Music Editor

manual

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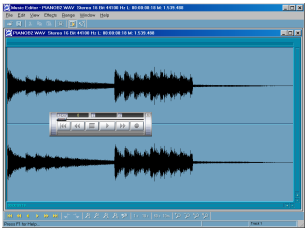
Introduction

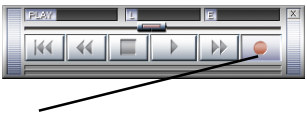
The MAGIX® Music Editor is an independent sub-program for audio processing or own recordings.
All audio formats are displayed as waveforms in the project window and can be processed there in a variety of ways.
In the case of AVI videos, the video sound track is extracted and processed as a waveform.



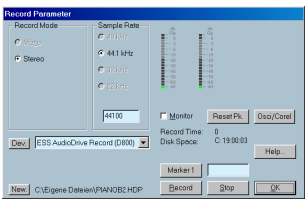
Quickstart

Record

For your own recordings you should have an audio source attached to the soundcard input, e.g. a record player or microphone.
Then click the Record button in the transport control to open the record parameter dialogue.
Activate the Monitor button! This function allows you to listen to the recording material before recording, or listen while recording.
The LED peak metre shows what is received by the soundcard input. If the level is too high, the LED peak metre indicates a 'Clip' display (top LED). You definitely need to reduce the volume.
Actual recording starts only when you click the Record button in the record dialogue. Start!
You are recording. The MAGIX® Music Editor shows this in the record window with a counter (recording time display).
If you click the **Stop** button, the MAGIX® Music Editor stops the recording and shows a dialogue, where you can then choose to keep or discard the recording.
If you click the Delete button, the program returns to the record window. You can then repeat the recording or stop altogether.
If you press the OK button, the MAGIX® Music Editor will show a waveform of the recorded material in a project window. You can save it as an audio file or continue processing.



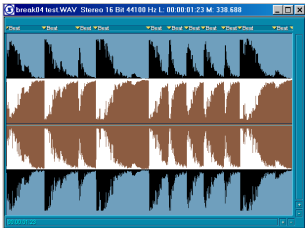
Record



Record parameter

Audio processing

The MAGIX® Music Editor allows you to cut, process and refine your recording and any other audio material.
Audio material is presented in waveform in a project window. The various zoom and editing functions allow you to move between different views.



For all processing: the area to be processed must first be marked on the waveform with the mouse.
The Effects menu allows you to filter unwanted noise disturbance or replace unwanted passages with silence. You can also apply 'real' sound effects, like reverb or echo.
The audio material is best saved as a so-called HD-Wave project on the hard disk. The files get the suffix 'HDP' . Most audio programs can read and process HDP projects directly.

Terminology and Editing Concepts

The following lists some specific terms that where defined to describe components of MAGIX® Music Editor that are mentioned frequently throughout the documentation. Even if you were somewhat familiar with some of the particulars, we would like to encourage you to read the definitions for the individual terms. The terms are specific context related and are not further covered in the rest of the documentation.

Section

MAGIX® Music Editor can display any project window in up to three sections. This enables you to show the complete sample in one section while displaying smaller sections in one or two other sections. Each section can be accessed and edited in separately.

Active Section when using Zoom Levels: If Zoom commands are used on one of the display sections, such as the buttons on the Positionbar, it is important to designate the section that is to be zoomed. Click on the left or right scrollbar of a section to activate it.

Range

A range can be selected with the mouse. Ranges can be played back with the Spacebar. It is defined by the beginning and end (horizontal) and by the upper and lower limits (vertical).
The range is utilized to earmark sections, which will be used to manipulate the material in the range (Cut, Insert, Normalize, Fade-In, Fade-Out, Move, Effects, Delete, etc.).
The second function is the definition of loops, which are repeated during playback.
The third task of the range is the configuration of section edges in which graphical data is displayed. Especially the upper and lower edges may be analyzed during editing, which is not the case with some of the function groups!

Every project can have an unlimited number of ranges defined. Up to 10 ranges can be accessed directly through the function keys.

Selecting a Range: To select a range, move the mouse pointer to a section in the window display and click the left mouse button. While holding the button clicked, drag a range by moving the mouse to the right. The range is indicated by the vertical rectangle displayed in the window.
Next, release the mouse button. MAGIX® Music Editor displays the horizontal range values right underneath the title bar of the project window.

De-Selecting a Range: If you want to select a different range or want to deactivate the current range selection, click the mouse button once into the project window. The previous range disappears and the window can be used to select a new range.

Changing a Range: If you want to change an already selected range outline (beginning, end, upper, and lower border), simply click the left mouse button into the range and while holding the button, move the mouse in the direction you want to extend or shorten the range. As soon as the mouse pointer crosses over the current range border, the program picks up the border and snaps it to the mouse pointer. You now can move the range border to the new point and release the mouse button.

Moving a Range Horizontally: Hold the Ctrl or Shift key while clicking inside a range. Next, hold the left mouse button clicked and move the range to the new position. Release the mouse button to place the range at the new location.

Saving Ranges and Special Range Commands: Ranges and markers can be saved with the help of menu functions or keyboard shortcuts.
MAGIX® Music Editor can store an unlimited number of ranges and markers. These and other special functions to define, change, and use ranges can be found in the menu Ranges.

Moving of Ranges in Small Increments (Keyboard Shortcuts): By holding the Shift key and using the cursor keys, ranges can be moved in small increments. An

overview of all keyboard shortcuts can be found in the Shortcuts section.

Changing Range Ends in Increments Using the Mouse: This is most often needed when searching for optimized loop borders in Wave projects. The sections can be split with a keyboard shortcut (Shortcut: 'b') or with Range->Split Range. All range borders are displayed with a high-resolution zoom level.
Using Shift + b returns the display to a single section.

Clip

The Clip is a storage place for samples from Wave projects, which are copied from a Wave project window and can be inserted in the same Wave project or a different one. In addition, the content of the Clip can also be mixed with that of another Wave project window. The Clip always takes on the attributes of the originating project (Bit Rate, Sample Rate, Mono, Stereo Mode). The Clip is represented on the screen with a window that contains the word 'Clip' in its title bar. Otherwise, the Clip is like any other project that can be played back, edited and saved with a different name.

Marker

Markers are used to store specific time locations. They are indicated on the upper edge of the sample display by small triangles and show any assigned name or number. These markers can be moved with the left mouse button. Any project can have an unlimited number of markers. Up to 10 of these markers can be accessed through the number keys. A marker that has been assigned to one of the number keys carries the name '1' through '10'. The menu option Range>Store Marker>Other can be used to store markers with specific names. These names are displayed next to the marker in the project window.
If you click the right mouse button in the area where the markers are displayed, a context sensitive pop-up menu is displayed, which contains additional commands to manipulate markers.
To select a range between two markers, click on the triangle of the first marker to activate it, followed by holding the Shift key and clicking on the second marker.

Play Cursor

The Play Cursor or the Position Line is the vertical moving line during playback and shows the current playback position.

The start position of the Play Cursor (playback start) is set by clicking the left mouse button into the project window. This deselects any previous range.

Wave Projects

A Wave project contains audio data. Access to the Wave project is obtained by selecting the corresponding Wave project window. The title bar of the window displays the name of the Wave project, the bit resolution, the length of the sample, and the resulting storage requirement. To activate the window, simply click into the project window. MAGIX® Music Editor can work with an unlimited number of Wave project window displayed on the screen. Working in a Wave project window works much the same as with conventional sample editing programs and you may already be used to those conventions.

To perform destructive editing, it is necessary to select a range with the left mouse button.

Clicking the right mouse button opens a context sensitive pop-up menu. The menu displays the most important functions for working with destructive processing.

Mono Wave Project: Contains mono audio data.

Stereo Wave Project: Stereo audio with a standard two-channel graphical display (combined display of both stereo channels). Contains stereo audio data. The sample values for the right and left channels are contained in the same file in successive order.

Menu File

Open Project

WAV (*.WAV): WAV Files (Standard Audio Format).

HD PROJECT (*.HDP): This is the data format for MAGIX® Music Editor files.
When opening a WAV file, MAGIX® Music Editor automatically creates an associated HD Wave project. The HD Wave project file contains additional information about the audio file, such as marker positions. Once the WAV file has been opened once in MAGIX® Music Editor, it can be loaded as a HDP from that point on.
Please note that direct editing of WAV files from a CD-ROM is not possible. Please use Import Sample instead.

KEYS: w for WAV files
Shift + L for HDP files

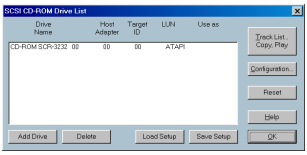
TOOLBAR: 

Load CD Track(s)...

This function allows you to import audio data from most CD ROM drives and CD-Writers in the digital domain, without any loss in quality. Please contact our technical support for the latest list of supported drives.
The HD Wave projects are recorded as WAV files and can therefore be edited with other audio editing programs without having to convert them first.
To do this, please follow these steps:

1. Open the drive list dialog and select your desired CD-ROM drive, if you have more than 1 drive
2. Click the 'Track List' Button
3. In the CD track list dialog select one or more tracks in the list box
4. Click on 'Copy Selected Track(s)..'
5. Select a filename for the new WAV file or HD Wave project and click O.K.
6. Now the audio data is copied from the CD-ROM to your hard disk as a new WAV file.

Features of the Drive List Dialog:
TRACK LIST (COPY, PLAY)...: This button opens the track list dialog for selecting several audio tracks of your CD.



CONFIGURATION: This button opens the drive configuration dialog, where you can select special copy modes and SCSI IDs.

RESET: Restores the standard drive settings.

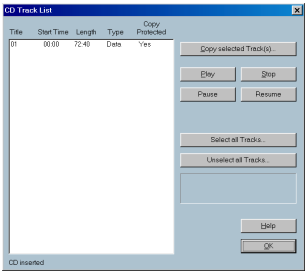
ADD DRIVE: Creates a new drive entry in the list for editing the configuration data.

DELETE: Deletes the selected drive entry from the drive list.

SAVE SETUP: Saves the drive list and all configuration data in a *.cfg file.

LOAD SETUP: Loads the drive list and all configuration data from a *.cfg file.

Features of the Track List Dialog:



COPY SELECTED TRACK(S): This button starts the audio data copy process, all selected tracks from the list are copied into one WAV file.

PLAY: Starts audio playback of the first selected track in the list.

STOP: Stops audio playback.

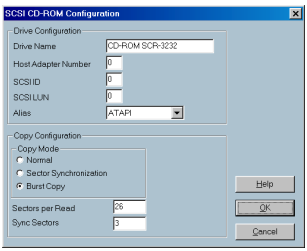
PAUSE: Stops audio playback for later resuming.

RESUME: Resumes playback if previously paused.

SELECT ALL TRACKS: Selects all tracks of the CD for copying the complete volume. You can select multiple tracks with Ctrl + mouse click or with Shift/ Alt + Cursor keys!

DESELECT TRACKS: Closes the drive door of the CD ROM drive.

Features of the CD ROM Drive Configuration Dialog:



DRIVE NAME: Lets you edit the name of the drive in the list. This is useful if you create more than one entry accessing the same physical drive.

HOST ADAPTER NUMBER: Lets you specify the number of your SCSI adapter – normally 0.

SCSI-ID: Lets you set the ID of your CD ROM drive. Be sure to set the correct ID, there is no error checking!
SCSI-LUN: Select the SCSI LUN parameter, normally 0.

Alias: Lets you select a manufacturers type of your CD ROM drive.

Copy Mode Normal: Copies the audio data without any software correction.

Copy Mode Sector Synchronization: Copies the audio data using a software correction algorithm. This is useful, because some CD ROM drives cannot seek exactly to the same position between two read accesses but MAGIX® Music Editor can correct these differences using this algorithm.

Copy Mode Burst: Optimizes the speed of the copy process, no software correction is done.

Sectors per Read: Defines the number of audio sectors per read cycle, the higher the number the faster the copy process will be. Not all SCSI adapters support more than 27 sectors!

Sync Sectors: Defines the number of audio sectors used for the Sector Synchronization. A higher number results in a better synchronization but also in a slower copy process.

Save Project

The current project is saved with the name displayed in the project window. If you previously have not specified a name for your project, MAGIX® Music Editor will ask you to do so.

Toolbar: 

Keys: s

Save Project as...

You can define the path and name of the new project you want to save your work under. HD Wave projects are renamed on the hard disk. MAGIX® Music Editor will not generate a copy of it for reasons of conserving space on your hard drive.

KEYS: SHIFT + s

Save in Format

With this function, you have the possibility to convert projects between the different MAGIX® Music Editor Wave project formats. An option is the conversion to and from stereo Wave projects to mono Wave projects.

Rename Project...

The 'Rename Project' command will let you rename a project file rather than save it to a different file. For RAM Wave projects, only the internal names are changed (without being saved). But all corresponding files are renamed immediately in the case of HD Wave projects.
RAM Wave projects need to be saved after renaming the project.

Delete Wave project...

HD Wave projects are deleted from the hard disk. Use this command with caution, as all corresponding files are lost.
(If you wanted to delete a HD Wave project (HDP) from a file manager such as Windows Explorer, it would also be necessary to delete the graphic files related to the project files.)

Import Sample...

MAGIX® Music Editor gives you the option of importing Wave, AIFFor Sample Dump files into a MAGIX® Music Editor project. You will need to specify which type the project is going to be, a RAM Wave Project, or a HD Wave project.

Difference between Open->WAV and Import Sample->WAV:
The command Open->WAV opens an already existing WAV file and edits the file as a HD Wave project. MAGIX® Music Editor automatically creates a HDP file and the corresponding graphic file in the source folder.
When importing a WAV file, the complete file is copied. Additional hard disk space is needed and the process takes much more time, since the audio file has to be copied with Open Project->WAV. Import Sample->WAV has to be used when intending to use the WAV file as a RAM Wave project.

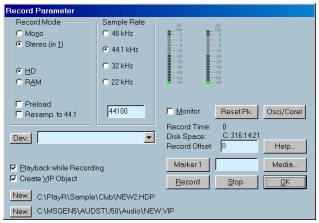
Export Sample...

The command 'Export Sample' will let you export HD Wave project or RAM Wave project files into Wave-/ MPEG (1:10), or – with an external encoder – as MP3 files and Dump files. Keep in mind, that your project file needs to be either in the 8- or 16-bit mode. You can save it both in Mono or Stereo format.

A Note about Export Sample:

The audio data files for HD Wave projects can be directly loaded or imported as WAV files by other audio applications. The command Export Sample is only necessary if you want to copy the audio file. Keep in mind that the hard disk requirement increases and that the copy process takes additional time.
This command has to be use to convert RAM Wave projects into WAV files.
Please note that direct editing of WAV files from CD-ROMs is not possible. Please use Import Sample instead.

Record...



This menu option opens the Record window. All necessary settings for the recording can be performed here.

Record mode: Select between Stereo and Mono.

Sample Rate: Select the sample rate of the audio file. Make sure that your sound card supports the chosen sample rate.

Device: This selects the desired device driver you want to use for the recording. If you have more than one sound card installed in your system, this window will let you specify which card to use. Make sure the sound card is properly installed in Windows and is operational. If you do not see an entry in this window, check whether a device driver has been installed for your sound card. This usually is done during the software installation for your sound card.

? (Device): By clicking on the '?' button you can check on the record capabilities of the selected sound card. It shows you information on the sound card driver and it's capabilities.

Monitor: This checkbox activates the VU meters. Most sound cards also allow you to preview the audio signal you are about to record and depending on the features of the sound card, you will be able to monitor the recorded signal during the recording.
To keep the system requirements down, you may wish to disable the monitor function if it is not crucial to the recording you are doing. This will lower demand on the computer system, which may be required if you are working on a slower system.
During the recording, the meters will react more slowly due to the priority level change. The most important task is to keep the recording error free. For this reason, MAGIX® Music Editor will switch the updating of the VU meters to a lower priority to not overload the computer system. This results in a slower reaction time of the meters. The levels are still shown with the correct values. Also, if you use lower buffer settings, the meters are updated in faster intervals.

Corel/Osci: A oscilloscope view can be opened to display the wave form in a scaleable window. When activating the Phase check the phase correlation of a stereo signal can be displayed.
A vertical line represents a mono signal, a horizontal line represents a signal with a phase inversion, which is not wanted in most cases.

Record Time: This counter indicates the length of the actual recording in minutes, seconds, and milliseconds.

Disk Space: This counter shows you the available disk space in total track minutes for the selected sample rate and record mode. This counter does not decrease during the recording. It is updated after the recording takes place.

Help: This brings up the context sensitive help system with information on the features in the Record Parameter dialog.

New (Button 1): The path to the left of the button indicates the location of the audio file that is to be recorded. If you click on the New button you may enter a new name for the audio file or a new location. This is an easy way to target specify directories or hard disks as destinations for the new audio files. If you select a new name, the Wave project is renamed as well.

Set Marker 1: You can drop markers into the project. The current position of the play cursor is used to drop a marker at positions you want to select for later clean-up or similar tasks.

Record: Starts recording by activating this button.

Stop: Stops the recording process. MAGIX® Music Editor will ask you whether you wish to keep the recording or delete it.
Should the computer become overloaded due to swapping data or hard disk access for example, simply interrupt the recording with a click of the right mouse button or the space key.

OK: Closes the Record Parameter dialog.

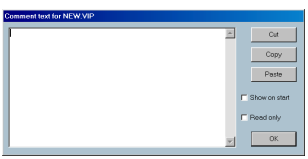
Key: r (second r starts recording)

Properties → Project Information

This will show you information on the current project. This includes creation date, memory size, path and file names.

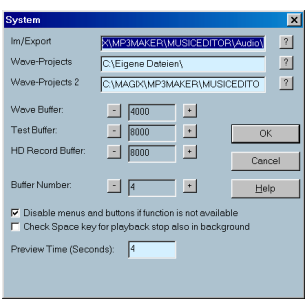
Key: i

Properties → Text Comments



You can enter text comments to the current project via a simple text editor. This text can be displayed at each new opening of the project. This will preserve important information about the project together with the audio material.

Preferences → System



In the 'System' menu, you have options to fine-tune MAGIX® Music Editor. You can specify parameters such as paths and play and recording buffers.

Im/Export: To enter the default path for wave import and export. Click on the '?' button to bring up another window to look for a specific directory in case you do not know the full path.

HD Wave Projects: To adjust the default path for HD Wave projects.

Play/Record Buffer: This setting determines the buffer size for the playback and recording of audio files. Larger buffer settings may lead to a more stable playback on slower systems or at full CPU load. The number of simultaneous playback tracks increases. However, the response of the computer slows down, which may have an adverse effect on real-time effect editing. We therefore suggest finding an optimal compromise for your individual system.
For simultaneous playback and record (Record while Play) the buffer settings for the HD Record and HD Buffer needs to be the same.

HD Wave Buffer: The default setting is 8000 Samples. This buffer is used for the playback of HD Wave projects. To gain faster response times, try smaller settings.

Real Time Buffer: The default setting is 8000 Samples. This buffer is only used for the real-time preview in the Effect menu dialogs.

Buffer Number: This setting determines how many of the above buffers are to be utilized (values between 2 and 9). A higher setting for Buffer Number secures a more stable operation. However, the memory requirement increases and the response time decreases. The actual buffer utilization can be monitored with the status bar in the lower right-hand of the MAGIX® Music Editor screen.

HD Record Buffer: The default setting is 8000 Samples. This buffer is used during the recording of audio material and determines the length of the data block that is written to the hard disk.

Disable menus and buttons if function is not available: When checking this option, only those menu options appear in the menu selection, which are actually available with the type of project window.

Check the Spacebar for Playback Stop in the Background: The spacebar is used for playback start and stop. If MAGIX® Music Editor is playing in the background, (another Windows application takes the focus), this option determines whether the spacebar is monitored to stop playback in MAGIX® Music Editor.

Preview Time: This determines the length of preview for the non real-time preview in the Effects menu dialogs. The non real-time preview is used for very processing intensive effects in the destructive Wave editing portion of MAGIX® Music Editor (Menu 'Effects').

Keys: y

Preferences→Undo Definitions

The depth of undo can be specified. A value of '20' means that the last 20 changes can be undone.

Preferences→Colors

MAGIX® Music Editor lets you specify the color for various areas of the screen. Use this menu option if you want to change the default color to another one.

Exit

This command will exit MAGIX® Music Editor. Please note that all changes made to any project not saved prior to exiting will be lost.

Keys: Alt + F4

Menu Edit

Undo

MAGIX® Music Editor offers you a comfortable way of tracking your changes. Up to 100 changes can be kept in memory and traced backwards
Range and marker manipulations can also be undone using the 'Undo' feature.
Thanks to this extremely efficient feature, critical operations can simply be tried and then reversed to return to the original status if the results are not satisfactory.

KEYS: CTRL+z

Redo

Redo revokes the latest undo command.

KEYS: CTRL+a

Cut

The audio data in the selected range are copied from the current Wave project into the Clip. The material behind the removed range is merged with the material in front of the removed range to close the gap. The complete Wave project becomes shorter.
Please keep in mind that the Clip always contains the same attributes as the Wave project the material was copied or removed from.
If you cut material from a mono Wave project, the Clip becomes a mono Wave project. If material from a stereo Wave project is cut or copied to the Clip, the Clip becomes a stereo Wave project. Another attribute adopted is the bit resolution and the sample rate of the originating Wave project. The previous contents of the Clip are deleted.
After a successful removal of the selected material, MAGIX® Music Editor drops a marker at the position the removed range previously started. This allows you to insert the contents of the Clip into the Wave project at the exact same spot if you accidentally removed the material. Use the function Edit->Paste/Insert Clip to insert the Clip contents.

TOOLBAR: 

KEYS: CTRL + x or x

Delete

The data of the current range is deleted. The sample data after the deleted range is added at the position the deleted range started. The sample length becomes shorter. Please note that this command will not save the deleted data to the Clip. If you want to preserve the deleted sample data, use the 'Cut' command. Using this the 'Delete' command will delete the data from the current sample and preserve the contents of the Clip.

KEYS: Del

Copy

The current range is copied into the Clip but not deleted in the project. The sample length is not varied. Please note that the former Clip contents are deleted. The Clip again has the same attributes as the project.

TOOLBAR: 

KEYS: CTRL + c or c

Copy as

The current range of a Wave project is copied into a new file. A file requester appears to select the name of the new project.

Insert/Paste

The contents of the Clip are inserted into the current project behind the position of the play cursor or the beginning of the currently selected range. The data that are located behind the insert position are moved out of the way to make room for the Clip contents. The samples or audio tracks become longer. The Clip remains unchanged during the procedure. If the Clip was empty, an error message is displayed.
After inserting the contents, the program selects a range over the inserted area. If you select Edit->Delete , the inserted contents are removed and the project is returned to the original state.

The following table shows how MAGIX® Music Editor responds in the case the clip and the project have different channel numbers:

Clip	Project	Clip Channel	Project Channel
Mono	Mono	Channel 1	Channel 1
Stereo	Stereo	Channel 1	Channel 1
		Channel 2	Channel 2
Mono	Stereo	Channel 1	Channel 1
		Channel 1	Channel 2
Stereo	Mono	Channel 1	Channel 1

Shortcuts:
Toolbar: 

Keys: CTRL +v or v

Overwrite with Clip

The current range is replaced with the Clip contents. The overall sample length remains unchanged. The data that occupied this position before cannot be recalled. The Clip contents are not changed. The assignment of the Clip channels follows the table mentioned above.

Keys: Alt +v or Insert Key

Extract Range

This function is the counter part of the 'Cut' function. The current range remains unchanged only the sections before and after the selected range are permanently deleted. The audio file becomes shorter. The contents of the Clip are unchanged.

Mix with Clip

The range contents and the Clip contents are mixed. Channel assignment between project and Clip follows the table above (See 'Insert' function). The contents of the Clip are not altered.
Since either component is combined with their full sample values, make sure that no over-modulation takes place. This function is performed by way of addition. This assures on one hand, that the project sample remains free of a sudden volume decrease. On the other hand, modification of the amplitude might need to be performed before the mix to keep the resulting sample from clipping and distorting. For information on amplitude modification, see 'Editing Menu.'

Insert Workspace

The 'Insert Workspace' option will insert 'blank' data at the current play cursor position or the position of the cur-

rently selected range. Size and position of the inserted blank space will depend on the length of the range selected before.
The blank space will actually contain data with zero value. The data following the insertion point will be added to the end of the blank space. The defined range is maintained, the length of the inserted space extends the overall sample.
If you do not have sufficient memory to insert the workspace, MAGIX® Music Editor will display an error message.

Crossfade

The section before the current play cursor position or the selected range is merged with the contents of the Clip in a way to create a crossfade section. Two separate cuts are needed:
1) Copy a range into the Clip.
2) Set the play cursor on the desired position and then call up the crossfading function.

Amplitude / 2

This function divides the amplitude of all sample values by a factor of 2. The same could be achieved by a fade-in/fade-out with parameters ranging from 50% to 50%. However, this function is much faster since computing time is greatly reduced.

Amplitude * 2

The same holds true for the 'Amplitude * 2' function. However, sample amplitude values are multiplied by a factor of 2, thus corresponding with a fade-in/fade-out process with parameters ranging from 200% to 200%.

Append Projects

With this function a project can be appended with another project, i.e. the material of one project is copied directly behind the material of the first.
You need to first select the project you want to append. Then you activate the menu and click on the project you want to add to the first.

Change Bit Resolution

When using this function, MAGIX® Music Editor lets you select the bit resolution of a Wave project.

Notes for Working with 8-bit Wave Projects:

Lower resolution audio files are often used for multimedia applications. A reduction of the resolution to 8-bit is useful, since the storage requirements are also reduced. A drawback of lower bit resolutions is the decline of the signal to noise ratio (SNR). The quantization noise increases with the lower resolution. The quantization noise is not of a steady type. In fact, it is modulated by the signal and appears especially annoying.

By the way, the bit resolution of a project file is always displayed in the title bar of the project window. Bit resolutions between 1 and 8 bits use 1 Byte (8 Bit) per sample value. Resolutions between 9 and 16 bits use 2 Bytes (16 Bit).

If you need to perform multiple processing steps on an 8-bit Wave project, convert the audio file into a 16-bit project before starting the processing. Any calculation inaccuracies occur in the 16-bit realm and are therefore minimized. Also, some functions in the Effects menu only work with 16-bit samples. After your are done processing the audio, convert it back to an 8-bit audio file.

Menu View

Graphic Refresh

Display inaccuracies after complicated sample processing can be fixed by using this menu option. The screen (window) will be cleared and redrawn to display the project properly.

Sections

MAGIX® Music Editor allows the optional display of one, two or three sections of the samples belonging to one Wave project. Other audio editing applications usually show only one window of a sample.
If you select '2', MAGIX® Music Editor will display the same sample in two window sections. Each section can be handled separately. It is possible, for example, to represent the complete sample in one section and a zoomed in version of a certain range in the other.
The mode '3 sections' is especially useful for searching for loop points in Wave projects.
The whole sample can be shown in the upper section, while the section on the lower left displays the beginning of the loop range and the section on the lower right the end of the range. Use the split range function for this purpose (key b).
Go back to 1 view with Shift b!
This is only an example of the mode '3' view. All sections can be handled independently.
You can also drag ranges over the section bounds. Establish the starting point of a range by clicking, then keep the mouse button pressed, and change over to another section. MAGIX® Music Editor will show you the size of the range and at the desired location release the left mouse button to determine the end of this range.

Show Grid

This menu function will display the grid on the project window. The units of measurement defined in 'Units of Measurement' will appear in the upper sections of the grid.

KEYS: #

Grid Setup

With this option, you can define the type of grid that is used for the Show Grid option. Select between several line styles.

Units of Measurement

'Units of Measurement' is used to specify the grid dimensions. Several display options are available which will appear at the upper section of the grid.
The units supplied with MAGIX® Music Editor are 'Samples', 'Milliseconds', three SMPTE Frame options, the MSF format for red book CDs (SMPTE with 75 frames), SMPTE + Milliseconds (instead frames) and 'Bars' for BPM display.
Note: If you want to find out what the current speed of the a selected quarter bar is, simply select the 'Beats' option. The upper indicator 'L:' will display the BPM.

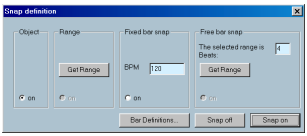
Snap to Grid

This function switches the Grid on and off.

TOOLBAR: 

KEYS: Ctrl + r

Snap Setup



RANGE: Activates the range grid and enables the use of the current selected range as grid base (by clicking on the button 'Get Range'). This option is very useful if you have found the perfect location defining a particular music bar in the sample. To transfer the range into the grid, use the command 'Get Range'.

FIXED BAR SNAP: Activates a grid, this is based on bars and beats from the beginning of the project. You can specify the speed of the measure by entering the BPM (Beats Per Measure) value in the dialog box. By clicking on the 'Bar Options' button you have more options to specify the parameters for this option such as the time signature.

FREE BAR SNAP: Activates a grid, which is based on bars and beats. The difference to the 'Fixed Bar Grid' option is that MAGIX® Music Editor takes the number of beats entered in the dialog box and automatically calculates the speed from the length and position of the range. If a com-

plete 4/4 measure is selected the number of beats in the measure would be 4. The length of the range would determine the speed in BPM that is needed to play the sample in the selected time frame.

Bar Definitions: This dialog lets you specify the bar settings, e.g. Numerator / Denominator, the speed in beats per minute and the timer resolution in peaks per quarter note.

Keys: SHIFT + r

Menu Effects

Normalize

This function modifies the sample's overall amplitude. The data is altered so that the maximum amplitude occurring in a specified range is set to 100% (or any other value between 1-400%). Music Editor will first attempt to detect the maximum and relate it to the percentage chosen. Then all other values are weighted with the new factor.
The Normalize function is designed to fully modulate or over-modulate samples. A particular application is processing that is done before a conversion from a higher sample resolution to a lower resolution takes place. Since the dynamic range of the low resolution is smaller, it still can be fully utilized by applying the Normalize function. If working with sounds from one single instrument, you should set the factor to 100%.
If, however, your audio material has background percussion for example, you will be able to over-modulate the sample to 120% to 200%. This will only cut off the new percussion peaks. The same method allows you to alter the sound of natural instruments by over-modulating them.
As preparation for further physical processing, such as filters, reverb, dynamic compression etc., a level reduction of 50-70% is suggested. This should avoid clipping during post processing.

An important reselect: If the volume level during the recording is relatively low and the material is later normalized, the result will not be of the same quality if the recording level is maximized to its fullest range. If for example the volume level was only set to 50% of the possible range, the audio material will be in 15-bit quality. Even normalizing the material to 100% will not change this aspect.

Keys: **n**

Switch Channels

With this function you can switch left and right stereo channel. This is useful to correct recordings with switched channels.

DirectX Plug-Ins

This function allows you to use Microsoft DirectX compatible plug-ins with MAGIX® Music Editor. This complements the already existing superb effects with an unlimited number of 3rd-party effects.

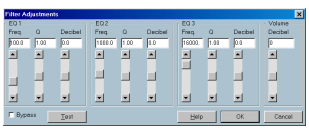
Working with the Plug-Ins:

After opening the plug-in dialog, a list of installed DirectX Plug-Ins is visible. Double clicking on a specific plug-in moves the plug-in to the left side of the dialog. The left side shows the active plug-ins. At the same time the plug-in is moved into the active plug-in list, the dialog for the chosen plug-in is displayed. The DirectX plug-in dialog allows you to make further settings for the effect. Additional double clicks on entries in the right-side list add other plug-ins to the active plug-in list on the left side. Please make sure that the chosen plug-ins are compatible with each other. For example, mono and stereo plug-ins can not be used simultaneously – an error message is displayed.
The last plug-in loaded into the active plug-in list can be deleted with the button 'Delete last Entry'.

Test: This button activates the real-time preview of the active plug-in listed on the left side of the display. This function is ideal for testing of the chosen plug-in settings if the real-time calculation operates sufficiently.

Preview: This function calculates a short segment of the audio material with the active plug-in settings and plays back the audio segment. Use this option if your system does not seem to be able to sustain the real-time preview (button 'Test'). The length of the off-line preview can be determined with the setting System (shortcut: y).

Parametric Equalizer



This dialog contains a 3-band parametric equalizer. You can activate filters on three freely selectable frequency ranges to adjust the sound of a sample. You can produce wide-band frequency adjustments for both high and low pass ranges as well as small-band corrections of specific frequency ranges.
To accomplish this you must select an area in the current project or with the 'a' key the entire project.
On faster computers, the real-time preview can be used. Using the preview, a specific setting can be easily exam-

ined before it is written back to the sample. On a Pentium with 90 MHz or higher, all 3 bands can be calculated in real-time and played back simultaneously!

Frequency: With the frequency faders, the middle frequency of the individual filters can be adjusted between 10 Hz and 24 kHz. Through the free choice of the frequency, several filters can also be set to the same values to achieve a greater effect.

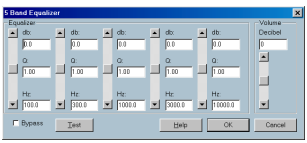
Width: Here the width of the individual filter can be adjusted between 10 Hz and 10 kHz.

Decibel: This fader set the amount the filter is increased or decreased (+/- 20 dB). A fader setting of '0' deactivates the filter and thus consumes no additional processing power.

Volume: You can adjust the overall volume with this faders if due to the filtration of the individual levels the volume is too low.

Test: This button activates the real-time preview. If the preview cannot be turned off by pressing the 'Test' button again (due to overload of the computer) press the spacebar to stop the audio playback. Increase the real-time buffer size in the menu 'Setup', 'System' if needed!

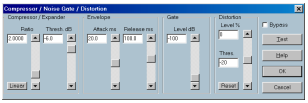
Graphic Equalizer



This dialog contains a 5 band graphic equalizer. The filters can be adjusted on five pre-determined frequency ranges, to alter the sound of a sample.
To accomplish this you must select an area in the current project or with the 'a' key the entire project.

Equalizer
The frequency ranges can be raised or lowered individually with the five faders. If you set the fader to the '0' position the filter is deactivated and will not consume any processing power.

Volume
You can adjust the overall volume with this faders if due to the filtration of the individual levels the volume is too low.



TEST: This button activates the real-time preview. If the preview cannot be turned off, by pressing the 'Test' button again (due to overload of the computer), press the spacebar to stop the audio playback. Increase the real-time buffer size in the menu 'Setup>System' if needed!

Compressor / Expander

With this Editor (Compressor/Gate/Distortion) you can work on the dynamics of a sample.
Processing is carried out in the same way as on high-quality studio equipment "previewing", i.e. there is no peak overriding, or other artefacts, as the algorithm can never be "surprised" by peak levels. All of the functions can be pre-heard in real-time (Test-Button).
The following functions are available:

Compressor/Expander

The dynamics of a work are restricted, loud passages stay loud, quiet passages become louder. Compression is often used to give material more power and assertiveness. The compression level is set with the Ratio Control, the application level is determined by the Threshold. Build-up and fade-out times can be influenced by Attack and Release. An Expander is the functional opposite to the compressor: the differences between the peak levels and quiet passages become greater.

Gate

Very quiet passages (under the Threshold Level) are suppressed or drawn down to zero. This effectively enables the noise level even in the pauses between individual takes to be suppressed, but even at high compressions levels (Ratio > 5) the Gate function is useful, to avoid over-raising of the quietest passages and thereby the background noise.

Distortion

With this set-up audio material can be distorted by means of a non-linear transfer identification line; the signal become louder and additional harmony waves are created. By influencing the application point of the distortion (Threshold) a soft, analogue sounding distortion (Overdrive) can be generated (Threshold e.g. on -40 dB), or a hard, digital sounding distortion (Threshold on 0 dB). With Ratio the strength of the distortion can be set precisely.

Parameters for the Compressor/Gate/Distortion Editor:
Ratio: This parameter controls the strength of the given effects, 1.0 means no effect.

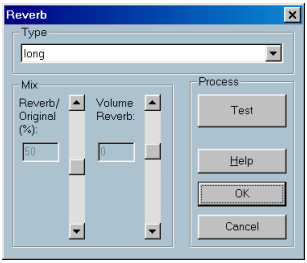
Threshold: Here the application threshold can be set, above or below that of the given effect.

Attack: Here the time can be set in which the algorithm reacts to increasing levels.

Release: Here the time can be set in which the algorithm reacts to decreasing levels.

Gate Level: This parameter determines under which amounts the level should be set to 0.

Reverb



This function generates high quality reverb in 3 different types.

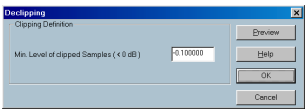
Type: Here you can switch between short, medium and long reverb.

Mix: This slider lets you adjust the level of the dry signal and the reverb sound.

Volume: Here you can adjust the output level of the audio material.

Test: This button calculates a short buffer of audio material with reverb and starts playback for previewing the results.

Declipping



Music Editor contains a function to remove digital or analog clipping. Anybody who records audio has encountered this one before. The perfect live recording contains clipping at the most important moment. This alone may render the recording unusable!
Music Editor uses high-grade algorithms to interpolate the passages containing the clipping. The algorithm uses the material before and behind the clipping as a reference point.
The declipping algorithm is especially useful for material that contains obvious clipping, such as a piano or voice recording. Distorted drumbeats are normally not salvageable.

Minimal Level of Clipped Samples: This setting determines the volume level the algorithm considers offending material. There are sound cards that exhibit different clipping behavior and this setting becomes an important issue. Some DAT recorders have an analog protection mechanism so that the level never reaches the digital maximum signal. In these cases a setting of –0.5 dB or lower make most sense.
By entering a value of –6 dB all samples above half of the digital maximum are considered 'distorted' and are recalibrated. Even analog distorted material can be improved with the algorithm.

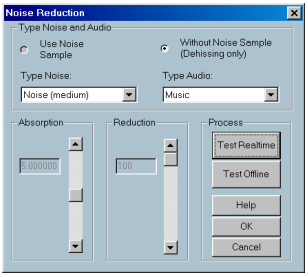
Remove DC offset

This function in menu 'Effects' removes a DC offset in the selected range of a Wave project (RAP or HDP). Some sound cards produce such a DC offset while recording, so it is useful, if you can remove it!

Get Noise Sample

This mode uses a noise sample to reduce the unwanted sound.

Noise Reduction



The Noise Reduction function can be used to effectively remove annoying noise material from the audio with very little or almost no discoloration of the original audio. For this function the algorithm needs an example of the noise print that needs to be removed. This function works best with types of noises such as a constant occurrence of a ground loop, air conditioner, hum, tape hiss or feedback. Please note that this algorithm was not necessarily developed to remove pops and clicks from audio material. However, a typical click noise floor such as vinyl recordings can still be successfully treaded with this function.
The algorithm can also work without a noise sample - then only white noise is reduced, such as tape hiss or microphone amplifier hiss.
Mark a range over the audio material you want to be reduced in the recording! Then create the noise sample before opening the Noise Reduction dialog using the menu „Effects > get Noise Sample" !

Without Noise Sample: Use this mode if you do not have a noise sample and you only want to reduce white noise (dehissing).

Type Noise: Here you can select between different noise types.

Type Audio: Here you can select between Music and Voices to control the denoising algorithm.

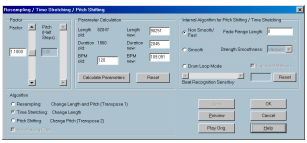
Absorption: This parameter lets you adjust the level of noise to be reduced. Please adjust this level carefully - it controls the quality of the complete noise reduction algorithm! If the level is too low you still hear noise and artificial high tones. If the level is set too high you may loose high frequencies of your audio material.

Reduction: Here you can adjust the balance between original signal and denoised signal. In most cases is is useful to keep a certain amount of original (non denoised) material - e.g. with a setting of -12 dB. This keeps as much of the natural color of the audio material as possible.

Test Realtime: This button starts the realtime preview function of the actual settings on fast PCs.

Test Offline: This buttons starts the preview funtion for slower PCs - small parts of audio material are calculated and played back.

Resampling / Timestretching / Pitchshifting



Important: If you want to change the sample rate of a whole audio file (e.g. from 48 kHz to 44.1 kHz) please use the separate function 'Change Sample Rate' in the Effects menu!
All algorithms in this dialog only use the parameter factor (upper left edit control) to set the amount of effect. All the other input fields in the parameter group simply control this factor. This makes it easy to specify the factor by typing in the new length, pitch or tempo in bpm. Press 'Refresh Display' to calculate the actual factor if needed! The following algorithms can be used:

Resampling: When using a factor lower than 1.0 the material becomes faster and higher. This is very similar to an analog tape deck, which runs at a higher or lower speed. Also samplers and pcm-synthesizers use this type of algorithm for transposing the samples or waveforms. Use this mode to correct the pitch and speed of any audio material, which may change its length.

If the factor is lower than 1.0, the re-sampling process is performed without a quality loss.
Otherwise, the re-sampling process will result in a loss of high frequencies. If for example the length of a 44.1 kHz sample is doubled, the resulting frequency response of the processed sample is limited to 11.025 kHz.

Pitch Shifting
The pitch of the sample is changed, maintaining the length. Use this mode to transpose an audio object without changing the length.

Time Stretching
The length of the sample is changed, maintaining the pitch. Use this mode for example to change the tempo of a drum loop without changing the pitch.
Time Stretching and Pitch Shifting are no loss-less procedures - depending on the factor there can occur short delays or other artifacts in the sample. To minimize these artifacts you have the choice between 3 internal algorithms:
Loops / Songs: Use this mode for factors in the range of 0.9...1.1. This algorithm keeps the original phase even of stereo material, but it produces more artifacts when using with large factors.

Loops / Songs / Speech: This mode uses a much more complex algorithm, which needs more time that is calculating. But it gives in most cases better results when using large factors. The phase of the material is changed to get a 'smoother' sound. If you were for example dealing with speech, vocals, or orchestral instruments this would be no problem. More complex spectrums, such as a mix of different instruments or completed mix problems, may develop problems.

Solo Instruments: This mode uses the same algorithms as the last one, but uses more of the smoothing component. This makes it ideal for solo instrumental sounds like piano samples or vocals.

Beat Marker-Mode: This is a additional Timestretch Mode. It is made for pure Drumloops.
Basically it works like this:
Through activating the option "Find Beat Marker" the algorithm tries to find and mark Beats in the Audio material.

Only these points will be used for timestretching by moving the autio material at the markers ahead or back.
Increasing the tempo will superimpose some beats, slowing down generates short pauses between the beats.
That mostly sounds better than the older algorithms.
A threshold value for beat detection can be set by using the sensitivity control.
Furthermore you are able to set the beat markers manual before you open the Timestretching dialog.
Just set the markers short of the beats (key: shift + 1 ... 0)
If a Wave Project is open and visible, you can follow the process of setting beat markers on the screen.

Test Realtime: This is a new function for the beat marker mode. Herewith it is easy to test the effect before you let Music Editor calculate the whole sample.
Irrespective of the tempo, the pitch of the loop can be adjusted using the pitch control in the upper left region of the dialog.

Change Sample Rate

Use this function to change the sample rate of a whole audio file. This may be needed to convert a DAT recording at 48 kHz to 44.1 kHz for use on an audio CD.
After choosing the new sample rate you can select a filename for the new project.
If the resolution is increased the sample rate change will take place without any quality loss - the sample material will not experience fidelity reductions. (The needed hard disk space will increase though.)
If the resolution is reduced, the overtones or high frequencies may be lost during the sample rate change. For example, if the resolution of a 44.1 kHz sample is reduced to 22.05 kHz, the frequency response of the resulting sample is reduced to 11.025 kHz. The frequency response is always half of the resolution specified. For a conversion from a 48 kHz sample to 44.1 kHz, this loss in quality is not significant, since the human ear only recognizes frequencies up to 20 kHz. (A resolution of 48 kHz is often only used because the digital to analog conversion can take place with much higher precision without expensing a lot of effort.)
Please note that resampling to 44.1 kHz can also be done while recording in real-time.
The Playback Parameter window (Shortcut: p) contains a Varispeed option for real-time resampling during playback. The Record window (Shortcut: r) will let you

resample to 44.1 kHz in real-time from any of the selected sampling rates.

Fade in/out

This function allows sample ranges to be faded in or out. The amplitude is varied in its time characteristic from the start value of the beginning to the final value at the end of the range. When the function has been called, a window appears in which you can specific parameters for this operation.
A simple fade-in operation would be performed with the parameters from 0% to 100%, whereas normal fade-out requires the specification from 100% to 0%.
The fade curve can be adjusted from linear to exponential or logarithmic.
Notice that real time fading is applied to virtual projects only (with handles). For all other projects (RAM and HD), the sample data is physically altered.

KEYS: **f**

Set Zero

Sample data values in a selected range are set to zero (no data). Noise and imperfections in a sample can thus be eliminated.

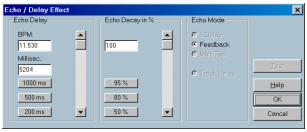
Invert Phase

The sample data within the selected range is inverted along the amplitude axis. This phase inversion means that negative values become positive and vice versa. This function, too, is reversible.
The 'Invert' function permits samples with different phases to be matched.
Along with the available mixing functions (which are, from a mathematical viewpoint, adding functions) you can actually subtract samples by applying this function to the selected sample.

Revert

The sample data in the selected range is reversed along the time axis. The playback of the sample data happens from the end to the beginning. This allows for very interesting effects, not to mention the 'hidden messages' frequently referred to in various songs.
This function is reversible: if you do not select a new range, calling this function once more leads to the original material.

Echo



Music Editor allows you to apply an echo effect to the selected range in the Wave project.

Echo/Delay: This section will determine the length of the echo delay.

BPM: You can specify a particular BPM speed if the echo needs to run in sync with the audio material. For example, if a music piece is set at 110 BPM you could specify the same setting here and have the delay appear with the exact beats of the music.

Millisec: Specify a setting in milliseconds for the delay.
1000 ms: This will select a preset of 1000 ms for the delay.
500 ms: This will select a preset of 500 ms for the delay.
200 ms: This will select a preset of 200 ms for the delay.

Echo Decay in %: This parameter specifies the volume decrease between the single echo events in percent. Values close to 100% results in a slower echo delay. Values below 40% lead to rapid decay.
95 %: This will select a preset of 95%.
80 %: This will select a preset of 80%.
50 %: This will select a preset of 50%.

Echo Mode: The Echo Mode setting will determine the type of delay you would like to apply.
1 Delay (only in mixer mode)
Only one delay will occur in the audio material.

Build Physical Loop

This function utilizes a complex algorithm for optimizing loops in Wave projects. It is useful when samples are to be used for instrumental sounds as well as wave table synthesizer.
Before you can process a sample you need to select a range in your sample that already defines the rough edges of the sample loop. Remember that you can shift and vary a range during playback to find the best loop position. A comfortable way to look at the loop positions is by activating the split range mode by pressing 'b'. The sample will be displayed in 3 sections.
To gain an interruption-free loop the outer limits of the range will be set to zero. By applying a crossfade to the

material at the loop end containing the sample data in front of the loop beginning, Music Editor will create a 'smooth' transition between loop end and loop beginning. When a marker is set in front of the selected range, the range between the marker and the beginning of the loop will be used for the crossfade. This offers you a feature found in professional hardware samplers. To achieve a short crossfade set the marker close to the loop beginning. To receive a long crossfade position the marker further away from the loop beginning.
Notice that the distance between marker and beginning of the loop range needs to be smaller than the loop range itself to make a crossfade possible.

Menu Range

Range all

The range will cover the complete sample. This command comes in handy if you want to apply changes to the entire sample with functions that normally only address certain ranges.

KEYS: **a**

Move Play Cursor → to beginning

Sets the start position of the play cursor to the beginning of the project.

KEYS: **Home**

Move Play Cursor → to end

Sets the start position of the play cursor to the end of the project.

KEYS: **End**

Move Play Cursor → to range start

Sets the start position of the play cursor to the beginning of the currently selected range.

KEYS: **Alt + cursor right**

Move Play Cursor → to range end

Sets the start position of the play cursor to the end of the currently selected range.

KEYS: **Alt + cursor left**

Edit Range → to beginning

The beginning of the range will be extended toward to the beginning of the project.

KEYS: **SHIFT + Home**

Edit Range → to end

The end of the range will be extended toward the end of the project.

KEYS: **SHIFT + End**

Edit Range → Flip Range left

The current range is shifted left by the length of the range. Its end will be its former beginning. If there is not enough room to place the range, the command will not be executed.

KEYS: **CTRL + SHIFT + left**

Edit Range → Flip Range right

The current range is shifted right by the length of the range. Its beginning will be its former end. Keep in mind that if there is not enough room to place the range, the command will not be executed.

KEYS: **CTRL + SHIFT +right**

Edit Range → Beginning of Range → 0

This function shifts the beginning of range to the right of the next zero position. The function can be called from the keyboard by pressing the left Shift + Alt keys and '6' on the numeric keypad at the same time. You can also press the PgUp key.

KEYS: **Page Up**

Edit Range → End of Range → 0

This function shifts the end of the range to the right of the next zero position (change in polarity). 'Zero position' is the next sample value with zero value or the boundary between a positive and a negative sample value (or vice versa). This is particular useful for searching for loop points. The function can be called from the keyboard by pressing the right Shift + Alt keys and '6' on the numeric keypad or the PgDn keys.

KEYS: **Page Down**

Edit Range → Beginning of Range ← 0

This function shifts the beginning of the range to the left of the next zero position. The function can be called from the keyboard by pressing of the left Shift + Alt keys and '4' on the numeric keypad. You can also press the PgDn key.

KEYS: **SHIFT + Page Up**

Edit Range → End of Range ← 0

This function shifts the end of the range to the left of the next zero position.
The function can be called from the keyboard by simultaneously pressing the right Shift + Alt keys and '4' on the numeric keypad or by pressing the Shift + PgDn keys.

KEYS: **SHIFT + Page Down**

Edit Range → Range length to

This command lets you set the range length to 1, 2, 4, 8, and 16 bars. You can set the tempo in BPM with menu View->Snap Setup.

Split Range

This function is in particular useful for working with loops. If not already displaying in Split Range Mode the project is first switched to this mode displaying three sections on the screen.
The upper section displays the whole sample. The section located at the bottom left displays the data near the beginning of the range. The section at the bottom right displays the data near the end of the range.
The boundaries of the range can be exactly positioned in the lower sections, while the upper section will display the location of the entire range. You can also define ranges across several sections.

KEYS: **b**

Store Range

Another powerful feature of Music Editor is the option of defining and saving different ranges for future retrieval. An unlimited number of ranges can be defined. You can for example specify different loops and compare them while you recall their ranges.
All ranges of a project can be seen in menu Tools->Range Manager. There all ranges can be renamed or played.
When selecting this menu option, the selected range needs to be stored by entering a numerical value the range is associated with.

KEYS: **SHIFT + F2 ... F10**

Store Range → Other

You can define more ranges by using the submenu 'Other'.
You will need to specify a name for the range selected.

KEYS: **SHIFT + F11**

Get Range

By selecting this option, you can choose one of the defined ranges as the current range.
Music Editor even lets you choose a range while playing. The specified range becomes the current one and is audible. Using this method, you can change between two ranges comparing them with each other. Ranges can also be named and recalled with the Range Manager (Tools menu).

KEYS: **F2 ... F10**

Get Range Length

By selecting this option you can choose the length of one of the defined ranges as the current range.
Music Editor even lets you choose a range length while playing. The specified range becomes the current one and is audible. Using this method you can change between two range length comparing them with each other.

KEYS: **Ctrl + Shift + F2 ... F10**

Store Marker

You can store an unlimited number of markers wherever the play cursor is placed at.

KEYS: **SHIFT + 1 ... 0**

Using the submenu 'Other', you can define more markers with a desired name. Defined markers can be seen above the sample data section of the project window and can be moved with the mouse.

KEYS: **SHIFT + [**

Store Real-time Marker

With this function (Alt + number key) markers can be stored during playback. The markers are dropped at the current play cursor position. This allows you to 'mark' up your project for later editing.

KEYS: **ALT + 1 ... 0**

Get Marker

By selecting this menu option, you can easily locate marker points. Simply specify the desired marker location and Music Editor will position the play cursor at that location.
You can even select a new play cursor location during playback of the project.
You should keep in mind that, whenever a marker has been defined, the range between the marker and the end of the sample is played.

KEYS: **1 ... 0**

Markers on Range Borders

This function sets two markers to the beginning (S) and the end (E) of a selected range.

Set Markers on Silence

This function sets markers on silent regions in the sample (only in Wave projects - HDP or RAP). You can choose the minimal length of the pause, a threshold level, the start number and a prefix for the marker name.
This is very useful to select the regions of sample CDs etc...

Get last Range

This function restores the last range that was selected. It comes in handy when a range was mistakenly deleted by a mouse click.

Range Editor

The beginning, the end and length of a selected range can be numerically changed in different units of measurement. This function will let you specify minute details of a particular range you need to set.

If you change any of the values in the 'Range Start', 'Range Length' or 'Range End' sections, all other values will automatically be updated with the exceptions below:
Change values in the Range Start section:
The end will be maintained.
Change values in the Range End section:
The start will be maintained.
Change values in the Range Length section:
The start will be maintained.
Please note the format of the 'Bar' dialog box. The format is displayed as a 4/4 beat with 96 clicks per quarter. Displayed are the bar, beat, and clicks.
The number of beats per minute (BPM) can be set in the BPM dialog box in View->Snap Setup.

Menu Window

Cascade

This function arranges all open windows in a cascade style.

Tile

All open windows are moved next to each other, making use of the whole display area.

KEYS: Return/Enter

Untile

This function will return the window order to the previous state.

KEYS: Shift + Return.

Arrange Icons

All icons are rearranged along the lower portion of the screen.

Toolbar

Shows or hides the upper tool bar.

Statusbar

Shows or hides the status bar on the lower portion of the display.

Positionbar

Shows or hides the positioning bar on the lower portion of the display.

Rangebar

Shows or hides the range bar on the lower portion of the display.

Time Display

Shows or hides the time display window.
This window always shows the actual time position in the actual format.You can change this format with the menu 'Units of Measurement'. We recommend the SMPTE format: hours:minutes:seconds:frames. The colors and the font for the display can be changed in the File->Preferences. You can zoom the window to any size and position it anywhere on the screen!

Osci / Correlation

A simple oscilloscope view can be opened to display the wave form in a scaleable window. When activating the Phase checkselect the phase correlation of a stereo signal can be displayed.
A vertical line represents a mono signal, a horizontal line represents a signal with a phase invertion, which is not wanted in most cases.

Transport-Control

With the new transport control you can easily start and stop playback, start record and punch recording.
Also the cursor position and range langth can be seen in the transport control.
An output peakmeter is shown in the lower line.

Control Elements:

PLAY: Here you can read the play or rnage start position

L: This shows the langth of the actual range.

E: This shows the end position of the marked range

SCROLL BAR: This lets you move the play cursor through the project.

Play Parameter

The Play Parameter window which appears after selecting this menu option is designed to quickly enter playback parameters. Below is an explanation of the options available in this window.

SAMPLE RATE: The sample rate can be changed here as long as the soundcard supports the new rate (some soundcards even support changing the rate while playing the sample!). This is especially useful to hear notes in a sample range played in a different octave. When selecting half the sample rate the pitch should be the same. It would be played one octave lower.
Device - To specify the driver of the sound card use this dialog box. This is especially important if multiple output devices are located in the computer.

Autoscroll: The 'Autoscroll' section will let you activate the autoscroll feature. It is especially useful when working with long disk files. The HD Wave project window will follow the play cursor during playback.
When working in '2' or '3' section display mode, the autoscroll feature will cause the individual sections to follow the play cursor as well. If you have zoomed into one of the sections, the play cursor will move through the section faster resulting in more screen redraws.
There are two alternatives in auto scrolling.
The 'Soft' option performs a smooth scrolling of the whole waveform, the play cursor stays in the center of the display. This mode needs a fast graphics board, because the complete screen is scrolled between the marker steps.
The 'Page' option performs a page by page scrolling.
Please note, that the auto scrolling requires certain processing power based on your processor, graphic card and the resolution of the display. For this reason you might encounter small interruptions in playing the audio files. Should this occur simply disable the auto scroll feature or raise the buffer size (select 'Setup' menu and click on 'System').

Scrubbing: While pressing the 0 key on the numeric block (Numlock active) and moving the mouse you can perform scrubbing. MAGIX® Music Editor starts playback at a very low speed, the mouse position relative to the start play cursor controls the speed.
There are two scrubbing modes (in playback parameter window - key p):
Note: When working with smaller buffer sizes (4000, 2000 samples) the scrolling becomes 'softer'. Please verify the performance of your computer system and smaller buffer sizes to not produce playback interruption.

Relative: The distance between the play cursor and the mouse sets the playback speed.

Absolute: The position of the mouse in the window sets the playback speed - at the left border
playback speed is 200% backward, at the right border speed is 200 % forward, in the middle of the window the speed is 0.
There is a real time resampling performed for changing the playback rate without changing the sample rate of the sound card. For best performance, use small play buffer sizes and a fast processor.

A Tip Using Scrubbing: The scrolling becomes 'softer' when using small buffer sizes (2000, 4000 samples). You may need to test your system for error free playback with these small settings. Combined with the Soft Scroll mode, editing becomes very convenient on faster computers

Varipitch: MAGIX® Music Editor supports smooth changes of the pitch while playback, even in multi track projects (vertical slider in playback parameter window - key p).
Activate the Varispeed mode with the 'active' button, then you can change the playback speed in various kinds:

Vertical slider: Changes the playback speed from -200% to +200%

Pitch Factor: Lets you specify a certain pitch factor manually

Halftones: Lets you specify a value of halftones. The playback will be transposed the number of halftones.

Internal Rate: Here you can set a sample rate for the varipitch calculation. If you want to play a WAV file with a sample rate of 48 KHz but your sound card can only play rates up to 44.1 KHz simply set the internal rate to 48 and activate varispeed. You hear the same result as playing back with real 48 KHz!
This function is also very useful for digital playback to DAT with 44.1 KHz samples and and vice versa!

BPM: Here you can type in the original bpm value of your material and a destination bpm value, which is reached using the varipitch.
Important: Varipitch works also while recording! So you can set the pitch to -2 halftones, sing a song into the computer, then switch off the varipitch - your track is transposed two halftones higher!
There is a real time resampling performed for changing the playback rate without changing the sample rate of the sound card. For best performance use small play buffer sizes and a fast processor (Pentium recommended).

Keys: p

Close all Windows

Closes all opened projects. Before closing a window/ project, MAGIX® Music Editor will ask you whether you would like to save the project.

Half Height

The MAGIX® Music Editor screen is shown in the upper half of the display.
This is useful, when using a sequencer program in multitasking. So you can switch between MAGIX® Music Editor and the sequencer without the need of complete screen redraws.

1, 2, ...

Choose active window from the list.

Menu Help

This menu contains the context sensitive online help functions of MAGIX® Music Editor and the about box.

Contents of Help...

Use this command to show the contents of the help system. Click the command, for which help is needed!

Context Help

Use this command, to get help about any part of MAGIX® Music Editor. Click the  button in the upper toolbar and then click on any button or menu item to get the help information.

About MAGIX® Music Editor...

Copyright notices and version numbers are displayed.

System Information

A window is displayed, containing information about the memory status and other parameters.
Particularly useful is the display of the free storage on all connected disk drives, the used system resources utilized by MAGIX® Music Editor and the memory usage. Make sure the parameter for system memory used by MAGIX® Music Editor never grows larger than the displayed overall system memory available (physical RAM). If this happens, the performance of MAGIX® Music Editor is reduced caused by page swapping (virtual memory) done to compensate for the missing memory.

A few Tricks

A few tricks that help make working with MAGIX® Music Editor easy:

Working in Projects

– The 'a' key will select the complete sample as a range.
– With the keys Home and End you can set the play cursor to the beginning or end; all selected ranges will disappear.
– A range can be selected from one exact marker position to the next by clicking on the marker above the waveform. Next, hold the Shift key and click on the second marker.
– Using the Shift + mouse click a range can be moved horizontally.
– Shift + Ctrl + Cursor keys will flip a range to the right or left. This is a great way of testing a loop at a different position.
– To determine the tempo of a selected range (BPM), open the Snap Definition dialog (Shift + 'r') and select the number of beats the selected range represents (for example: 4) in the Section 'Free Bar Snap'. Next, click on the button 'Get Range' in the section 'Free Bar Snap' to retrieve the length of the selected range. The BPM display in the 'Fixed Bar Snap' section now displays the BPM of the audio section.
– The 'Delete' key deletes markers when the Play Cursor (real-time cursor) is located exactly on the marker.
– When pressing the 'Return' key, all open windows are tiled on the MAGIX® Music Editor screen.

Recording/Playback

– The Recording window can be displayed by pressing the shortcut key 'r'. The recording can be started with the key 'r' and stopped with the key 's' when the Recording window is displayed and active.
– The playback can be started and stopped with the Spacebar. When stopping, the Play Cursor returns to the original position. If the playback is stopped with the '0' key on the numeric keypad, the cursor will stop at the current playback position. Continuing to hold the '0' key, while moving the mouse (Scrubbing) can alter the exact position.

Toolbars

Upper toolbar

1 2 3 4 5 6 7 8

1 Open WAV File
2 Save Project
3 Cut Range
4 Copy Range
5 Insert Range
6 Snap on/off
7 Transport Control
8 Context Help Mode

Lower toolbars

Sections can be defined by the button bars located on the bottom part of the screen and by proportional bars located on the bottom and right edge of the window.

Position toolbar

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

1 Section to beginning
2 Section one length left
3 Section half of its length left
4 Section half of its length right
5 Section one length right
6 Section to end
7 Range to last marker
8 Range to next marker
9 Zoom in horizontally
10 Zoom out horizontally
11 Show entire project
12 Zoom from range
13 1:1 presentation
14 Set the zoom depth to 0.1, 1, 10 and 60 seconds
15 Zoom in vertically
16 Zoom out vertically
17 Show complete sample vertically
18 Zoom in to vertical range borders

Range toolbat

1 2 3 4 5 6 7 8 9

1 Play Cursor on left range border
2 Play Cursor on right range border
3 One range length left
4 One range length right
5 Range start to previous zero crossing
6 Range start to next zero crossing
7 Range end to previous zero crossing
8 Range end to next zero crossing
9 Range Editor

Keyboard Shortcuts and Intellimouse

You may change the default shortcuts at any time with "File->Preferences->Keyboard Shortcuts".

General

A	Range all
Ctrl-A	Redo
B	Split range into 3 views
Shift-B	Display gets 1 view
C or Ctrl-C	Copy range
Shift-C	Copy As
F	Fade In/Out
H	Close all Windows
I	Project Information
Ctrl-I	Import Sample
N	Normalize
P	Play parameter
R	Record Dialog
Ctrl-R	Grid on/off
Shift-R	Grid definition
Q	switch Grid off
S	Save project
Shift-S	Save project with new name
Ctrl-V or V	Insert Clipboard
W	Load wave
X or Ctrl-X	Cut range
Y	System preferences
Ctrl-Z	Undo
Space	Playback on/off
Enter	Arrange windows
Esc	Abort playback, recording and physical sample manipulations
Del	Delete range
Backspace	Restart Playback
Insert	Overwrite with Clip
+ Ctrl	Copy into Clip
+ Shift	Insert Clip
Numeric 0	Scrubbing
Numeric ','	2 Views
#	Switch Grid on/off

Range

Cursor left or 4 on numeric pad:	Scrolling left
+ Ctrl	Zoom In

+ Alt	Play Cursor to beginning of the range
+ Shift + Ctrl	Flip range left
Cursor right or 6 on numeric pad:	Scrolling right
+ Ctrl	Zoom Out
+ Alt	Play Cursor to end of range
+ Shift + Ctrl	Flip range right
Home Play	Cursor to beginning of project
+ Shift	range to beginning of project
End	Play Cursor to end of project
+ Shift	Range to end of project
PgUp	Range start to next zero crossing
+ Shift	Range start to previous zero crossing
PgDn	Range end to next zero crossing
+ Shift	Range end to previous zero crossing
/ * - + Keys on numeric pad:	Move range borders dependent on zoom level

Function keys

1-10	Get range 1-10
1-10 + Shift	Store range 1-10
+ Shift + Ctrl	Get range length
F11	Store range with new name
Keypad 0-9 (not numeric block!):	Get Marker 1...10
+ Shift	Store Marker 1 bis 10
+ Alt	Store Marker while playback
?	Store Marker with new name

Microsoft™Intellimouse

Middle mouse click:	Playback Start/Stop
Wheel:	Scroll horizontally
+ Ctrl	Zoom In/Out horizontally
+ Shift	Zoom In/Out vertically

First of all: A general and fundamental solution. Make sure that your system and software is installed properly. Are all needed devices switched on? Are all cable connections leading from the correct outputs to the correct inputs? The most trivial problems often result in the biggest frustration.

I see markers with the letter 'E' in my physical audio file and interruptions occur at those spots. What are they?

Music Editor creates these markers automatically if during the recording the program runs out of resources and recording interruptions take place. This can happen if the computer is overloaded or not fast enough. Look at the 'pops and clicks' section for some solutions to the problem.

I have pops and clicks in my material when I play back any audio.

Pops and clicks can sometimes occur with certain sound cards and system configurations. If it happens, it is most often during the recording of audio tracks.

Especially when using Music Editor in Windows 95 there are several things that can be done to remedy the problem:

Make sure you use the latest driver for the sound card. You might need to contact the manufacturer of your sound card for an updated driver.

Check to see that there are no IRQ or DMA conflicts with other devices in your system. The Device Manager in the Control Panel in Windows 95 might help you diagnose problems.

The audio caching setting in Windows 95 might need to be adjusted. To do this bring up the Control Panel and select Multimedia from the options. Next, click the Advanced tab and select the Media Control Devices option. In the Media Control Devices look for Audio Control Device and call up the Properties. The following setting can be adjusted to solve some pops and clicks problems. Some problems with pops and clicks can be solved by editing the SYSTEM.INI file in the Windows directory. Look for a [Vcache] section and add the following lines:

maxfilecache=4096

This should effectively solve the problem. The values for the parameters are Kbytes of file cache and can be adjusted depending on your RAM size.
By disabling virtual memory a problem with pops and clicks or other playback or recording problems can sometimes be solved. Please refer to your Windows manual for instructions on how to disable the virtual memory.
As a rule of thumb: If the status bar in Music Editor does not indicate any errors during playback or recording, the problem most likely has to do with the sound card driver or settings for the sound card.

I get no audio during recording or playback.
If you hear no audio during either recording or playback in Music Editor, check on the following items:
Make sure that all cable connections are made properly and that none of the cables is defective.
If the sound card has a mixer program, make sure that none of the mute options are turned on and that the volume faders are sufficiently turned up.
Check to see whether you have the proper driver installed for your sound card. You can do this in the Windows Control Panel.
If you don't hear any audio in Music Editor and would like to check your sound card, use the sound card's own sound utilities to diagnose the card. Also, many sound cards come with their own set of playback software for digital audio. Follow the instructions in the sound card's manual for testing digital audio with the card's utilities.
Make sure that your external mixer/amplifier is turned on and has a sufficient volume setting.
These are the most common problems you would be dealing with when having audio problems.
Note: The Digital Audio Labs CardD+ approaches monitoring the recorded signal during the recording a little bit different than other sound cards. It is perfectly normal to have the incoming audio signal missing on the outputs of the card as you are recording the audio.
The CardD+ will not 'feed' the audio signal on the inputs of the card to the outputs during the recording. You will need to monitor the recorded signal externally during the recording phase. All other tracks in Music Editor will play back just fine.

Whenever I start playback or recording my system hangs or displays an error message.
This many times is an indication that an IRQ or DMA and possibly an address conflict is present. You will need to make sure that no other component in your computer system uses the same hardware settings as your sound card. If it does, the system may hang or even crash.
Under Windows 95 and NT 4.0 you may use the Device Manager to find free IRQ, DMA and address settings. Refer to your Window manual for instructions on using the Device Manager to diagnose your system. There are also a number of commercial diagnostics tools available that may assist you with finding free settings. In some cases reconfiguration of already existing components is necessary and sometimes even replacing components with ones that allow you more configuration choices.

Support

If you are unable to correct your problem with Music Editor contact MAGIX® support:

U.S.A.
Info: info-usa@magix.com
Webpage: http://www.magix.com
Fax: (310) 656-0234

Europe
Info: info@magix.com
Webpage: http://www.magix.com
Fax: ++49 - (0)89-7691041
T.: 0181 968 1554

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