desired tail length, which should match the decay time of your reverb settings. The default is 2.0 seconds.

### OVERWRITE ORIGINAL

This will “destructively” add the effects processing to your original file. When this is selected, the destination location will not become active.

### CREATE NEW FROM SELECTION

This will allow you to create a new audio file from the highlighted selection of audio with the newly added effects processing.

### CREATE NEW FROM WHOLE FILE

This will allow you to create a new audio file from the entire audio file with the newly added effects processing.

This option is the default when creating a file from the Play List.



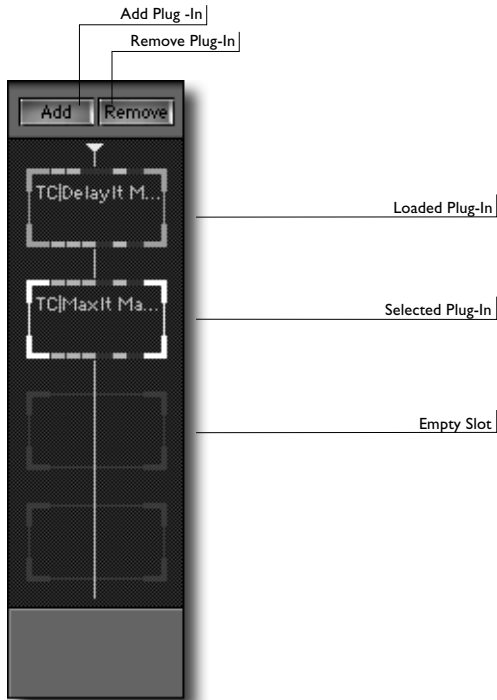
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## LOCATION

When you choose to create a new file from either the “Create New from Selection” or the “Create New from Whole File”, the location option will become active. Here, you can name your new file, choose a destination folder, and change the file format and bit depth.

If the Browser View focus indicates that you are in the Play List, then it is only possible to “Create New from Whole File”. This will render your entire Play List with the effects from the FXmachine to a new file on your hard drive. You will still have the possibility to Add Tail for effects ring out, and you will be able to have all of the location options, such as file formats and bit depth options.

## FX SLOTS



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## REALTIME EFFECTS

SPARK LE supplies you with a 1x4 FX routing chain. So you can process your audio with up to 4 Plug-Ins in real time simultaneously!

### WHICH PLUG-IN FORMATS CAN BE USED?

SPARK LE supports VST Plug-Ins, the standard for native real-time processing on the Mac. So you can choose from a wide variety of Plug-Ins.

### NAVIGATION

Select a slot by clicking on one of the 4 grayed out frames, by using the cursor keys on your keyboard. The selected slot is highlighted by a yellow frame.



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### ADDING A PLUG-IN TO THE FXslots

Load a Plug-In to the selected slot by clicking on the “Add” button, which you will find at the top of the FXmachine window. Don’t worry about the Plug-In position. Even after loading, you can freely move the effect to any other position in the matrix.

Alternatively, hold down the <CONTROL> key while clicking on an empty slot to display a context-sensitive selection menu right where you need it. This way, you won’t even need to select the slot before loading.

*Note: Contextual Menu Extensions must be enabled to show context sensitive menus.*

The first Plug-In you load into the FXslots will automatically open the Plug-In window.

*Note: If your desired Plug-In doesn’t show up in this pop-up list, but you are sure that it is installed on your computer, you should check for the activated Plug-In folders in your SPARK LE preferences. Please refer to the “Preferences” section for more details.*

### MOVING PLUG-INS

To move an effect to another position in the slots, simply drag & drop the effect from its original position to the desired one. The Plug-In maintains all settings in its new position.

## HOW TO COPY PLUG-INS

Would you like to have the same Plug-In in two (or more) places? No problem: While holding down the <OPTION> key, drag the desired Plug-In from its original position to the desired destination and drop it there. The copied Plug-In will maintain all settings, which you can of course change independently of the “original.”



## REMOVING EFFECTS

There are three ways to remove a Plug-In:

- Select the field and click the “Remove” button.
- Click on the field while holding down the <CONTROL> key to display the context sensitive menu. Then click the “Remove” button.
- Alternatively, press <BACKSPACE>.

To remove all Plug-Ins from the FXmachine, hold down the <OPTION> key and click the “Remove” button.

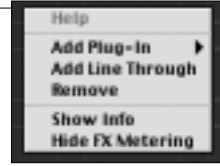
## LEVEL INDICATION FOR EACH PLUG-IN

Each active slot indicates the input level of its Plug-In with its own small input meters. Small LED meters display the level indication at the top and bottom of each slot. These meters make it easy to keep an overview of the levels even within a complex effect setting. To save a little bit of CPU power, you can deactivate this metering in the context sensitive menu.



## CONTEXT SENSITIVE MENU

When <CTRL + Clicking> on a Plug-In slot, a context sensitive menu will open. This will give you the possibility to add and remove Plug-Ins to/from the current Plug-In slot as well as some general display options for the FXmachine:



### ADD PLUG-IN

Will let you choose a Plug-In for the current effect slot.

### ADD LINE THROUGH

Will insert a Line Through element to the current effect slot.

### REMOVE




Will remove the Plug-In from the selected slot.

### SHOW/HIDE INFO

This option will display additional info for all Plug-In slots:

The Plug-In delay in samples (Latency) will be indicated on top of each slot (if this number is correctly reported by the Plug-In). Also, you will get information about the number of input and output channels of each Plug-In:



- Mono: nothing is indicated on the input/output 
- Stereo: the common icon for stereo signals will be indicated 
- More than 2 channels: the exact number of output channels will be indicated 

### SHOW / HIDE FX METERING

This option will enable/disable the input metering on all Plug-In slots. Disabling the metering will free up some CPU resources.

## SYSTEM PERFORMANCE: THE SYSTEM INFO SCREEN

The number of Plug-Ins that can be loaded into SPARK LE's FXmachine is dependent from the CPU Speed and the Memory setting for SPARK LE. To give you valuable feedback on the current system load, SPARK LE offers a "System Info" screen, that indicates the available memory (in byte), the CPU load (in%) and the harddisk performance (in %). This screen can be opened from the "Windows" menu ("Show System Info") or via <COMMAND + ^>.



## CPU METER

The CPU meter displays the CPU power used for processing. The overload LED will be active when you load more Plug-Ins into the matrix than your computer can handle. However, you will still be able to render the effects into a file (see "Create File" dialog).



You might note that with a high CPU load, the application will react slowly to your commands. This is because the audio playback has top priority to avoid audio dropouts.

If more than a few dropouts occur, the CPU overload LED will light up and playback will stop.

## PLUG-IN EDIT VIEW

To open a Plug-In Edit View, double-click on the desired Plug-In in the FXmachine matrix. This will open a screen with the Plug-In user interface. If the Plug-In doesn't have its own interface, you will get a "Standard FX View" with a fader control for each parameter.

If you double-click on another slot in the FXmachine, the Plug-In Edit View window will be updated to view the new Plug-In. This avoids having windows open unnecessarily and will display the Plug-In window in the same position for all Plug-Ins, so you don't have to rearrange your screen layout every few steps.

The size of this Edit View Window will stay adjusted to the largest Plug-In user interface that has been viewed in this window. This is to avoid resizing of the window and will give you a more stable view. Of course you can always resize the window manually by clicking on the Zoombox icon in the title bar of the window.



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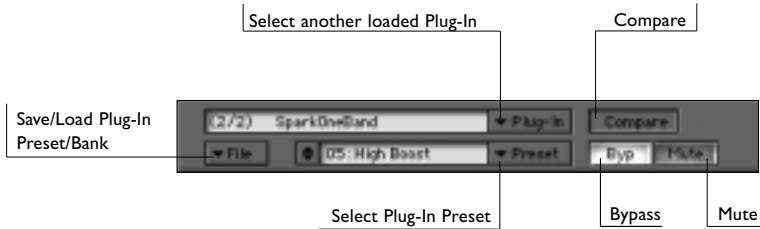
### MULTIPLE PLUG-IN EDIT VIEWS

Usually, when you open the edit view of a Plug-In, it will show up in the same window the previous Plug-In used. In some cases, it might be helpful to get more than one effects window open at one time. To open additional Plug-In edit screens, press the <OPTION> key while double-clicking on the Plug-In on the matrix. This will open a Plug-In View for this particular Plug-In. This window is reserved for this Plug-In and will not change or disappear when you choose a Plug-In from another matrix slot.

*Note: Pressing <COMMAND + O> will show/hide the Master View and all Plug-In windows by just one single key stroke.*

### THE HEADER OF THE PLUG-IN EDIT VIEW

On top of each Plug-In Edit View you will find the Plug-In header with “Compare”, “Bypass” and “Mute” buttons, as well as the preset management of the Plug-In.



If you want to change to another Plug-In Edit View, simply choose one from the Plug-In pop-up on top.

*Note: Only slots with loaded Plug-Ins can be chosen from this pop-up list; empty slots will be grayed out.*

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# PLUG-INS

**SPARKie** has a powerful realtime processing engine with 4 Plug-In slots. You can either load any of the included **SPARKie** Plug-Ins or Plug-Ins which are compatible with Steinberg's VST Plug-In interface. Please note, that the included Plug-Ins do not support VST – so they can only be used in **SPARKie**!

**SPARKie** includes the following three Plug-Ins:

## ONE BAND EQ

This Plug-In supplies you with TC-quality equalization. By loading multiple instances into **SPARKie**'s FX slots, you can e.g. build up to 4 bands of Notch filtering to fix a noise problem or create a comprehensive 4-band parametric EQ.



TYPE: Low Shelf, Hi Shelf, Parametric and Notch  
FREQ: Frequency adjustment from 20Hz – 20 kHz  
GAIN: -18 – +18dB, preset to -96 dB for the “Notch” type  
BW: 3, 6, 9 or 12 dB/Oct. for shelving types, 0.1 to 4 octaves for parametric and 1 to 100 for Notch.

*NOTE: Double-clicking on a value field will bring up a dialog for numeric entry.*

## DELAYIT

This stereo delay line is great for use in a musical context, as you can set the delay time not only in milliseconds, but also in Beats Per Minute (BPM) – which makes it easy for you to match the delay time with the tempo of your music. Try working with half tempo on one side and double tempo on the other and a Feedback of 0% – this will create a very nice stereo effect.



**Delay** adjusts the delay time independent for left and right channel from 1.0 to 2000 milliseconds. Click on the display and move the mouse up or down for adjustment.

The **Feedback** parameter allows you to generate repetitions for your delayed audio, creating the classic “echo” effect.

The **Mix** parameter adjusts the ratio between dry and effected audio.

*NOTE: Double-clicking on a value field will bring up a dialog for numeric entry.*

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## MAXIT

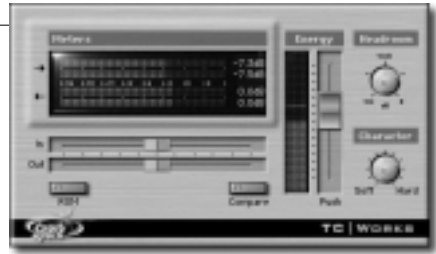
When mixing or mastering a project, you might want to boost the loudness or “energy” of the music. MaxIt will supply you with an easy-to-use, yet powerful dynamics processing tool to do just that! With only 3 parameters you’ll have everything under control.

**Energy** determines the amount of “boost”. The further you push it up, the more your audio will be “squeezed” and sound subjectively louder. Be careful – don’t push too far, this is strong medicine!

On the **Energy meter** you’ll be able to see how much processing is going on.

**Character** controls the strength of the dynamics processing. Of course you’ll only hear an effect if the Energy fader is pushed up far enough so the algorithm is working. “Soft” adjusts the algorithm to treat your material carefully, with clean-sounding results. But if you’d like even more level boost – turn the knob towards “Strong” and you’ll notice how the process will push the material even more. However, there’s a trade-off: depending on your material, you might notice a “dirtier” sound. Like with the Energy Fader, handle with care!

**Headroom** is an essential parameter when you’re mastering for CD: You can decide to leave some “room”, so your audio doesn’t go up to 0 dB, but is limited at a maximum of -0.1. Some CD manufacturing plants do recommend to leave such a so-called headroom to eliminate the danger of having unnoticed clips in the material.



# MISCELLANEOUS

## PREFERENCES

The Preferences dialog allows you to define defaults for SPARK LE, such as the location of your Plug-Ins or your preferred time scale as well as many other settings. You will need to set up most of SPARK LE's Preferences only once. Preference settings are saved globally rather than with each Project File.

To set the Preferences, choose "Preferences..." from the Edit menu ( <SHIFT + COMMAND + P> ). The Preferences are stored in a file called "SPARK LE Preferences", which is located in the System Folder::Preferences. If SPARK LE can't find this file, you will be notified by an error message and a new Preferences file with the default settings will be created.

## GENERAL

### WARNING DIALOGS

Many dialogs allow you to check a box titled "Don't show again". If you check that box, the corresponding message won't show up again. For example, if you click on the Trash Icon in the File View, you will see the message "Do you really want to delete this item?".



If you feel that you don't need this warning every time you click on the Trash icon, you can check the "Don't show again" box. From now on the selected file will be deleted immediately without further warnings.

Checking the "Activate/show all warning dialogs again" function in the Preferences will reactivate all deactivated warning dialogs.

### CD EXPORT

If you are using Roxio Toast, Jam or apple iTunes for CD Burning, you need to point SPARK LE to the location of that CD Burning application. This will enable SPARK LE to start the application when pressing the "Create CD" icon in the Play List. Simply press the "Choose Location" button and select the right folder.

## PLUG-INS

### PLUG-IN FOLDERS

On the Plug-In page, you can define up to four different Plug-In folders for SPARK LE – and select which folders you want activate.

For example, you could split your Plug-Ins into different groups, a “Recording” group and a “Mastering” group. Or you might have another application on your system that has its own VST Plug-In folder. You don’t have to copy these Plug-Ins and have the Plug-Ins on your harddisk multiple times:

Set the other Plug-In folder as one of SPARK LE’s Plug-In folders – that’s it!

To select a Plug-In folder, click on one of the four “Choose” buttons and select the right folder. The default folder for SPARK LE’s own Plug-Ins is “VST Plug-Ins” in the SPARK LE folder.

To activate/deactivate a Plug-In folder, check/uncheck the corresponding check box.

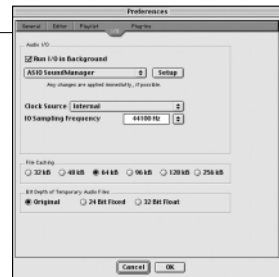
*Note: SPARK LE will search in all subfolders of a Plug-In folder for valid Plug-Ins. If multiple instances of a Plug-in were found in the defined Plug-In folders, only the first instance of the Plug-In will show up in the Plug-In list – the Plug-In won’t show up multiple times.*



## I/O

This is probably the most important Preferences page. Here you define SPARK LE’s I/O device, File Caching and how temporary audio files are stored.

There are two ways to add an ASIO driver to Spark LE 2.6 in Classic MacOS. While both methods are described below, it is important to know that the "simple" method is transparent to the end user, and the "Advanced" method requires access to the Spark LE 2.6 app bundle.



The simple method is to drag the ASIO driver for your soundcard to the "Add ASIO Drivers" folder before launching Spark LE.

Please note that this requires that you have Apple Script enabled on your computer. After dragging the ASIO driver to the "Add ASIO Drivers" folder, an Apple Script dialog will pop-up prompting you to "Cancel", "Remove Drivers" or "Add Drivers".

Select "Add Drivers". The application will now add the drivers to a sub-folder in the "Spark.app" bundle.



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After the drivers have been added, the next screen will provide you with a "List of currently installed ASIO Drivers."

Select "OK" to quit the application and return to the finder.

The next time you launch Spark, your newly added ASIO driver will be available from your I/O Preferences.



## AUDIO I/O

The option "Run I/O in Background" will allow SPARK LE to continue with the playback, even if you are currently working with another application in the front. If you uncheck this option, the playback will immediately stop as soon as SPARK LE will be switched to the background. At the same time, the audio device will be released by SPARK LE. This way, other audio applications will be able to use this audio device as I/O.

Select your preferred audio I/O system, such as the ASIO SoundManager or the ASIO driver for your audio card. Your audio hardware is only available in the pop-up list, if your audio hardware's ASIO driver is moved or copied into SPARK LE's "ASIO Drivers" folder, located inside SPARK LE's main folder.

Usually, you can change between different ASIO drivers without relaunching SPARK LE. If this is not possible, SPARK LE will request to be restarted.

*Note: If you select SoundManager as the default I/O device, you will not be able to record audio. Please choose ASIO SoundManager instead.*

Press the Setup button to get your audio hardware settings (if applicable). Please have a look in your audio hardware's documentation for more information. Also, other options like the available Clock Sources and I/O Sampling Frequencies are hardware dependent and therefore not described in this manual.

## FILE CACHING

The file caching parameter shouldn't be touched unless you experience problems with dropouts during recording or playback (especially when working with 96kHz or higher). As a rule of thumb, slower hard drives (like PowerBook hard drives) will require a larger buffer size – but remember that bigger cache sizes require also more memory for SPARK LE.

## BIT DEPTH OF TEMPORARY AUDIO FILES

While you are editing files, SPARK LE will create temporary files with the changes you have made. With this option, you can define the bit depth (and therefore the quality) of the temporary files: Besides the bit depth of the original file, you can also choose 24 bit (fixed) and 32 bit (float) for higher quality.

## EDITOR

### UNIT USED BY EDITOR

The Editor page allows you to select the preferred time unit, drawing mode and Clipboard settings.

“Unit used by editor” sets the preferred time unit, either in Sample Frames, Seconds, Hours:Minutes:Seconds or even milliseconds. The chosen unit will be used for time indication in the Browser View.



### WAVE OVERVIEW BEHAVIOUR

With this option, you can select the playback behaviour in the Waveform overview (the upper waveform in the Editor) "Start Prelisten with <COMMAND + Click>" will start the playback only, if you click in the overview while pressing the <COMMAND> key, while the other option "Start Prelisten with Normal Click" will start the playback without any additional key pressed.

### DRAWING OPTIONS

The “Drawing options” should be set according to the speed of your computer. The default setting is “High Quality”. If you get the impression that your computer isn’t fast enough for waveform redraws, in the clipboard try “Normal” or “Fast Mode”.

### WHEN RESIZING THE WINDOW

This option allows you to change the behaviour when you vertically resize SPARK LE’s Browser View. “Zoom my current view” will show the same content as before, “Resize my current view” will show/less of the current waveform.

### PROPERTY DIALOG ON REGION CREATION

Check this option, to get the “Property” dialog with naming option for the Region automatically every time you create a new region.

### SPLIT STEREO FILES

SPARK LE can work directly on split stereo files. If you check the option “Automatically load L & R files as stereo files”, files named “.L” and “.R” will be loaded as stereo files, even if you just select one of them.

### UNDO/REDO

Here you define the undo stages per client. A client is for example the Play List, the FXmachine, a Plug-In, ... Set the number of undo steps you would like to have (from “unlimited” down to 5). “Unlimited” is the most secure setting, but requires also most memory (both, RAM and HD space). For more details on the Undo/Redo feature, please read the Undo/Redo discription in chapter 2.

The “Temporary File Folder” defines the folder where temporary files are stored on your system. By default, this is an invisible folder on your system harddisk. The Temporary File Folder should be set to a drive with enough space for audio files!

## PLAY LIST

### DEFAULT PLAY LIST ENTRY

On the Play List page, there is the possibility to select a default transition type for new entries that are added to the Play List. For example, if your preferred crossfade type is a 10ms Equal Power crossfade, and you want to have this setting as default for all regions you add to the Play List. Select Equal Power as Crossfade Type and set the Crossfade length to 10ms.



*Please note that, although you can set a Pause Length and a Crossfade Length time only the time belonging to the selected Crossfade Type will be used!*

If the default Crossfade Type is “Pause”, the Pause Length will be used, otherwise the Crossfade length. As the “Hard Cut” type has a length of zero by definition, the Length settings will be ignored if you choose this type.

### BIT DEPTH OF PLAY LIST

When exporting the Play List via the “Export Play List” function, or when rendering effects to the Play List (“Create File” dialog), this is the default value for the Play List bit depth. However, if you can define a different setting in the “Save As” dialog when you specify the file name.

## SPARKLE FILE TYPES

SPARK LE utilizes several types of files:



### PROJECT

The Project file includes all the file references, Regions, Play Lists, FX settings and configurations, Window settings, etc. In short, everything! Load and save Projects from the File menu.

Saving a “default.prj” in the SPARK LE application folder will allow you to start SPARK LE with preconfigured settings, presets and even preloaded files and Plug-Ins!

If you don't want to load the “default.prj”, press <CONTROL + OPTION> while starting SPARK LE.



### WORKSHEET

A Worksheet includes all the information you find in the Browser View, including references to the audio files used, Regions and Play List entries.

To save a Worksheet, select “Export Worksheet” from the File menu. To load a Worksheet, select “Import Worksheet.”

Worksheets do not include information about the Master View (i.e. no FXmachine and Plug-In settings).



### PLAY LIST

You can export your Play List as a CD-Image (a single audio file). Simply press the “Export” button. This will create an Sounddesigner II file. You can use it to burn a CD directly.



### PLUG-IN BANK

A Plug-In Bank consists of a number of Plug-In Presets. To load and save a Plug-In Bank, click the “File” button in the Plug-In Edit View. VST Plug-In Banks are compatible with other VST applications.



### PLUG-IN PRESET

A Plug-In Preset includes one setting for a Plug-In. To load and save Plug-In Presets, click the “File” button in the Plug-In Edit View. VST Plug-In presets are compatible with other VST applications.



## AUDIO FILES

SPARK LE will save your audio files as WAV, SDII or AIFF. Project Files only refer to these audio files, they don't include them! If you move an audio file to a different location, delete or rename it, existing Project files won't be able to find this file anymore.



## OVERVIEW FILES (OVW)

For each audio file used in SPARK LE, there will be an overview file created. These overview files contain the waveform overview and enable SPARK LE to show the waveform of a file immediately when it is loaded. If the audio file and the overview file modification dates will not match, SPARK LE will automatically create a new overview, to make sure that audio file and waveform view are synced.

## HARDWARE SUPPORT

The ASIO interface is supplied by Steinberg, so finally all applications on the Mac can share the same sound card drivers. This makes it much easier for you and for the manufacturer of your sound card. Only one driver is required, for compatibility with all applications that implement the ASIO interface!

Thanks to ASIO and the "ASIO settings" panel, you can optimize the performance of your system. In native audio systems there's a delay (called "latency") between the input and the output. You will notice this mainly when trying to record live. How much or little latency you experience is primarily dependent on your sound card's driver. Please consult your sound card documentation for more details.

## LOOPING

In the "Options" menu, you can switch Loop Mode on and off. Select OFF to deactivate the Loop function. "Forward" will play the Loops in the forward direction, as the name suggests.

When Loop is activated, there are two loop markers in the waveform display. When you start playback, SPARK LE will loop between these markers.

If you move a marker during playback, you will immediately hear the result of this change, so you can easily fine-tune the loop to sound the way you want.



