



# Audio Cleaning Lab SE

Record • Edit • Restore • Burn  
Recordings from LPs, tapes, and MP3s

## Copyright

This documentation is protected by law. All rights, especially the right of duplication, circulation, and translation, are reserved.

No part of this publication may be reproduced in the form of copies, microfilms or other processes, or transmitted into a language used for machines, especially data processing machines, without the express written consent of the publisher.

All copyrights reserved.

All other product names are trademarks of the corresponding manufacturers. Errors in and changes to the contents as well as program modifications reserved.

MAGIX and Cleaning Lab are registered trademarks of MAGIX Group.

VST is a registered trademark of Steinberg Media Technologies GmbH.

MAGIX Audio Cleaning Lab uses patent-pending technology.

Other mentioned product names may be registered trademarks of the respective manufacturer.

MAGIX licensing conditions are included in the installation and also at [www.magix.com](http://www.magix.com) under EULA

Copyright © MAGIX Software GmbH, 2000-2012. All rights reserved.

**Legal notice:** Copyrights and laws against exploitation of accomplishments of artists and publishers shall be observed.

## Preface

Congratulations! You now own a high-performance digital audio lab, which is perfect for cleaning and enhancing the sound of your records, tapes, CD tracks, MP3 collections or audio files, combining your media in any order, and burning or exporting everything in optimum quality directly onto CD or DVD.

The volume and sound on each track can be perfectly synced and equalized. Various audio formats can be combined, simultaneously edited, and burned. The method is especially easy and clear, since automatic settings, assistants and step-by-step instructions make sure that the process goes smoothly and easily. Neither previous experience using the software nor long processing time are necessary.

The print manual provides an introduction and tutorial that explains all the most important features with step-by-step instructions.

In addition, an electronic manual is supplied in PDF, which systematically explains all of the program's components one after the other. You can also use the program's help file by pressing "F1". If you prefer to discover the many possibilities of the program by yourself, then use the PDF manual and help file simply as a reference. An alphabetical index is included for this purpose.

Have fun with MAGIX Audio Cleaning Lab SE.

The MAGIX team.

# Table of Contents

<b>Copyright</b>	<b>2</b>
<b>Preface</b>	<b>3</b>
<b>Support</b>	<b>5</b>
<b>Before you start</b>	<b>7</b>
System requirements	7
Installation	8
<b>Introduction</b>	<b>9</b>
What is MAGIX Audio Cleaning Lab SE?	9
Features	10
Overview of the program interface	12
<b>Tutorial</b>	<b>14</b>
Program start	15
Load and play audio files	16
Cleaning	18
Mastering	20
Object effects	21
Cut out undesired passages	22
Retouch short distortions such as cracks	24
Export	27
<b>If You Still Have Questions</b>	<b>29</b>
<b>More about MAGIX</b>	<b>30</b>
MAGIX Online World	30
magix.info	30
MAGIX Magazine	31

# Support

Dear MAGIX customer,

Our aim is to provide fast, convenient, solution-focused support at all times. To this end, we offer a wide range of services:

- **Unlimited web support:**  
As a registered MAGIX customer, you have unlimited access to web support offered via the convenient MAGIX service portal on <http://support.magix.net>, including an intelligent help assistant, high-quality FAQs, patches and user reports that are constantly updated. The only requirement for use is product registration on [www.magix.com](http://www.magix.com)
- **The online community, on-the-spot support and a platform for exchange:**  
MAGIX customers have free and unlimited access to the online community at [www.magix.info](http://www.magix.info), which includes approx. 150,000 members and offers the opportunity to ask members questions concerning MAGIX products as well as use the search function to search for specific topics or answers. In addition to questions & answers, the knowledge pool includes a glossary, video tutorials and a discussion forum. The multiple experts, found round-the-clock at [www.magix.info](http://www.magix.info) guarantee quick answers, which sometimes come within minutes of a question being posted.
- **Additional telephone service:**  
Besides the large number of free customer service offers, we also offer a fee-based telephone customer service.

Here you can find a summary of our technical support telephone numbers:  
<http://support.magix.net/>

**Mail (Europe):** MAGIX Development Support, P.O. Box 20 09 14, 01194 Dresden, Germany

**Mail (North America):** MAGIX Customer Service, 1105 Terminal Way #302, Reno, NV 89502, USA

**Please have the following information at hand:**

- Program version
- Configuration details (operating system, processor, memory, hard drive, etc.), sound card configuration (type, driver)
- Information regarding other audio software installed

**MAGIX Sales Department**

You can reach the MAGIX Sales Department workdays for help with the following questions and problems:

- Orders
- Product consulting (pre-purchase)
- Upgrade requests
- Returns

**Europe**

Monday - Friday, 09:00-16:00 GMT

**U.K.:** 0203 3189218

**Denmark:** 699 18149

**Sweden:** 0852500858

**Finland:** 09 31581630

**Norway:** 0210 30665

**North America**

9 am to 4 pm EST Mon-Fri

**Phone:** 1-305-722-5810

# Before you start

## System requirements

**Operating system:**

For Microsoft® Windows® XP | Vista® | 7

**Computer:**

- 1 GHz processor or higher
- 512 MB RAM
- 500 MB free hard disk space
- graphics card: resolution 1024 x 768
- 16-bit sound card
- CD-ROM drive

**Optional:**

- Burn CDs/DVDs with CD/DVD±R(W) recorder

## Installation

**Step 1:** Insert the program disc into the drive. The installation program starts up automatically. If the disc doesn't run automatically,

- open Windows Explorer and click the letter of the CD-ROM drive
- or double-click on "Start.exe" to start the installer.

**Step 2:** To begin the installation of MAGIX Audio Cleaning Lab SE, click on "Install". The MAGIX Audio Cleaning Lab SE installation program will appear.

**Hint:** During installation, you will be asked (in case there are multiple users on your computer) if you would like to set up for the administrator. The option "Administrator only" restricts use of the program to the specified administrator. The "All users" option allows all users of the computer to use the program.

Simply follow the on-screen instructions to complete the installation process, and then click "Continue". All files are now copied onto the hard drive.

**Step 3:** Once the installation is complete, confirm the message by pressing "Finish". Now you can start the program at any time from the Windows "Start" menu.

### Uninstalling the program

If you would like to uninstall MAGIX Audio Cleaning Lab SE, you can do so via the control panel under "Software". Or go to "Programs > MAGIX > MAGIX Audio Cleaning Lab SE > Service and Support > Uninstall MAGIX Audio Cleaning Lab SE".

## Introduction

### What is MAGIX Audio Cleaning Lab SE?

MAGIX Audio Cleaning Lab SE is a gentle but powerful cleaner for all kinds of acoustic material including records, tapes, CD tracks, recorded speech, and MP3s. Digital cleaning features remove everything from light cloudiness to the worst sound abominations on noise-filled tapes, scratched records, and on MP3s that have been compressed to death. A fine polish of the sound brings new life to every song and the burning function encapsulates your sensitive sound material on audio or data CD, protecting it from any further damage.

Individual tracks, even individual passages within a track can be given their own effect settings. In addition, the entire sound can be cleaned up, refreshed and – especially important for compilations – the volume can be balanced.

MAGIX Audio Cleaning Lab SE is fast, easy-to-use and very gentle: Nearly all effects are calculated in realtime during playback without damaging the recorded material in the least. The original recordings and songs remain untouched on the hard drive. You can therefore experiment to your heart's content without having to worry about causing any lasting damage to your audio material.

## Features

### **Import**

You can either import existing audio files in many conventional formats into MAGIX Audio Cleaning Lab SE, or simply use MAGIX Audio Cleaning Lab SE to record your own music. No matter whether cassette, tape reel, LP, or via streaming Internet, with only a few clicks, you can digitize your music and edit it further with MAGIX Audio Cleaning Lab SE.

### **Cleaning**

The heart of MAGIX Audio Cleaning Lab SE is its ability to remove unpleasant noise in music and enrich the overall sound. To do this, there are numerous professional tools available like the "DeClicker", "DeCrackler", "DeClipper", "DeNoiser" (including DeRumbler preset), and "DeHisser". You can also add a number of sound effects to your music. Resampling and timestretching help adjust the speed and pitch of pieces so that they match, and reverb/echo adds professional reverb to your music. The possibilities are nearly endless, as you will see. For more detailed information about the tools, please read MAGIX Audio Cleaning Lab SE's help file.

### **Mastering**

So that your recordings sound optimal, a selection of mastering tools are available to you once you have cleaned up the audio material. Try them out yourself to see which settings are the best, or let MAGIX Audio Cleaning Lab SE do the work for you by searching for the best settings automatically. For more detailed information about the tools, please read MAGIX Audio Cleaning Lab SE's help file.

### **Export**

Of course, you can also export your recordings. There is a wide range of formats available which enable you to enjoy your recordings anywhere you like.

---

**Supported formats****Import:**

**Audio:** WAV, MP3, WMA, AIF, OGG, FLAC, AAC, M3U, CUE, CD-A

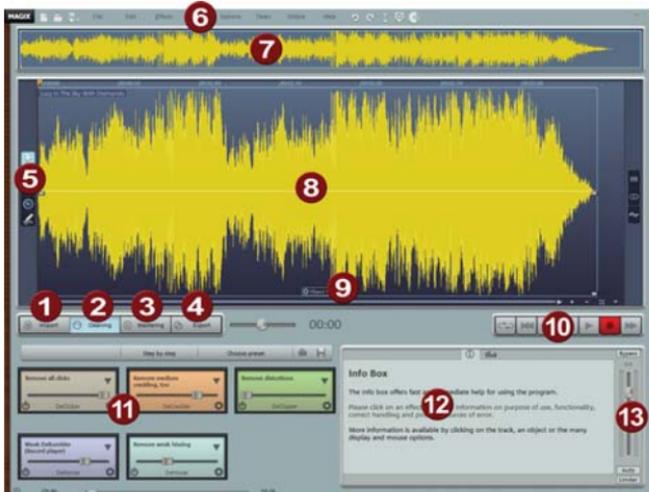
**Export:**

**Export:** WAV, MP3<sup>2</sup>, MP3 Surround<sup>2</sup>, WMA, OGG, AAC<sup>1</sup>, FLAC, MP3/Data  
CD/DVD, CD-A

<sup>1</sup>) Activate AAC encoder (fee-based)

<sup>2</sup>) only with Windows Media Player 10 or higher

## Overview of the program interface



- 1 Import:** Add new audio material here such as audio files from your hard disk, LPs or tapes via the record function, as well as songs from an audio CD.
- 2 Cleaning:** You can remove audio disturbances in the track via the "Cleaning" screen.
- 3 Mastering:** Use the "Mastering" screen to optimize the audio material in the track.
- 4 Export:** Export audio material as an audio file and burn it directly onto CD or DVD via the "Export" screen.
- 5 Mouse modes:** Select a suitable tool here: Arrow (Move mouse mode), Scissors (Cut mouse mode), "X" (Delete mouse mode), Clock (Resampling mouse mode), Pen 1 (Draw volume curve mode) or Pen 2 (Draw wave shape).
- 6 Menu bar:** Here you'll find all functions of MAGIX Audio Cleaning Lab SE.
- 7 Overview track:** View the complete project. The area which is currently being edited by the user is highlighted.
- 8 Track:** Make detailed changes to the audio material here.

- 9 **Object FX:** Access the object effects for the selected song in the track here.
- 10 **Transport control:** Controls playback of the track.
- 11 **Effects section:** Here you can access the individual cleaning and mastering effects.
- 12 **Info Box/Analyzer:** Switch between information on the currently selected function and the visualization screen here. The visualization screen displays the output signal graphically. You can choose between the following display options: peak meter, oscilloscope, phase correlator, spectroscope, and spectrogram.
- 13 **Master volume:** Set the total volume of the track here. The limiter hinders overmodulation, and the auto function enables the volume to be automatically optimized.

## Tutorial

In this chapter, we introduce all the most important features of MAGIX Audio Cleaning Lab SE. You don't need any special experience; just some time for recordings and hard drive space.

With MAGIX Audio Cleaning Lab SE you can load audio material from a number of different sources into projects in order to clean it up, edit it, export it as an audio file/CD or burn it to disc using just some of the special functions that come in the package.

First of all, you'll need suitable audio material. You can load your records or tapes, or even, for example, audio files from the Internet as MP3s.

Analog material like records or tapes have to be digitized first so that it can be processed by the computer. The recording function in MAGIX Audio Cleaning Lab SE can be used for this purpose. It's used to record analog material via the computer's sound card.

## Program start

After starting the program, a selection dialog including several tasks will appear.



Choose from:

- **Restore vinyl sound:** for LPs.
- **Clean tape sound:** for tapes.
- **Optimize voice and audio book recordings:** for speech.
- **Edit digital files:** for MP3 files, web radio recordings and many more.

For all these options you will require relevant material. In the following we assume that you already possess digitized material which you would like to free from any bothersome noise.

**Note:** If you wish to digitize an LP, you should use a USB phono pre-amp in order to connect your record player to your PC. By doing so, you ensure best sound quality all the way through. You can find a suitable USB phono pre-amp in our MAGIX Online Shop at [www.magix.com](http://www.magix.com).

## Load and play audio files

After choosing a suitable task, MAGIX Audio Cleaning Lab SE will show up with an empty project window. You are in the "Import" section, which is recognizable by the lit button below the project window.



The workflow in this section is very easy:

- You can load your audio files, e.g. in MP3 format by clicking the "Audio files" button.
- You can record LPs or tapes via the "Record" button.
- You can import audio CDs via the "CDs" button.

After import, a waveform display of the audio track appears in the main window.



The waveform display gives you an idea of the audio track's progression. You can even detect noises. Crackling for instance creates a clearly visible peak in the waveform.

Below to the right, you will find the transport controls for playback, stop and winding. You will be familiar with these functions from other playback devices.

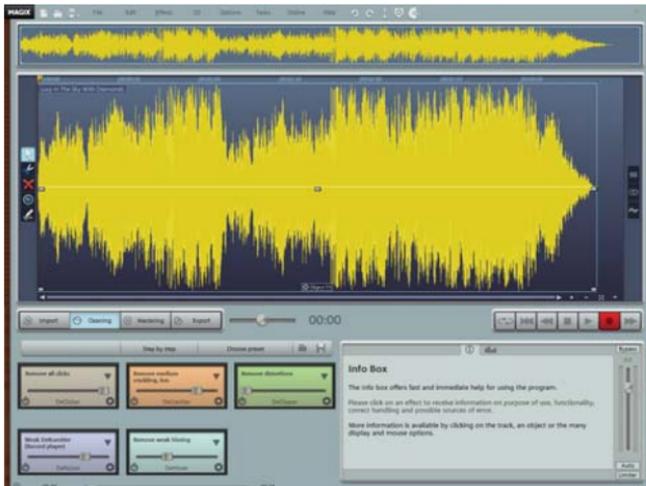


Use the mouse for quicker navigation: If you click into the waveform display with the mouse, the playback marker will be moved exactly to this position. You can start and stop the track by pressing the spacebar of your keyboard.

## Cleaning

There are many types of noises. Let's start with the easiest ones: constant humming or irritating hissing. This kind of noise is usually caused by tape recorders, record players or microphones and are audible throughout the complete track. Find out how to get rid of these irritating distortions:

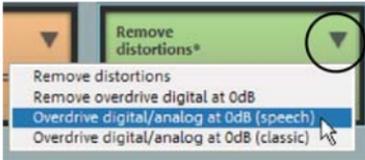
- Switch to the "Cleaning" section.



Most of the elements that are displayed here are identical to the ones in the "Import" section, but the function area in the lower left hand corner has changed decisively. Six different functions for removing audio disturbances are available here, which are adjusted differently depending on your selection in the start dialog. The modules are "DeClicker", "DeCrackler", "DeClipper", "DeNoiser", and "DeHisser". If you click on one of these modules, you will find explanations regarding purpose and workflow of the individual module on the info monitor located in the bottom right-hand corner.



The slider lets you regulate the strength of all of the "cleaning" effects (except for Spectral Cleaning, which we will deal with later).



If you are not satisfied with the presets of the start dialog, you can choose further presets using the arrow menu.



To get an idea of how the selected effect affects your audio material, you can turn it on and off by clicking on the symbol in the left-hand corner.



Click on the symbol in the bottom right-hand corner to open a user interface where you can set all of the available parameters for the effect.

In a way, this symbol represents the effect's engine hood. The interface located behind it was designed to simulate professional audio editing devices.



Depending on the effect device, you can specify very effective audio editing settings here. To do so, it's necessary to know a bit about audio editing though. Usually, however, you will not need these special functions, but they can be useful in complex cases. If you need them or if you're interested, please read the complete documentation (either the PDF manual or the program's help file).

## Mastering

"Mastering", the second effects area aims at optimizing the audio material.

- Click on the "Mastering" button.



You will find the following effects modules here: "StereoFX", "Equalizer", "Brilliance", "Sound Cloner", "Dynamics", "Multimax", "Enerzizer" and "Chorus".

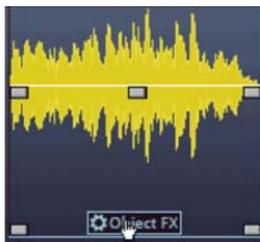
The functionality of the optimization effects is the same in principle: Adjust the strength of the effect via the slider, switch the effect on and off to

compare the original with the edited audio material and access the actual operation console by clicking on the symbol in the bottom right-hand corner.

## Object effects

If you combine the audio material from various sources, it's normally not sensible to apply cleaning and mastering effects to all objects in the same way. Tape recordings typically have other audio disturbances than LP recordings. Therefore, there are two different ways you can use the effects: Master effects and object effects.

The master effects are set centrally in the cleaning section. The settings made here are applied to the entire sound, i.e. for all objects in the master track.



Each object can also have its own individual effect settings. Click on "Object FX" on the object itself in the master track.

The "Object FX" screen (object editor) opens in a new dialog and displays additional effect devices. These effects can be set separately for every object in the master track.

The "Object FX" dialog also contains an echo/reverb device for adding Surround Sound to individual objects, and in addition to the multi-band compressor ("MultiMax"), a "simple" compressor is also included ("Dynamics").

## Cut out undesired passages

Now let's take a look at some special kinds of audio disturbances. A typical example would be the noise of a microphone knocked against something by mistake or even any kind of crackling, crashing, rustling, which can't be removed satisfactorily with Spectral Cleaning, because it's too irregular.

These kinds of noises as well as longer undesired passages can be cut out using the scissors tool in the left-hand corner of the track window.



- Select the scissor mouse mode.

The mouse pointer turns into a pair of scissors. If you move it across the track, the playback marker moves with it.

- Play the audio track and search for the section that you want to cut out.
- Click before and after the section to cut at these points.

This way, three separate objects are created on the track.



- Switch back to standard mode, select the object in the middle and delete it by pressing the "Delete" key.



A gap is created in the audio track. The problem is that where the disturbance used to be there is now absolute silence, which is irritating, too. It's not enough to simply cut out the audio disturbance, you have to add another sound into the gap, even if it's only a quiet hissing that is audible throughout the rest of the material, i.e. the room sound. Therefore, fill the gap with quiet material that features only hissing, for example.

- Search for a suitable passage in a different section of the audio track that is roughly as long as the gap. Cut the audio track before and after the passage.
- Switch back to standard mode and select the passage. Copy it to the clipboard (Ctrl + C or "Edit > Copy").



- Set the position line to the beginning of the gap and insert the passage (Ctrl + V or "Edit > Insert").



- Move the bottom right handle on the inserted object to adjust its length to the gap (It will latch into the cut edges).



That way, the distortion is "patched". All of the cuts can be fine tuned retroactively using the object handles to avoid crackling at the transitions.



- There are handles at the top left and right hand corners, which allow you to create fade ins and outs.
- The handle at the top center is for adjusting the volume. If you pull it downwards, the volume of the object is reduced.
- The handles at the bottom left and right corners adjust the object's borders. You can fine tune your cuts by extending or contracting the object.

## Retouch short distortions such as cracks

Let's take a look at a quick and elegant way of retouching short distortions such as cracks and clicks using a pen tool.

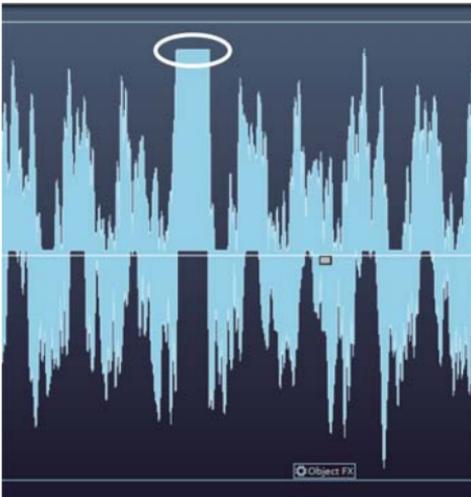
**Note:** You can't undo editing that you did with the "Draw wave shape" tool (no "Undo" function). After selecting the pen tool, you can decide whether, for safety purposes, you want to edit in a copy of the file or directly in the original material.

- Search for a section in the material where you hear crackling and set the play cursor to that position.

- Zoom into that section so that you can see the details of the waveform display. You can use the zoom button at the bottom right of the track window.



- Take a close look. Can you see the crack? Look for a "mountain" that is flat on top or exceeds its surroundings.



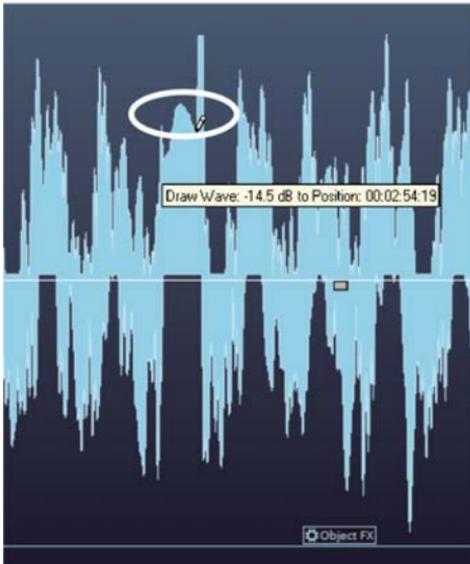


- Select the "Draw wave shape" mode.

The mouse pointer turns into a pen that you can use to draw directly into the waveform. If you click, the zoom level increases automatically and you can draw.

It's about trying to turn the flat form a bit more into a peak and moving it slightly towards the bottom.

This way, for example:



The critical section should then look like this at the end:



If you play back the material now, the cracks have disappeared.

## Export

After you have "cleaned up" the material, you can export your material: either song by song as MP3 or WAV file or all songs of the track as audio CD, DVD, or data disc.

Switch to the "Export" workspace: Only the functions in the bottom left-hand corner of the screen are changed.



If you haven't split each song on the track into a separate object, you will require track markers to specify the beginning of every new piece. With the help of the track marker assistant, you can control and change all track beginnings. If you need any help with burning CDs, use the CD assistant.



To save the project click on the floppy disk icon.

# If You Still Have Questions

## Task wizard

The task wizard is your information center for finding out more about MAGIX Audio Cleaning Lab SE. Divided into various topics, the wizard supports you during all the most important steps. Open this helpful feature via the "Tasks" menu.

## Info Box (immediate help)

MAGIX Audio Cleaning Lab SE includes an Info Box where you can find important information on the program. By clicking on one of the buttons or areas of the interface, you can read more.

## Program help file

The program's help file contains the entire program documentation and other information. Open the "Help" menu or press "F1" on the keyboard.

Press the "F1" key at any point and the help file will open with the relevant help topic (context help). The main help page can be accessed via the "Help -> Contents" menu item.

## PDF manual

Much like the help feature, the electronic PDF manual contains the entire program documentation. You can find it under "Start -> Programs -> MAGIX Audio Cleaning Lab SE" in the "Documentation" subfolder.

Have fun discovering your software!

The MAGIX team

## More about MAGIX

### MAGIX Online World

#### Well-connected: Products and services online from MAGIX

Discover the possibilities offered by the MAGIX Online World. Every MAGIX product offers a direct and easy-to-use gateway to the world of online multimedia:



#### Online World

- Present your photos, videos, and music directly in your Online Album or in worldwide Internet communities.
- Find professional templates & content for enhancing your personal projects.
- Design your own personalized website using professional Flash® design with photos, videos, music & impressive animations.
- Order brilliant photo prints to be sent directly to your doorstep. It's quick, easy, and well-priced.

Experience these and many more online services on [www.magix.com](http://www.magix.com)

## magix.info

**Help and get help** - Directly from within the program, you'll be able to access [magix.info](http://magix.info), the new MAGIX Knowledge Database. You'll find answers to all the most frequently asked questions about MAGIX products and multimedia in general. Couldn't find an answer to your particular question? No problem - just ask the question yourself!

You can access [magix.info](http://magix.info) online at <http://www.magix.info>

---

## MAGIX Magazine

The MAGIX Magazine - well-informed & up-to-date:

- Digital trends
- Interesting websites
- Useful information about MAGIX products

You can find the MAGIX Magazine at [www.magixmagazine.com](http://www.magixmagazine.com).