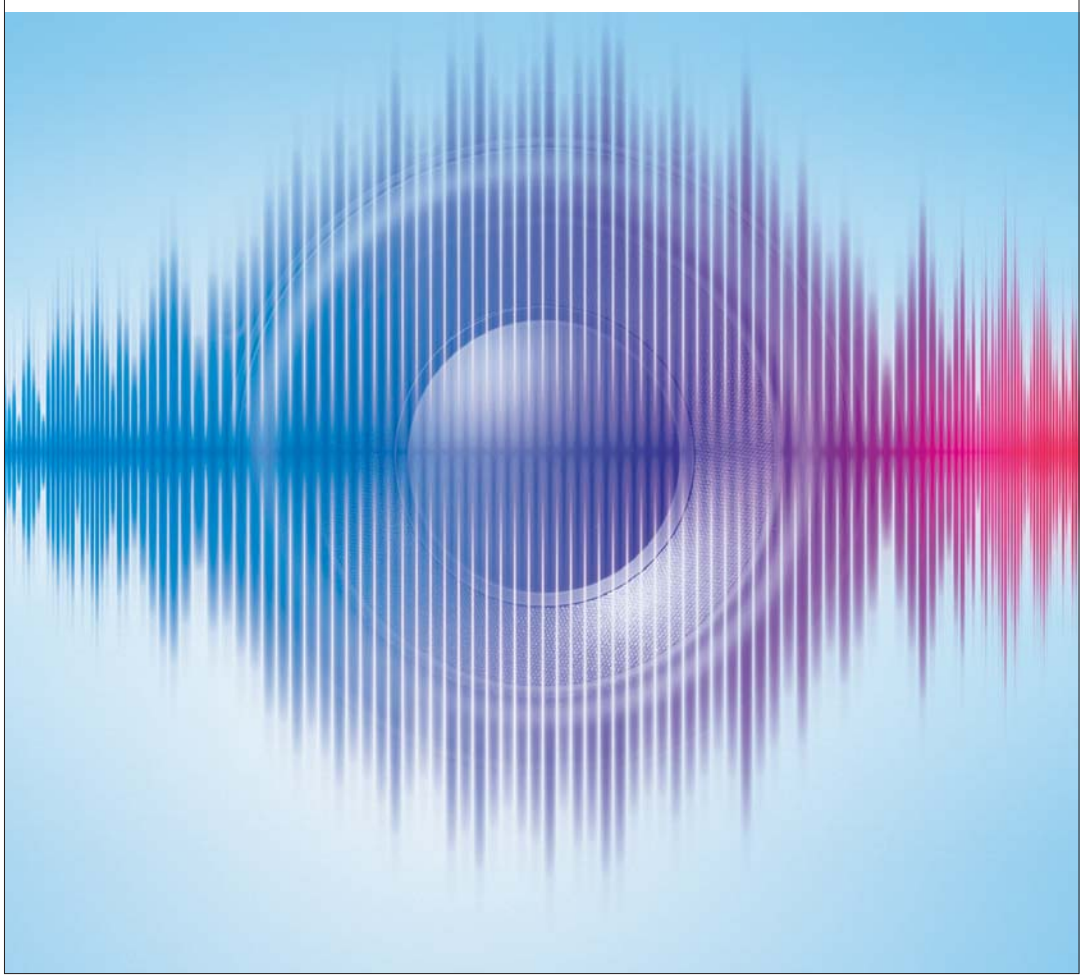
AUDIO CLEANING LAB 2013

MAGIX

English language manual



Copyright

Preface

Congratulations! You now own a high-performance digital audio lab, which is perfect for cleaning your records, tapes, CD tracks, MP3 collections, audio or video files, enhancing the sound, 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 2013.

The MAGIX team.

Table of Contents

Before You Start

System requirements

Operating system:
For Microsoft® Windows® XP | Vista® | 7

Computer:
- 1 GHz processor, or higher
- 512 MB RAM
- Available drive space: 500 MB
- Graphics card resolution 1024 x 768
- 16-bit sound card
- DVD-ROM drive
- Line in slot

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 in Windows. If the disc doesn't run automatically,

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

Step 2: To begin the installation of MAGIX Audio Cleaning Lab 2013, click on "MAGIX Audio Cleaning Lab 2013". The MAGIX Audio Cleaning Lab 2013 installation program will appear.

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

Step 3: Once the installation is complete, confirm by pressing "Finish". You may start the program at any time using the Windows "Start" menu

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 at 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, 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 guarantee quick answers, which sometimes come within minutes of a question being posted.
- Email support for MAGIX products:
  For every new MAGIX product you will receive, as of date purchase, 12 months of email based customer service.
  Premium email support:
  For priority support, or if you want the MAGIX support team to help with non-MAGIX related hardware problems you can purchase a Premium email support ticket. Log in at http://support.magix.net and click on "Purchase access code", the ticket is for a specific problem, and is valid until it is solved, it is not restricted to an email.

Please note: To be able to use the Premium email support and free product email support via the Internet, you have to register your MAGIX product using the serial number provided. This can be found on the CD case of your installation CD or on the inside of the DVD box.

- 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 make sure you 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: 45 699 18763
Sweden: 46 852 500713
Finland: 35 89 42419023
Norway: 47 210 35843

North America

9 am to 4 pm EST Mon-Fri
Phone: 1-305-722-5810

Uninstalling the program

If you would like to uninstall MAGIX Audio Cleaning Lab 2013, you can do this in the control panel under "Software" or go to "Programs > MAGIX > MAGIX Audio Cleaning Lab 2013 > Service and Support > Uninstall MAGIX Audio Cleaning Lab 2013".

Serial number

A serial number is included in each product. This serial number is required for the installation of the software and enables usage of additional bonus services. Please store this number in a safe place.

What can a serial number do?

With a serial number your program is clearly assigned to you and only you. This will allow you take advantage of the free email support service. Serial numbers also help to protect against software piracy which ensures that we are able to continually provide our customers with an optimal price/performance ratio.

Where can the serial number be found?

The serial number can be found on the reverse side of your CD/DVD case. If your product is packed in a DVD box, you'll find the serial number on the inside.

If you have purchased the download version, you will receive a confirmation email with the serial number.

When will you need the serial number?

The serial number is required when you start or register the program for the first time.

Note: We explicitly recommend registering your product (free), since only then are you entitled to download updates and to use MAGIX support services (view page 11) or activate codecs.

More about MAGIX

MAGIX Online World

Everything you need for your website

- Create your own website with MAGIX website software
- Publish your website for free with the MAGIX free web hosting service
- Register your domain name of choice for your website at a great price

Discover MAGIX Online World at www.magix-online.com

magix.info

Do you have questions, need help, or are looking for expert tips and tutorial videos on using your MAGIX product? At magix.info you will find answers and solutions as well as workshops and a comprehensive user forum for software and multimedia queries.

You can access magix.info online at www.magix.info

Introduction

What is MAGIX Audio Cleaning Lab 2013?

MAGIX Audio Cleaning Lab 2013 is a gentle but powerful cleaner for all kinds of acoustic material including records, tapes, CD tracks, speech recordings and MP3s. Digital cleaning removes everything from light crackling to severe interference on scratched records, old cassettes and MP3s that have been compressed too many times. A fine polish of the sound brings new life to every song and the disc-burning function lets you save your sensitive sound material on audio or data CD to protect it from further damage.

Individual tracks and even specific sections of a track can be given their own effect settings. Additionally, the entire sound can be cleaned up, refreshed, and especially important for compilations, the volume can be balanced.

MAGIX Audio Cleaning Lab 2013 is fast, easy-to-use and very gentle: Almost all effects are calculated in realtime when being played without damaging the recorded material at all. The original recordings and songs remain untouched on the hard disk. You can therefore to your heart's content without having to worry about causing any lasting damage to your audio material.

What's new in MAGIX Audio Cleaning Lab 2013?

SoundCloner 2

SoundCloner analyzes the sound characteristics of songs and transfers them to other recordings. Allowing you to apply the sound of a 60s soul recording to a modern pop song for example. SoundCloner 2 (view page 82) has been completely redesigned and now takes the dynamic range of the source track into account as well as the frequency spectrum.

Simple preset preview

Lots of presets for cleaning and mastering effects can be previewed when selecting them from the menus, plus the audio material you're working with will be used too. This allows you to compare various presets quickly and easily.

Improved interface

The user interface and many windows have been redesigned and decluttered to make MAGIX Audio Cleaning Lab 2013 more clear and easy to use.

Features

Import

You can either import existing audio files in many conventional formats into MAGIX Audio Cleaning Lab 2013, or simply use MAGIX Audio Cleaning Lab 2013 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 2013.

Cleaning

The key feature of MAGIX Audio Cleaning Lab 2013 is its ability to remove unpleasant noise in music and enhance the overall sound. There are numerous professional tools available for this such as the "DeClicker", "DeCrackler", "DeClipper", "DeNoiser" (including DeRumbler preset), and "DeHisser". You can also add several sound effects to your music.

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 2013 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 2013'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, AIFF, OGG Vorbis, M3U, CUE, CD-A, FLAC, AAC
Video sound import: AVI, WMV, MXV, MOV, DV-AVI, MPEG-2[2]

Export:
Audio: WAV, MP3[1], MP3 Surround[1], WMA, AIFF, OGG Vorbis, CD-A, FLAC, AAC[2], Audio-DVD, Data-DVD
Video sound export: AVI

[1)] Activate MP3 encoder for free
[2)] Fee-based activation

Stereo phono pre-amp

This chapter is only important for users, who bought MAGIX Rescue Your Vinyl and Tapes! 2013. In addition to MAGIX Audio Cleaning Lab 2013, MAGIX Rescue Your Vinyl and Tapes! 2013 also includes a phono pre-amp. Customers who bought MAGIX Audio Cleaning Lab 2013 can skip to the Quick Start chapter.

Introduction

Audio signals coming from record players have to be pre-amplified first before they are further processed by an amplifier or PC. Otherwise the recording's basses would be too quiet. This procedure is called “RIAA equalization”.

MAGIX Stereo pre-amp PA-005-2 USB takes over any pre-amplification of LP recordings and also offers the function of converting analog signals that travel from the output of the stereos to the PC, to digital data, which then can be processed by the PC.

It functions as an analog/digital converter, just like the sound card in the PC. Due to its top-quality conversion and sound creation, it is preferable to many other onboard sound cards. For this reason, it is recommended to use the USB pre-amp to carry out recordings from MP3 players, cassette and tape recorders.

The PA-005-2 USB offers additional functions such as a switch for both MC and MM magnetic systems.

Note: MC and MM are different types of pick-ups for record players. “MC” – “Moving Coil” – is the less frequent type, whereas “MM” – “Moving Magnet” – is the normal type. If you are unsure of which type to use, select the setting “MM” within PA 005-2 USB. If you have any problems with the quality of your recording, try the “MC” setting.

LP recordings on your PC or laptop

If you take a closer look at the pre-amp, you will see two input jacks:

- A cartridge for an RCA plug
- A cartridge for a mini stereo jack (next to the pre-amp)

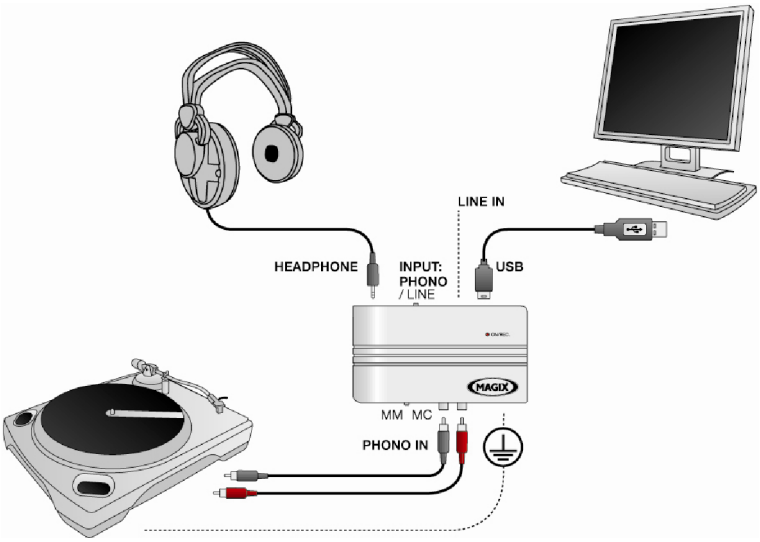
The RCA connector of the pre-amp can only be used for unamplified signals, such as the ones that come from record players. If you have a record player that delivers amplified sounds already (some devices from the 70s, as well as some DUAL record players), please use the mini jack (with the help of an adapter cable from a retail store) and change the plug to “Line-in” (see below: “Record from a line-in device”).

Preparation:

- Set the INPUT-switch of the PA-005-2 USB to “PHONO”.
- Connect your record player via an RCA cable with the PA-005-2 USB.
- Connect a USB port of your PC with the PA-005-2 USB using the provided cable. Once connected, the LED on the pre-amp should light up.
- If the connection is correct, then your PC will automatically detect the PA-005-2 USB.
- If a ground line exists on your record player, connect it with the extra screw next to the switch on the magnetic system (“MM/MC”).

Tip: In the event of the ground line of your record player being too short and to avoid hum loops, you should stick the stripped end piece into a flower pot or tape it onto the radiator.

When connecting, avoid the use of USB extension cables as this normally leads to a loss of function. The pre-amp should also be connected directly to prevent any disturbance in its functionality due to the use of USB hubs and port replicators.



Application:

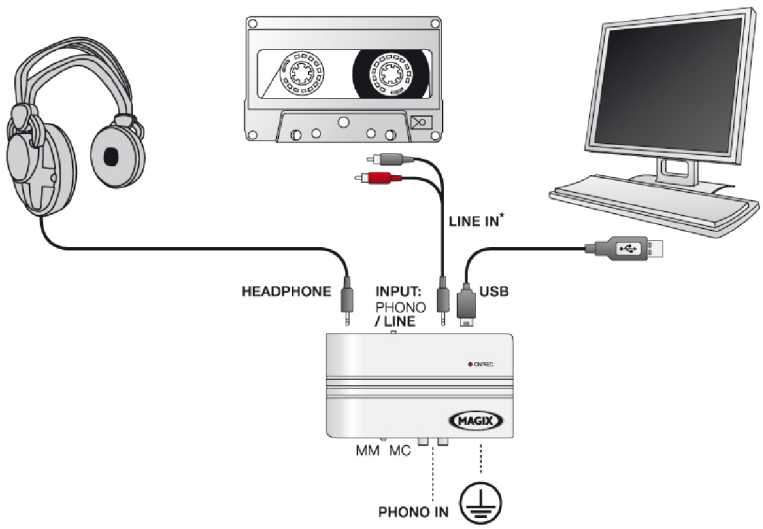
- Switch your record player on and play a record.
- Start MAGIX Audio Cleaning Lab 2013 and select “Restore vinyl sound” in the startup dialog.
- Activate the recording function (“R” key) and make sure that “PA-005-2 USB” under “Sound card” is selected.
- Start recording in MAGIX Audio Cleaning Lab 2013. The LED should flash while recording.
- Start LP playback.

Record from a line-in device (tape deck, MP3 player, ...) on PC or laptop

As mentioned before, you can also use the PA-005-2 USB to record tapes, MP3 player, CD player and other devices. Such devices have line connectors for output and their signals do not have to be pre-amplified. The PA-005-2 USB is only used to convert analog signals into digital data.

Preparation:

- Connect your audio source (e.g. tape deck) via a 3.5 mm mini cable with the PA-005-2 USB.
- Connect a USB port of your PC with the PA-005-2 USB using the provided cable. Once connected, the LED on the pre-amp should light up.
- Set the INPUT-switch of the PA-005-2 USB to “LINE”.



**You can purchase such an RCA-to-mini stereo jack cable in every retail store at low cost.*

Application:

- Switch on your audio source
- Start MAGIX Audio Cleaning Lab 2013 and activate the recording (as explained above)
- Start playback on the audio source

Technical details

- Input resistance: 50 kOhm at 1 kHz
- Output resistance: 50 kOhm
- Amplifier: 29dB/MM, 32dB/MC
- Maximum input voltage: 40mV/MM, 24mV/MC
- Maximum output voltage: 1.1V eff
- Bandwidth: 30 Hz - 20 kHz
- Signal-to-noise ratio:> 50 dB
- Voice-over: > 55 dB
- Power supply: Standard USB connection
- or optional USB charger
- Power consumption: 5V/500mA
- Size: approx. 120 x 72 x 28 mm
- Sample rate (2 channel recordings): 8KHz, 11.025KHz, 16KHz, 22.05KHz, 24KHz, 32KHz, 44.1KHz and 48KHz

Technical changes and errors excepted!

Disposal

This device may not be disposed of as common domestic waste, as it accords with European standards 2002/96/EG for waste electrical and electronic equipment (WEEE). This standard provides for EU-wide valid disposal and recycling of waste electronics. For disposal of your waste electronic devices, please use the disposal and collection systems available to you. Information regarding this is available to you from your local civic offices.

Quick start

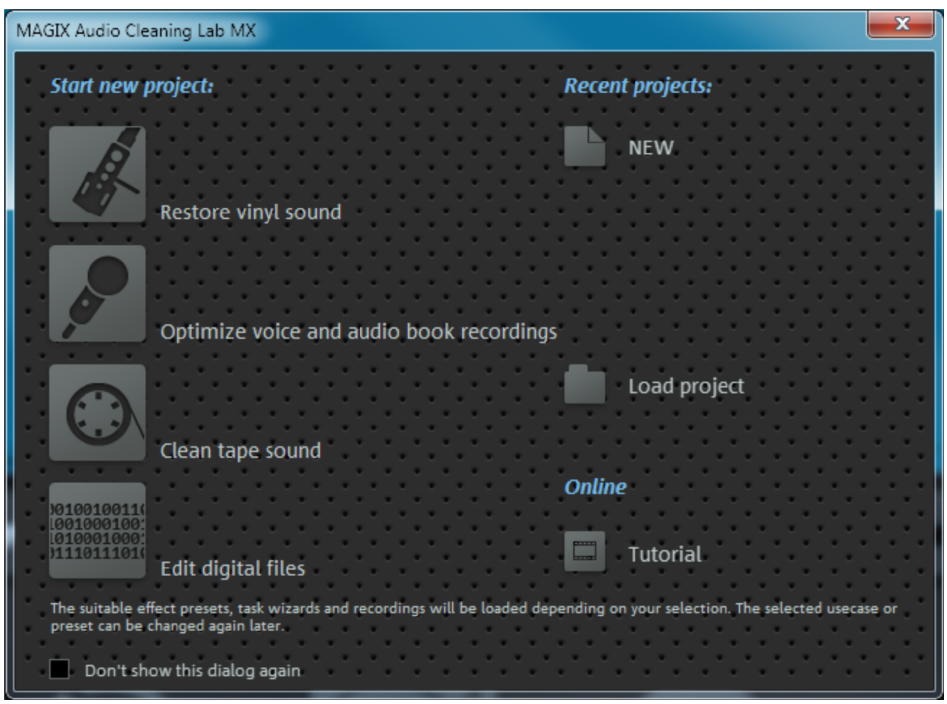
In this chapter, we will guide you through all of the important functions in MAGIX Audio Cleaning Lab 2013 step-by-step. You don't need any special experience; just some time for recordings and hard drive space.

With MAGIX Audio Cleaning Lab 2013 you can load audio material from a number of different sources into projects in order to clean it up, edit it, or export it.

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 2013 can be used for this purpose.

Program start

After starting the program a selection dialog will appear.



Choose whether you want to create a new project or load an existing one.

You don't have any existing projects yet so we will create a new project. You can either create a new, empty project or choose a preset from the drop down menu.

The choices are:

- **Restore vinyl sound:** for records.
- **Clean tape sound:** for cassettes.
- **Optimize voice and audio books:** for speech.
- **Edit digital files:** for MP3 files, web radio recordings and much more.

The effects will be adjusted according to the selected preset. The presets can be changed at any time.

You need suitable audio files to use each feature. In the following section we assume you already have digitized material on your hard drive which you would like to clean up.

Note: If you want to digitize records, you should use a USB phono pre-amp to connect your record player to your PC. This ensures best possible sound quality. You can find a suitable USB phono pre-amp in our MAGIX Online Shop at www.magix.com.

Load and play audio files

After starting the program, MAGIX Audio Cleaning Lab 2013 displays an empty project window. You are in the "Import" section, which is recognizable by the lit button below the project window.

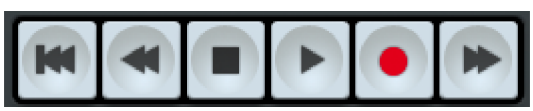
The workflow in this section is very easy:

- You can load your audio files, e. g. in MP3 format by clicking the "Audio files" button.
- You can record LPs or tapes by using 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. Even some noises can be recognized. Crackling, for example, creates a clearly identifiable peak in the waveform.

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

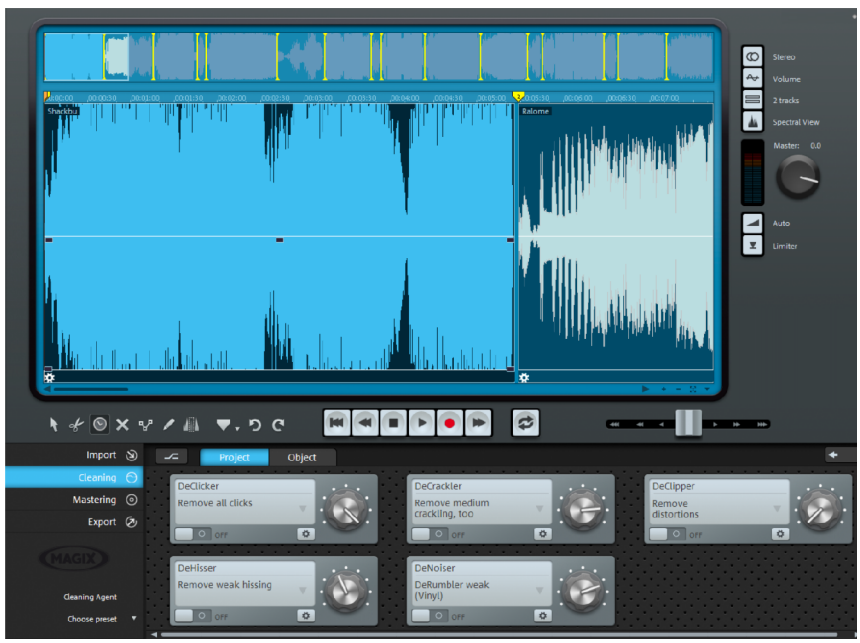


Use the mouse for quicker navigation: If you click into the waveform display with the mouse, the playback marker will be moved exactly to this position. You can start and stop the track by pressing the spacebar of your keyboard.

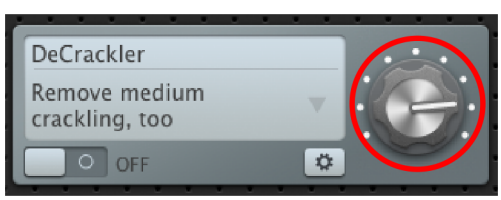
Cleaning

There are many types of noise. Let's start with the easiest ones: constant humming or irritating hissing. There are many types of noises. Let's start with the easiest ones: constant humming or irritating hissing. These kinds of noise are 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 noises:

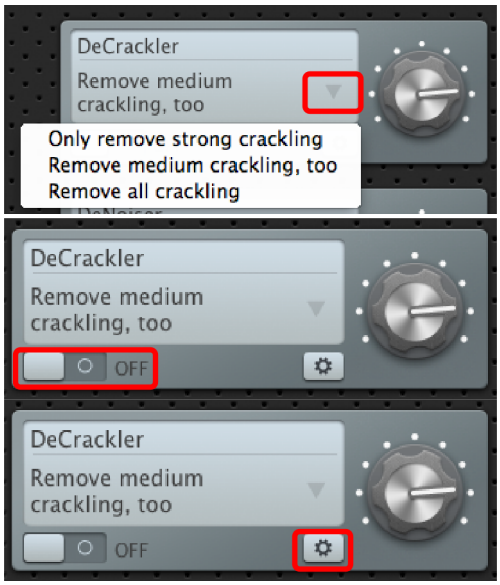
- Switch to the "Cleaning" section.



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. Five different functions for removing audio disturbances are available here, which are adjusted differently in the start dialog depending on your selection. 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.



You can use the knob to control the amount of each cleaning effect.



If you are not satisfied with the presets in 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. You can find more information in the „Cleaning effects“ (view page 65)chapter.

Mastering

"Mastering", the objective in the second effects area is to optimize the audio material.

- Click on the "Mastering" button.

You will find the following effects modules here: "StereoFX", "Equalizer", "Brilliance", "Sound Cloner", "Dynamics", "Multimax", "Reverb / Echo", "Energizer" 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

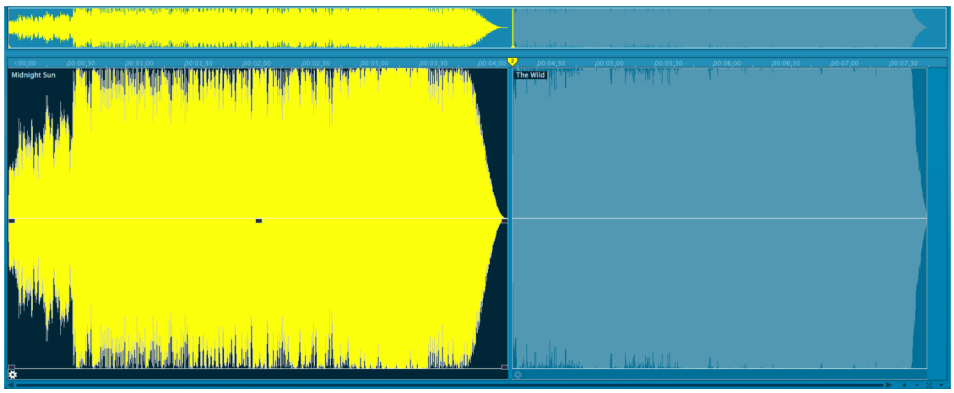
If you combine the audio material from various sources, it's normally not sensible to apply cleaning and mastering effects to all objects in the same way. Tape recordings typically have different noise than LP recordings. Therefore, there are two different ways you can use the effects: Project effects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

In the cleaning and mastering area you can see how the two types of effects are applied. "Project" is the default setting.

The settings for project effects 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. To add an effect to an object, click on "Object".

This will highlight the object that you want to edit. There are also many audio effects available. These effects can be set separately for every object in the master track .



Cut out undesired passages

Now let's take a look at some special kinds of audio noises, the kind that occur when someone mistakenly bumps into a microphone during a recording.

Clicks, pops, rustling or even longer unwanted sounds can be cut out of the track by using the scissors tool in the track window.

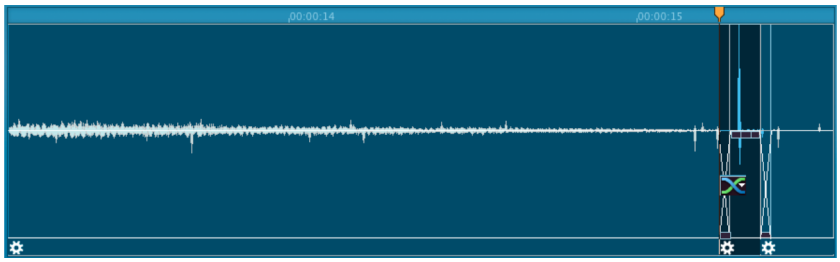
Note: This technique is only useful if the noise is the only sound and nothing else should be heard. If a click or pop occurs in the middle of the music, it's better to use theRetouching clicks and pops (view page 30) method described in the section below.

- Select the scissor mouse mode.

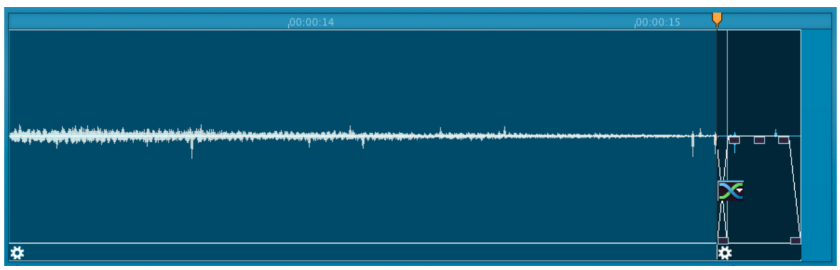
The mouse pointer turns into a pair of scissors. If you move it across the track, the playback marker moves with it.

- 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.

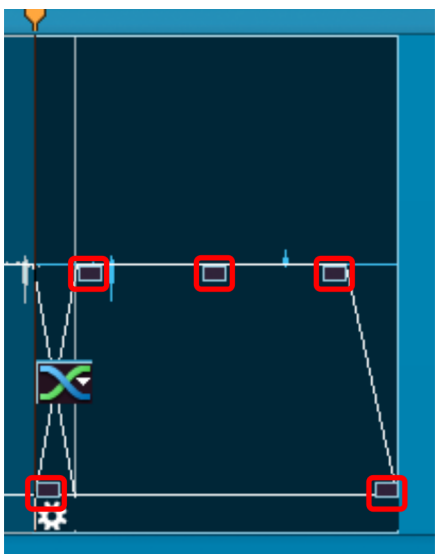
This way, three separate objects are created on the track.



- Switch back to standard mode, select the object in the middle and delete it using the menu command "Edit" > "Delete".



The back of the object automatically moves back and slightly overlaps with the front part of the object. You can use the handles to make fine adjustments to the transition.



- 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.

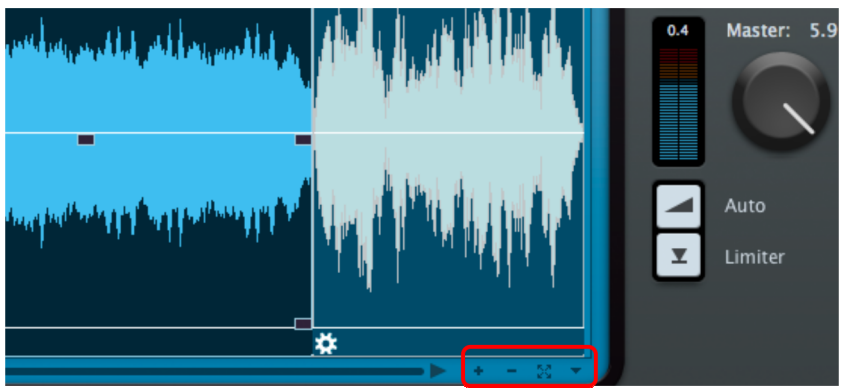
- The handles at the bottom left and right corners adjust the object borders. You can fine tune your cuts by extending or contracting the object.

Retouch short noises such as clicks or pops

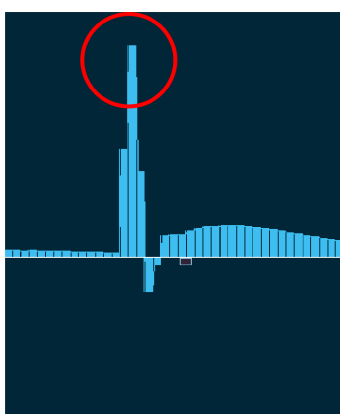
Let's take a look at a quick and elegant way of retouching short noises such as pops and clicks using a pen tool.

Note: You can't undo editing that you did with the waveform drawing tool. After selecting the pen tool, you can decide if you want play it safe and edit in a copy of the file or proceed directly in the original material.

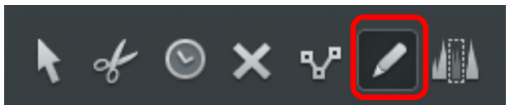
- Search for a section in the material where you hear crackling and set the playback marker to that position.
- Zoom into that section so that you can see the details of the waveform display. You can either use the zoom button in the bottom right corner of the track window.



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



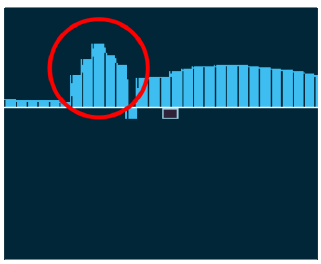
- Select the "Draw waveform" mode.



The mouse pointer turns into a pen which 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.

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

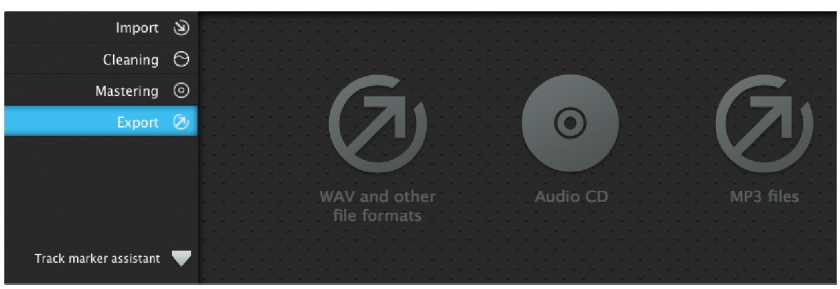


If you play back the material now, the cracks have disappeared.

Export

After you have "cleaned up" the material you can export it either song by song as MP3 or WAV files or all songs on the track as an audio CD.

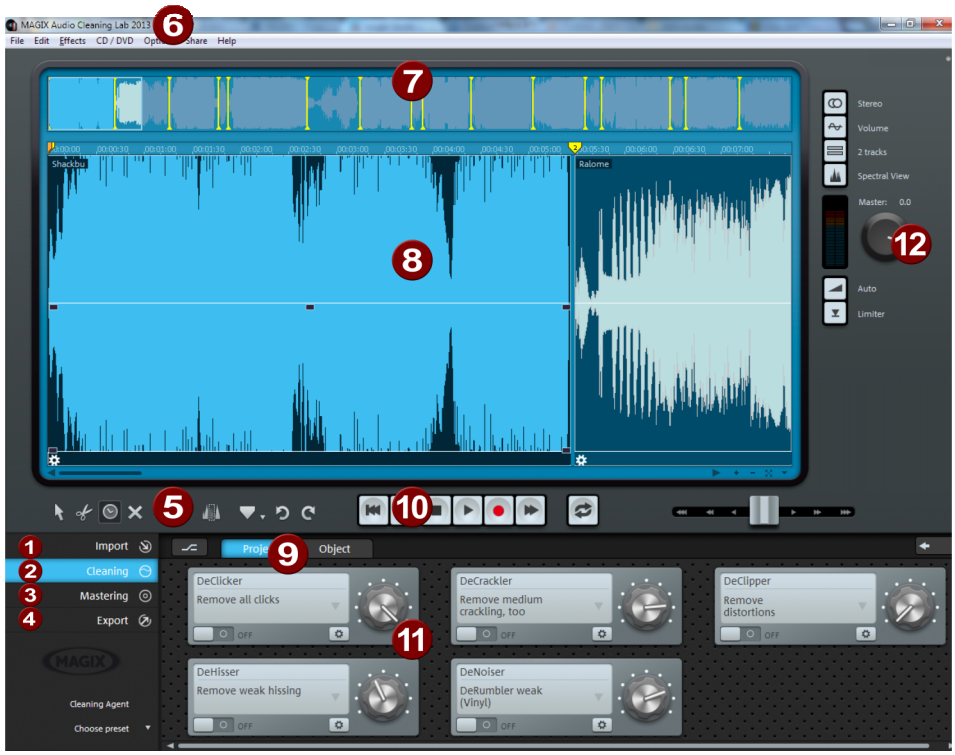
To do this, switch to the "Export" interface. The only part of the workspace that will change are the functions at the bottom.



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.

To save your project click on "File" > "Save project".

Overview of the program interface



1. **Import:** Add new audio material here such as audio files from the hard disk, LPs, or cassettes using the recording function or songs on audio CDs.
2. **Cleaning:** You can remove audio disturbances in the track using the "Cleaning" view.
3. **Mastering:** Use the "Mastering" view 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 using the "Export" view.
5. **Mouse modes:** Here you can select the right tool for the job: 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) and Pen 3 (Draw spectral cleaning shape).
6. **Menu bar:** Here you'll find all the features available in MAGIX Audio Cleaning Lab 2013.
7. **Overview track:** The entire audio track is displayed here. The area which is currently being edited by the user is highlighted.
8. **Track**: Make detailed changes to the audio material here.
9. **Project/Object:** Here you can determine whether an effect will be applied to the whole project or only to a selected object.

10. **Transport control:** Controls track playback.
11. **Mastering section:** Here you can access the individual cleaning and mastering effects.
12. **Master volume:** Set the track's master volume. The limiter prevents clipping and the auto function enables the volume to be automatically optimized.

Track window and constant control elements

This chapter describes the display and control elements which are available to you independently from the selected section in MAGIX Audio Cleaning Lab 2013

MAGIX News Center

The MAGIX News Center features links to current online tutorials and tips & tricks on the software application examples. The "News" is indicated by color according to content:

- Green indicates practical tips & tricks for the software
- Yellow reports the availability of new patches and updates
- Red for special offers, contests and questionnaires

If no new messages are present, the button will appear gray. When the MAGIX News Center is clicked, all of the available information will be displayed. Click the messages to reach the corresponding website.

The master track

Audio material display

All of a project's audio material is displayed in the master track of the track window as a waveform. The waveform corresponds with the acoustic properties of the material. This means that there isn't anything to listen to at places where there isn't anything visually; higher waves mean high volumes. The tracks waveform display forms the most important basis for locating specific passages.

The display is compressed, meaning that the waveform is displayed as a ratio of loud passages to quiet passages. This ensures correct display for quieter sections at the beginning or end of a song.

Position line

During playback a thin line will move horizontally from the left to the right over the master track. This is the position line, which indicate, which part of the wave form is currently reproduced.

The last starting point of the playback is indicated by a small triangle in the master track. The position line will jump back to that position, once playback has finished.

Timeline

The timeline is located above the track. It shows the time position in the project. The measurement units can be selected from the "Options" menu. You can choose from: samples, milliseconds, hours/minutes/seconds, and CD frames.

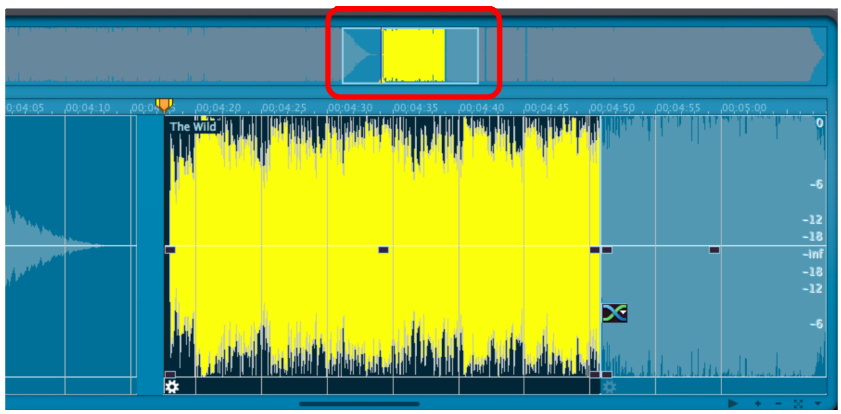
The markers are also displayed in the timeline. They can be accessed, moved or deleted with the mouse.

Navigation

The task of the transport controls is to help you navigate through the audio material in the master track. Here you can find functions that you will already now from your old tape recorder. You can get more information in the chapter Transport controls (view page 40).

The simplest solution, however, is to navigate directly in the track: a mouse click on the time ruler will set the starting point for the playback (even if playback is already running!) The space bar starts and stops playback.

Overview track



The overview track lets you select the project section which is displayed in the track display (displayed in blue).

The track window now includes an additional overview track with a reduced display of the complete project. Now you can work at a specific position or on a certain song while maintaining an overview of the complete project and quickly navigate to areas that need more work. In the overview track you can also select the song or position in the material to be displayed in the track window.

Move the section to the part of the project simply by clicking in the overview track; the zoom level remains the same. Define a new range in the overview track by clicking and dragging. Vertical yellow lines indicate the markers in the overview track.

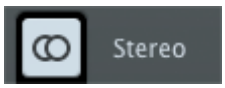
Use the "Overview mode" entry in the "Options" menu to show/hide the overview track.

2 tracks

Use the "2 tracks" button to create a second stereo track, for example, if you want to create transitions between two songs or to "park" a song on the additional track for the meantime.

An additional track provides a better overview when there are multiple objects in play. All objects can be moved randomly between the tracks. If moved between tracks while holding the "Shift" key, the horizontal position will be retained, i.e. only the track is changed. On the lower "shunting" track you can move the objects without moving the subsequent ones as well. Materials which are placed over one another will be played back simultaneously and burned on CD. If this is desired, then the volume level at this position should be monitored, since objects which are playing back simultaneously add to the overall volume.

Stereo



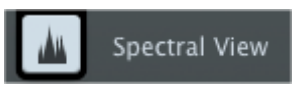
If the stereo button is activated, the waveform display of the audio material for both stereo channels will be displayed separately.

This view is useful to visually monitor processing of the material in the stereo panorama, or to locate precise crossover points during editing operations.

Volume curve

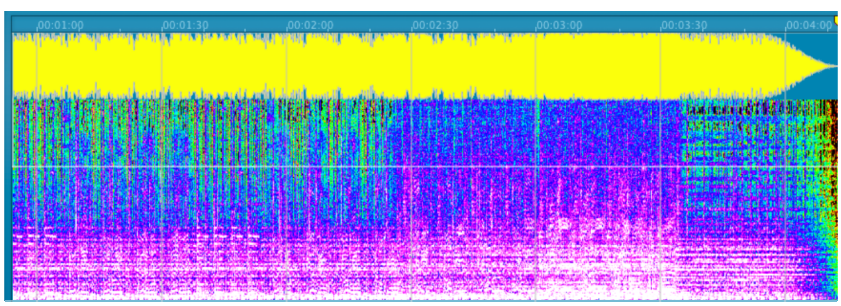
Use the **"Volume curve"** button to activate a volume curve (view page 62).

Spectral display



In addition to the waveform display, this button allows a spectral display of the audio material to be shown as well.

Spectral display equates the X axis (horizontal) to the time dimension. In contrast to the waveform display, whereby the height of the waveform only indicates the total level of the signal, the spectral display shows the level of each of the audio signal's individual frequencies. The actual level of each frequency is indicated by the color of the points in the spectrogram image.



The whole color spectrum is used to display the volume of individuals frequencies. Pink indicates loud sounds in a frequency range, green indicates the areas with middle volume and red the very quiet sounds (in the default color scheme). Black is used for quietness and white for maximum volume.

Different color palettes can be selected in the menu "Options -> Spectral display". "Display values scale" in the same menu ("#" key) shows an object's frequency scale.

Spectral cleaning is significantly more processor-heavy than the normal waveform display, so redrawing after a section changes is always slightly delayed. This delay is increased the further the zoom is extended, since MAGIX Audio Cleaning Lab 2013 needs to include more and more data for calculation of the display. For this reason, spectral display is only available from a certain zoom level.

Spectral display of the audio enables specific disturbances in the audio to be detected. Clicking can be recognized by vertical lines across the entire frequency spectrum; continuous disturbing sounds can be detected by horizontal lines.

More detailed explanations can be referenced in the section "Spectral cleaning".

This display also makes it easier to find sections in a song quickly, since instrumental changes can be clearly seen in the spectrum. On the other hand, the waveform display will not indicate changes if the volume level does not fluctuate.

Mouse mode

"Mouse modes" are your tools when working in the track window of MAGIX Audio Cleaning Lab 2013. Depending on the mode, the function of mouse-clicks in the project changes. The selected mouse mode is indicated by the appearance of the mouse pointer in the track window.

1. Select, move and edit objects.
2. Quick cutting of objects
3. Change the playback speed with pitchshifting/timestretching.
4. Deleting objects
5. Drawing a volume curve
6. Drawing a waveform
7. Editing objects in the spectral display (view page 36)

Edit mouse mode

The Edit mouse mode is preset. You can take care of all important tasks with this mode.

Select objects in the track window with a left-click. Selected objects can be moved. All subsequent objects are also moved so that no unwanted gaps develop later in the track.

In Edit mode you can use the 5 handles to fade or shorten all objects or to adjust the master volume.

Right-clicking on an object opens the so-called context menu from which you can select important editing options for the object.

Keyboard shortcut: V

Cut Mouse mode

The cutting mode converts the mouse pointer into scissors. Every object can be cut on the mouse position.

This creates two separate objects that can be edited separately.

Moving the mouse over the wave form depiction of the audio material you move the Position Bar along with the mouse pointer. So you can control exactly the point where you want to cut. The perform precision editing we recommend zooming the wave shape display before using the cut mode.

Like in move mode, right-clicking on an object opens the so-called context menu from which you can select important editing options for the object.

This mode is suitable for dividing a recording into different parts in order to apply object effects to each of the passages.

Keyboard shortcut: H

Delete mouse mode

If the "Delete objects" mode is activated, the mouse pointer turns into an eraser. In this mode, objects can be deleted from the project.

This also automatically moves the position of subsequent objects back to the position of the deleted object.

Keyboard shortcut: F

Resampling/Timestretching mouse mode

This mode lets you change the playback speed of objects with the mouse so that they are better aligned.

You can use this mouse mode by stretching or squashing the object at the rear object handle below. The mouse pointer turns into a clock.

Resampling mode (preset) can be used to change speed and pitch just like on a tape, i.e. speed and pitch are changed together as one. If an object is compressed with the mouse, the speed and pitch increase just like a tape when it is played faster.

In the timestretch mode, the pitch remains unchanged if the object length and with it the speed are changed.

You can switch modes by switching to the cleaning effects, selecting "Object" editing and then selecting timestretching from the tempo/resampling effects presets list.

Volume draw mode

In **volume draw mode** the volume curve can be "drawn".

This way, you can create irregular volume progressions quickly.

To delete volume curve points, double-click on the corresponding point or click on a point in the delete object (view page 38) mode (view page 38).

Wave drawing mode

Repair short distortions such as crackling directly in the wave form of the audio file by using the Wave drawing mode. Such distortions usually only last a few sample values, so you can use the mouse and try to draw along the original waveform without the distortion.

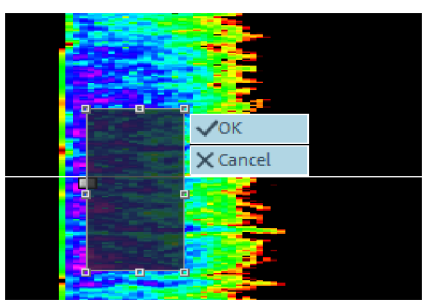
There is an automatic zoom function in the wave form display when you switch into the Wave drawing mode, so sample values become visible.

Warning: Unlike other editing of the master track which only affects the project, this mode lets you work directly with the Wave audio file, i.e. on the recorded raw material, which is changed directly and permanently. Create a backup copy to undo changes. Back up copies are created automatically when working with MP3 and other compressed formats, since such files have to be converted into the Wave format for this function.

Edit spectrum directly (Mouse Mode)

You can remove individual noises within the sound spectrum of the audio material with the help of the Spectral Edit mouse mode.

The view of the master track changes to Spectral display (view page 36). You can create an area around the noise with your mouse. Its size is still adjustable afterwards by simply stretching the handles on the frame.



You can hear the impact of the effect straight after playing the corresponding passage. Two buttons are located at the frame of the disturbances. By clicking "OK" the editing will be calculated into the audio material instantly. You can also undo each edit by clicking on "Edit" > "Undo".

By clicking "Cancel" you delete the frame and end the filtering process.

Marker

Opens a menu with different functions to set track markers (view page 141) automatically.

Undo

In the project you can undo the last changes you made. This way, it's no problem if you want to try out critical operations. If you don't like the result, you can always revert to the previous state using "Undo".

Shortcut: Ctrl + Z

Redo

The “Redo” function undoes the previous “Undo” function.

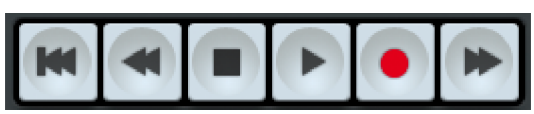
Keyboard shortcut: Shift + Y

Transport console

The transport control determines the playback position in the project. The position line is a thin vertical line in the track window indicating the current playback position.

With the position slider you can quickly move the position line in the project.

Use the transport console to start and stop playback, move forward and backward within the project and set the position line back to the very beginning.



Loop: Clicking on the loop button starts playback in an endless loop. This function is useful if you want to listen to parts of the audio repeatedly, e.g. to monitor transitions or effect settings in critical sections. You can extend or shorten the loop range in the timeline by using the mouse or by entering changes numerically in the "Playback parameters" window (options menu).

Return to start: Resets the position line to the start of the project (also works during playback).

Rewind/Fast forward: Rewind/fast forward first starts slowly, then quickly speeds up if you continue to hold the rewind or FF button. This corresponds to the functionality of a tape recorder which also takes some time to gain speed.
Alt + Click on this button lets you jump to the next or previous marker.

Stop: Stops playback, the position line jumps back to the starting position.

Play: Starts playback, clicking again stops playback at the current position.

Recording: Opens the record dialog where you can set the recording format, level etc. The actual recording is started in the record dialog.

Controlling with the keyboard and mouse:

- The space bar starts or stops playback.
- A simple mouse-click in the timeline above the track moves the position line to the corresponding position (also works during playback).
- Use the position slider to quickly move the playback marker within the project.
- Other special keyboard commands can be used to jump between markers and object borders quickly, see Zoom settings (view page 42).

Zoom

The waveform display allows you to recognize certain parts of the material from the shape. For many tasks it is quite useful to enlarge the waveform display. For detailed editing, e.g. editing with the scissor tool, there are several zoom options:

Quick zoom: For quick zooming it is sufficient to click with the mouse in the timeline, keep the mouse button pressed down and move it up or down. This way, you can quickly zoom the cursor in and out at any position without releasing the mouse.

The +/- zoom button at the bottom right corner of the track window zoom in/out the display.

This enlarges the central area of the track window. Clicking on the adjacent triangle opens the zoom menu. Here you can open different zoom and navigation commands (view page 42).

By selecting an area in the overview track (view page 35), you can also determine the visible section of the project. The overview track is located above the track window and displays the entire project irrespective of the selected zoom level.

You can click on this symbol or the "a" key to quickly restore the fullscreen view of the project.

Moving the scroll bar forward and backward allows you to quickly navigate through the project. Dragging the scroll bar ends adjusts the size, which also zooms in and out of the project.

Zoom settings

Command	Keyboard shortcut	Description
Play/Position marker		**Commands for quickly editing the playback position**
Marker left	Alt + right	The play marker can be moved quickly between the markers.
Marker right	Alt + left	
Object border left	Shift + Alt + right	The play marker can be quickly moved from object edge (object start and end) to object edge.
Object edge right	Shift + Alt + left	
Zoom ranges		
Show all	A	The entire project is visible.
Zoom 1s	1	The visible section of the project is quickly set to the selected value.
Zoom 10 s	0	
Zoom 60 s	6	
Zoom 4 min	4	
Zoom 10 min	Shift + 0	
Vertical zoom		Vertically zooms in and out of the wave shape. This is useful for locating the crossover point (for precise sample editing).
Zoom into waveform	Ctrl + Cursor down	
Zoom out of waveform	Ctrl + Cursor up	

Volume control/Auto button

This controller sets the playback level of the track. Before exporting, the project should be set as loud as possible in order to receive an optimally calibrated recording level. The "Auto" button below the volume control is for automatically optimizing the volume (normalizing).

In order to set the volume of the project as high as possible, place the position line just before the loudest part of the project and start playback. (The loudest position can be found by locating the highest peak of the waveform display).

After you have played the loudest part, click on the "Auto" button below the master volume control. MAGIX Audio Cleaning Lab 2013 automatically adjusts the volume so that the loudest part of the range just played back is exactly 0 dB - this will be the maximum volume.

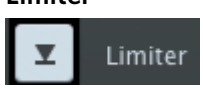
Note: The volume controller adjusts the volume of the project which means that it will be exported at this volume. If you set the level lower, the project will be exported at a lower volume. It is better to adjust the monitor volume with the sound card mixer or directly on your stereo system (e.g. monitor speakers) and to leave the volume control at the position recommended by the "Auto" button.

To adjust the monitor volume in the sound card mixer, you can click on the loudspeaker symbol in the notification area (at the right bottom corner of the screen). However, you can also adjust it directly in the "Playback parameters" (view page 150) dialog.

Control display

The display beside the volume control is a peak meter and shows the peak level of the audio in the track during playback. For stereo tracks the the left bar shows the level of the left channel and the right bar shows the level of the right channel. Both bars react together for mono tracks.

Limiter



The limiter can be switched on to reduce clipping. This device works sound-neutrally and provides a final guard against extreme levels.

Import

Audio files

MAGIX Audio Cleaning Lab 2013 can import audio files in the formats WAVE, QuickTime (*.aif), Ogg Vorbis (*.ogg), MP3, WMA, FLAC, and AVI (soundtrack only).
To do this, click the corresponding button **"Audio files"** in the import section and the "Load audio file" dialog will open.

Select any folder containing audio files. Every file listed can be previewed and loaded into MAGIX Audio Cleaning Lab 2013. The selected file is attached to the last object following a pause of 2 seconds.

You can also load several files simultaneously. Just as in Windows Explorer, you can extend your selection with "Ctrl" + click, or select a series of files with "Shift" + click.

The pause inserted between the files (2 seconds by default) can be changed in the CD/DVD menu with Automatic pause settings (view page 142). If you have tracks which blend over one another and which are distributed on several files then you should change this value to "0".

Keyboard shortcut: W

Record

The "Record" button opens the audio record dialog.

Basic knowledge about recording with the PC

The record function converts analog audio signals – records, tapes, sounds, speech – into digital data, which can be saved on the PC and edited with MAGIX Audio Cleaning Lab 2013.

The device which is used to digitalize the audio signals is already built into most sound cards and aptly called an analog-digital converter, often abbreviated with A-to-D, ATD or A/D. In order to record sounds, the A/D converter takes samples of the sound to be digitalized at fixed intervals by measuring the voltage level of the signal. The frequency of the sampling is called the sample rate and naturally lies within the kHz frequency range; several thousand times per second. The higher the sample rate, the more samples are recorded by the A/D converter, thus making the sound conversion closer to the original.

The precision with which the A/D converter measures the voltage level of the analog signal is determined by the sample resolution. The same principle applies here: The finer the resolution, the better and more natural the digital conversion.

Audio recordings in CD quality are recorded with a sample rate of 44.1 kHz and a resolution of 16 bits.

Connecting the source for recording

First of all, the source of the audio material must be connected to the sound card input. Again, there are several possibilities which primarily depend on the type of equipment you have.

If you are recording from a microphone, then please connect the microphone to the microphone jack on your sound card (usually red).

If you want to record material from a stereo system, then you can use the line-out or AUX out jacks on the back of your amplifier or tape deck. This involves connecting them to the sound card input (usually red).

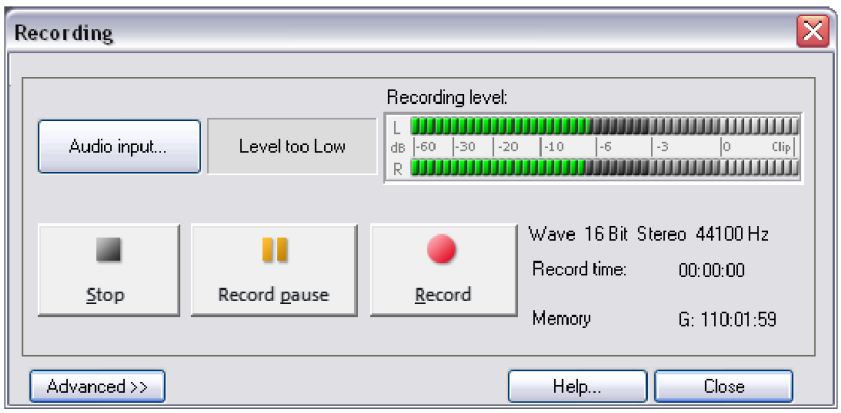
If your amplifier has no separate output (other than for the speakers), then you can use the connection intended for headphones for your recordings. In most cases, you will need a cable with two mini-stereo jacks. This type of connection has the advantage of being able to set the headphone input signal level with a separate volume. As headphone connections generally are not the best, it is advised that you use the line outputs if possible.

When recording cassettes from a tape deck, you can connect the tape deck's line out directly to the sound card input.

When recording from vinyl records, you should not connect the record player's output directly with the sound card because the phono signal needs to be pre-amplified. A more suitable method would be to use the headphone connection or an external pre-amp.

Record dialog

The "Record" button in MAGIX Audio Cleaning Lab 2013 opens the record dialog. However, the recording source must be connected to the input of the sound card with a suitable cable first. For more information, please read the "Recording basics" (view page 44) chapter.



Audio input: Opens the input and level automation (view page 49) for automatic selection of the correct input signal and level.

Recording level: Displays whether the level of the signal you want to digitize is correct. To set the level, play the **loudest part** of the material you want to record and monitor the display. Like with analog recordings, the sound of digital recordings has to be optimized as well. Too low level settings will have adverse effects on sound quality, distortions lead to unpleasant "clippings".

Recording: This button starts the actual recording. During recording, recording time and remaining space on your hard disk are indicated. Monitor the recording level on the LED display. If the display reaches the upper LEDs, there was a distortion at some point. In this case, you should definitely check the recording for clippings and, if necessary, repeat the recording using a lower recording level. At the end of the recording you will be asked if you want to use the recording. The newly-recorded material will be placed at the current position of the playback marker in the arrangement.

Recording pause: Pauses the recording. Click the button again to resume.

Stop: This button ends recording. The recorded material is then inserted into the upper track as an object. If objects are already in the track, the recording is attached to the last object after a pause of 2 seconds.

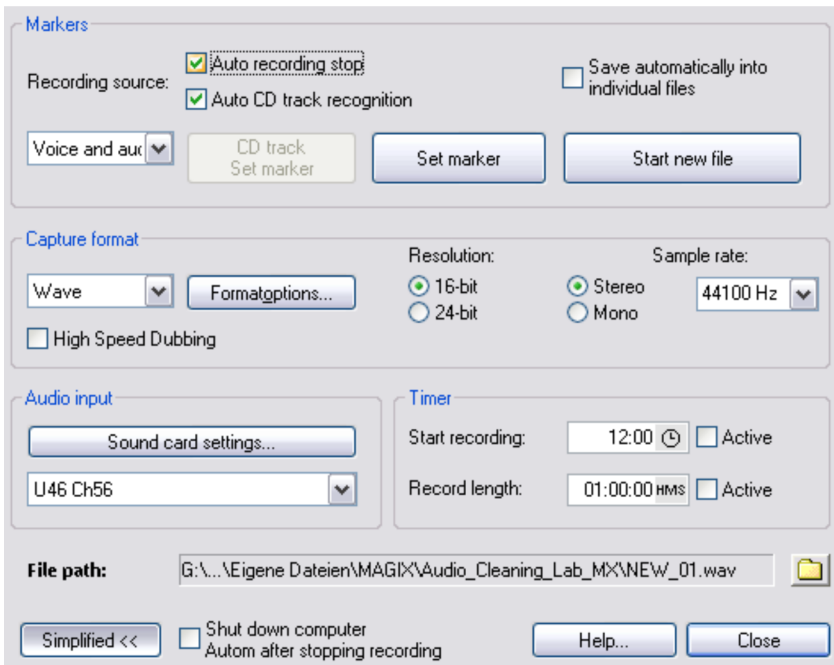
Advanced...: Opens the Advanced view of the record dialog (view page 47) with access to additional settings options.

Help: Opens the program's help file for the record dialog.

Close: Closes the record dialog.

Keyboard shortcut: R

Advanced settings in the recording dialog



Automatic recording stop: If this button is activated, recording will cease automatically after approx. 16 seconds of silence. This means that you can record without having to stop the process manually when the recording source ends.

Automatic CD track recognition: If this button is activated, then track markers are automatically placed at the end of the pauses after a track. In order for pause recognition to function seamlessly, you will have to set the proper source in the selection box (LP, cassette, CD, or Internet). You can specify the detection parameters even further in the Options menu via >Automatic track marker recognition options (view page 153).

Save automatically in individual files: If this feature is active, then every individual track that is recognized will be saved as a unique file.

Set CD track marker: Even during recording, you can set track markers by clicking the corresponding button in the recording dialog.

Start new file: If you want to record for very long sessions or multiple sources one after the other, then the recording file can become extremely large. This button will create a new sequentially numbered file each time it is pressed.

Recording format: This setting determines the sampling rate and bit resolution (deluxe version only) of the recorded audio file, and also whether the recording should take place in stereo or mono.

24-bit recording requires a high-quality audio card with 20 or 24-bit conversion, plus a 24-bit capable MME driver. Audio cards with SPDIF digital interfaces can also record audio material in 24-bit quality.

You can also record directly in compressed formats such as MP3 or OGG Vorbis. Select the format you want to use from the list box, and use "Format options" to specify details such as the bit rate and compression method.

Double Speed Recording: Activates the Recording at double speed (view page 48).

Audio input: The button "Sound card settings" opens a dialog with special settings (view page 51) for whatever sound card is present. The name of the selected sound card is also displayed. If you are using several sound cards (or such with several inputs), then you can select one from the menu.

Timer: Enter a starting time for a recording and the length of the recording. The recording doesn't begin immediately after pressing the "Record" button, but rather at a specifically set time. This way, time-delayed recordings (for example, at night or when you're out) are now possible. Of course, the system clock has to be set correctly. If "Record length" is also activated, then the recording will end automatically after the indicated period.

File name/file path: The name of the audio file to be created and the preset folder are displayed in the recording window. Both can be changed by clicking the folder button.

Shut down computer automatically after recording: If you are working with timer recordings, you might as well have the computer shut down automatically after the recording is complete.

Simplified...: Simplified version of the recording dialog.

Double speed recording

Some double cassette decks have a "Double Speed" copy function. On one deck a cassette will be played at double speed and on the other recorded at double speed. Doubling the speed cancels itself out so you will end up with a completely normal cassette recording. Thereby making it possible to copy cassettes in half the time.

With the option "**Double Speed Recording**" you can also use this function with MAGIX Audio Cleaning Lab 2013. If it's activated you can record played audio material at double speed, after recording the speed of the recorded material will be automatically halved.

Input and level automation

Every sound card has a least two inputs (microphone and line), as well as various "internal" inputs for the CD drive or the signal from another program, for example, Internet radio. With input and level automation you can automatically select the correct input for your recording without having to search and adjust the input level in order to avoid distortions.

To do so, click on "Audio input" in the record dialog. If you had already connected your source and begun playback, the correct input will be determined immediately. Otherwise do this now and click on "Search channel again".

If this didn't work, use the "Windows mixer" button to open the Windows Mixer and select the channel manually.

Adjusting the recording level is essential when recording digitally via sound cards in order to achieve optimum sound quality. If the adjustment is set too high, distortion occurs and the incoming signal must be reduced. If you reduce input sensitivity, the resolution at which the analog signal is digitized is also reduced. The level controllers of your sound card should generally be set as high as possible in order to achieve optimum results. Yardstick for an optimal level is the loudest part of the material. The loudest part should be adjusted to the maximum. You can now adjust the recording level with the help of the LED display in the record dialog.

You can adjust the level of the source manually using the "Volume" controller. If you activated "Automatic level adjustment", the level controller will automatically be set to the correct value.

Monitor while recording

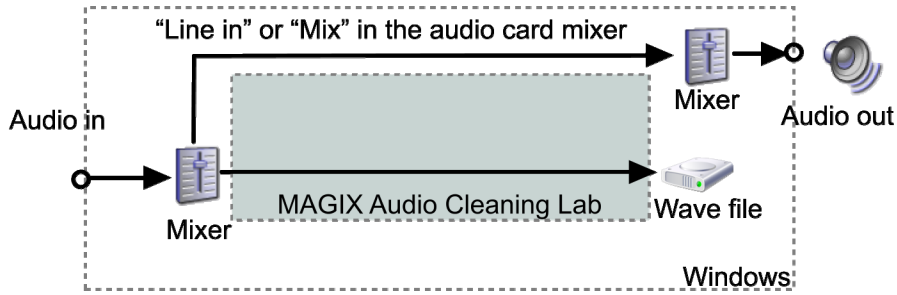
Do you want to listen to your digitizer while you are recording? It may not work from the start for the following reason:

Most sound cards, including the ones integrated in a PC ("onboard sound") offer help for the Windows sound card mixer. You can change the different input and output levels of the sound card or choose a digitizer.

You will also find a signal route within the mixer. This route passes an input signal through to the output of the sound card. The corresponding volume controls within the mixer are called line -In, microphone or stereo mix.

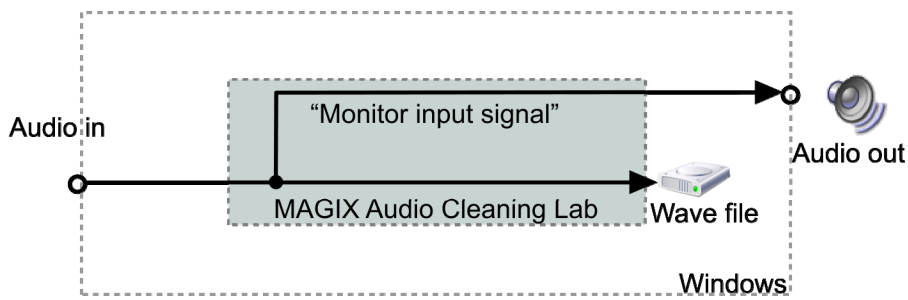
The functions, as well as the descriptions of the input and output controller within the Windows mixer, may differ depending on the sound card and sound card driver. Windows mixer is only a standardized "interface" for the sound card driver.

Regardless of MAGIX Audio Cleaning Lab 2013, Windows and the sound card driver enable you to listen while you record.



Recording: Sound card with Windows mixer support

Many sound cards or audio devices, such as USB record players offer either an incomplete or no mixing support at all. In that case, you don't have the option of monitoring while recording. If you go to "sound cards properties (view page 51)" within the advanced recording dialog you will find the option "Listen to the sound during the recording". If you activate this, MAGIX Audio Cleaning Lab 2013 will conduct the input signal to the output.



Recording: sound card without Windows mixing support

24 bit audio support

Audio files in MAGIX Audio Cleaning Lab 2013 can not only be recorded in 16 bit quality, but also in far superior 24 bit resolution. Simply select the "24 bit" option under "Resolution". 24 bit recordings require a high quality audiocard with 20 or 24 bit converters, as well as a 24 bit-compatible NME drive. 24 bit audio material can also be transmitted via audiocards with SPDIF digital interfaces.

We have had positive experiences with the 24 bit audiocards produced by Marian, RME, SEKD and Terratec.

The high resolution audio files are stored and edited in the 32 bit "floating point" file format by MAGIX Audio Cleaning Lab 2013. This ensures the full 24 bit quality independent of the gauge. The dynamics may increase to over 140 dB, while the recording's jamming transmission sinks, according to the type of audiocard, to 110 dB and more. Thanks to floating point processing, there is no need to worry about

internal editing being distorted. Floating point processing only starts to distort at around 1,500 dB above zero – in contrast to a 16 bit signal that distorts immediately once the zero dB line has been traversed.

Even in cases whereby audio material is intended for burning onto a 16 bit CD, it is worth selecting 24 bit recording because all effects calculations are made in a higher quality and therefore no "rounding" mistakes can be detected in the audible 16 bit range.

24 bit recordings (via storage as 32 bit float files) take up twice as much storage space on the harddisk as 16 bit recordings. But with current harddisk storage capacities, it works out as a good compromise when one considers the increase in quality.

High resolution audio files can be imported and exported as 24 bit WAV files, enabling trouble-free file exchange with other high quality audio systems, such as MAGIX Samplitude.

Digital transfer

With the recording function, digital audio data can be transferred to the hard drive through a digital interface (e.g. S/PDIF or ADAT).

ADAT or DAT recorders normally produce data with a sampling rate of 48 kHz. For a CD project with 44.1 kHz you must convert the sampling rate. This is carried out in real time by MAGIX Audio Cleaning Lab 2013. The digital signal is read at 48 kHz, but is automatically converted and inserted into the project as an audio file at 44.1 kHz.

For this to occur correctly, you must first set the sample rate of the incoming signal in the recording dialog. Click on the "Dev." button in the recording dialog. In the following dialog (sound card characteristics), set the audio recording formats supported by the sound card.

Now, connect the digital output of your recorder to the digital input of your sound card, and now start recording!

Record properties

This dialog provides you with information regarding the currently selected sound card. Supported audio formats of the sound card and the sound card driver's information is also displayed.

Driver system: Here you can switch between driver types (MME and WDM).

Note: Adjust this setting only if you have problems with audio playback or recording.

Special: Some sound cards or audio devices (for example, USB turntables) do not offer mixer support. With the "Monitor input signal" option you can listen to the sound during recording (monitoring).

"Filter DC offset" allows you to remove the DC offset section (view page 74) of the input signal, even during recording.

CDs

With **CDs**you can import music from a CD into the program.

Import CD

You can import entire Audio CDs or individual CD tracks into the project. Unlike data CDs, audio CDs require special treatment while importing ("grabbing" or "ripping"). The data is imported digitally, thus eliminating loss in sound quality.

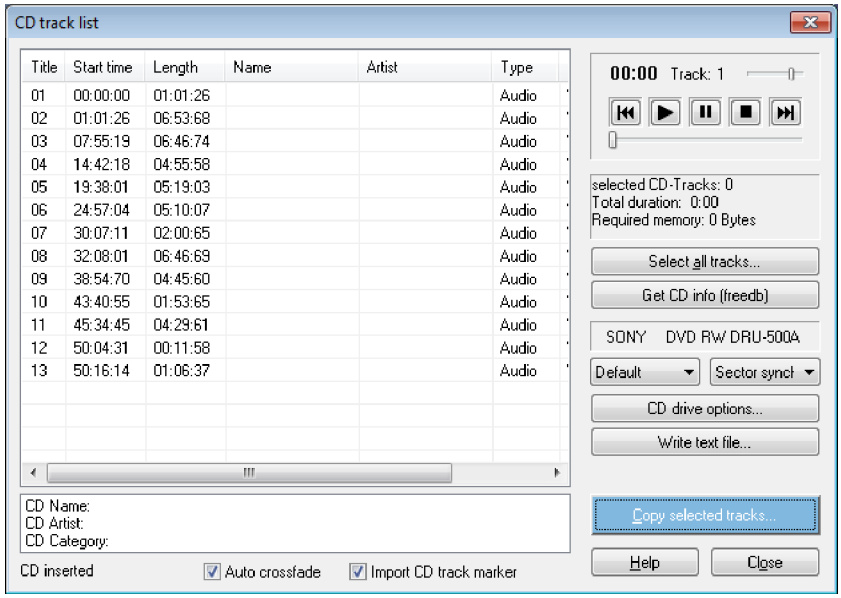
To import audio tracks you should proceed as follows:

1. Insert an audio CD into the drive and click on "Import CD". A dialog with a list of the CD tracks will open. If you have more than one drive, you may have to first select the drive containing the CD. You can do this in CD drive options.
2. Select the desired tracks (multiple selection by Ctrl + mouse-click).
3. Click on "Copy selected track(s)."
4. The "Import project" dialog will now appear. Here you can enter the file name and select the target directory.
5. The audio material is then copied from the drive onto the hard disk. A progress bar is displayed.

Once ripping is complete, the dialogs will be closed and the tracks are inserted into the project as individual objects.

Keyboard shortcut: D

The track list dialog



Copy selected track(s): This button starts audio copy. A new object is created for every track in the arrangement and the corresponding track marker is created.

Transport control: This lets you start and stop playback just like on a real CD player and skip forward and backward in the playlist.

Details on the total length and the memory capacity of the selected track are displayed below.

Select all tracks: All tracks are selected, for instance, to copy the entire CD. Several subsequent tracks can also be selected by holding the "Shift" key and left-clicking; "Ctrl + mouse-click" selects several tracks.

Get CD Info (freeDB): Request title information from the freeDB Online CD database (view page 144)

In the right selection box you can select the read speed, and in the left one you can select the export mode (see Configuring the CD-ROM (view page 55)).

CD drive options: Here you can change the settings and select the drive for importing the CD if you have installed several CD drives (see also CD-ROM drive dialog).

Write text file: Title list including the exact names and times can be exported as a text file for archiving purposes.

Dialog Load audio file

The "Import project" dialog appears after you have selected the option "Copy selected tracks". Here you can specify name and target address of the audio files. The audio files are subsequently numbered depending on their names (name -> name_1.wav, name_1.wav...).

Audio tracks (CDA files) are imported as WAV files by default. However, they can already be converted into MP3s during import. To do this, select the corresponding audio format in "file type" of the dialog "Import project" and then make the corresponding "format settings" (for more info on the audio formats please also read "Loading audio").

Copy-protected audio CDs

According to the copyright act it is forbidden to copy a CD with copy protection, but the owner of a CD may create a backup copy. The problem with copy-protected CDs is that they cannot be imported using conventional PC drives. In order to create a backup of such a copy-protected CD you have to play it on an audio CD player and record it as a regular analog recording via the sound card.

Drive list dialog

You can select and configure the disc drive if you have more than one drive.

Configuration: This button opens the configuration dialog (view page 55)where you can make various special settings, SCSI IDs, etc.

Reset: Restores the default settings of the drive.

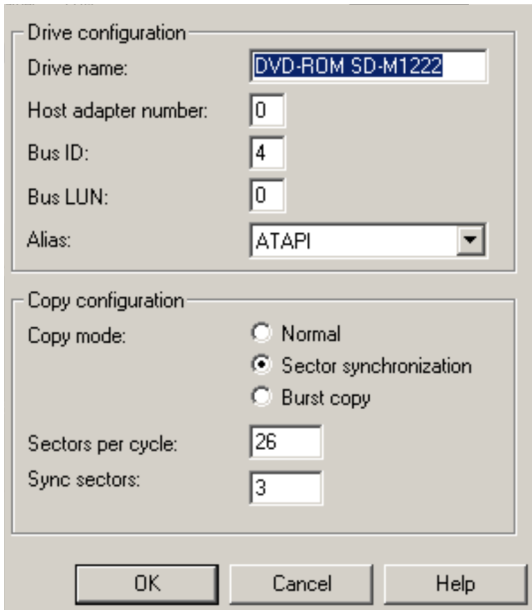
Add drive: Creates a new drive letter in the list which still requires special settings.

Delete: Deletes the selected drive.

Save setup: Saves the current drive list and all configuration data in a *.cfg file.

Load setup: Loads the current drive list and all configuration data from a *.cfg file.

The CD-ROM 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.

Bus ID: Here you can enter the ID of your CD-ROM drive. Be sure to set the correct ID, there is no error checking!

Bus LUN: sets the LUN parameter, normally 0.

Alias: Lets you select the manufacturer type of your CD ROM drive.

Normal copy mode: copies audio files without any software correction.

Copy mode sector synchronization: copies audio files with a special correction algorithm. This is especially useful, since many CD drives have problems finding an exact position again and gaps can occur.

Burst copy mode: optimizes the speed of the copy process, no software correction is used.

Sectors per cycle: defines the audio sector count that should be read from the audio CD in one cycle. The higher the number of sectors, the faster the copying process. Numerous SCSI systems have problems with more than 27 sectors.

Sync sectors: sets the count of audio sectors, which should be used for software correction. A higher number results in a better synchronization but also in a slower copying process.

Copy-protected Audio CDs

It is forbidden to copy an Audio CD, whether it is with or without copy protection. Each owner of a CD may however produce a backup copy of copy-protected CDs. The problem is that one cannot create a copy from copy-protected CDs since the CD cannot be read in with a conventional PC disc drive. In order to create a backup copy of a copy-protected CD, you must play it in an Audio CD Player and record it as a "normal" analog recording via the soundcard.

Arranging in the master track

This chapter is about working with objects and track markers. Descriptions of the individual control elements can be found further on in the „Track window“ (view page 34) chapter.

What is an object?

Objects provide you with a wave form-interpretation of your audio material. The starting point of each object is related to one single point in the audio file. The length of the object determines the length of the excerpt from the audio recording. So, an object does not represent the audio material itself, it is just a replay command. While editing objects you just define additional commands which will be executed in real time each time you listen to the object. For this reason, the original audio material never gets altered and nevertheless your personalized settings are permanently saved. This kind of data treatment is known as "non destructive-editing".

As objects are merely replay commands and they only indicate which audio material has to be played, you can move them to any desired position within the track window or even delete them without changing the content of your audio file.

Objects are important for differentiated sound editing of single tracks or loops.

Objects are subdivisions of your audio material which can be edited separately. Tracks are in contrast simple markers for an audio CD.

Objects can be cut into an arbitrary number of smaller objects, and they can be moved to the master track or even deleted.

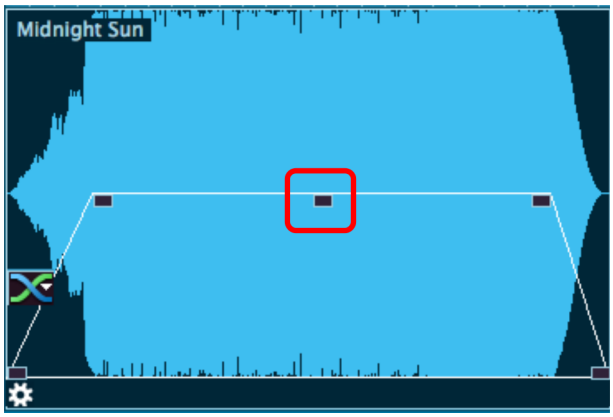
Should you move or delete an object in the track, all objects that appear after the deleted object will move up one position including their track markers, so that the pause between the songs will be preserved.

You do not have to move the objects themselves to change the sequence of the songs. As the following objects will all move up one position, this would only be possible using a second track. It is much easier to move the corresponding track markers in front of or behind another track marker. Doing this will regroup the corresponding objects. The most comfortable solution is to use the arrow keys in the CD track list.

Project

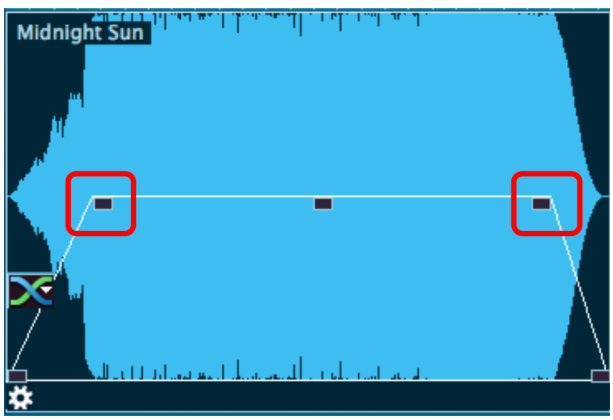
The project (*.vip file) contains all data MAGIX Audio Cleaning Lab 2013 uses. It does not contain audio data but only the names of the imported and recorded audio data and the saved locations on the hard drive, all edits, reductions and most effects processing. Furthermore, the object display on the tracks is referred to as a project.

Adjust object volume



The handle at the top center can be used to adjust the volume of the objects. This handle is particularly important for synchronizing the volume of songs originating from different sources. The volume of audio CDs may also differ.

Fading objects in and out

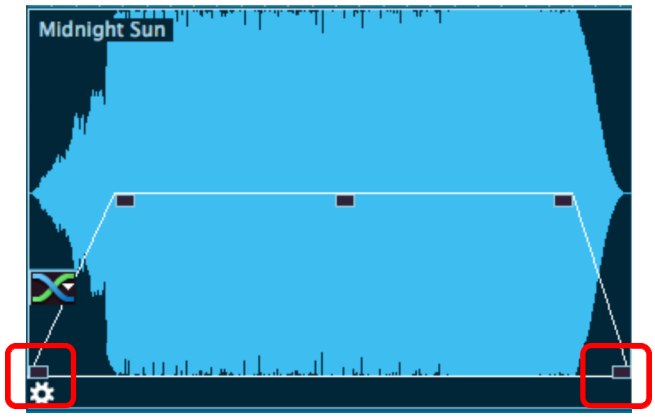


At the top corners of every object there are two fade handles that can be adjusted to fade an object in or out. It is particularly useful to use the fade handles to avoid hard transitions or crackling when you have cut passages out of a recording

Duplicate objects

Objects may be duplicated very easily. Click on the object to be copied with the mouse while holding down the "Ctrl" key. This generates a copy, which you can immediately drag to the desired position or cut separately.

Reducing and increasing the length of objects



All objects can be shortened by moving the mouse to the right corner of the object until the mouse pointer turns into a double arrow symbol. You can now reduce the size of the object. This way the songs or recordings are shortened without having to be edited.

Drag the handle to the right to make the object longer again. If you can't move the object borders further, it means that no audio material is available.

If a few seconds silence were accidentally recorded at the beginning, you can easily remove them by moving the left handle. If too much audio material was removed, you can restore it by moving the object border back in the other direction.

Deleting and moving objects

Any object can be removed from the track with the delete tool. No gap will be created in the project, i. e. the subsequent objects are moved.

If you move an object, all subsequent objects will be moved along in unison automatically so that no gaps appear.

Cut objects

Use the commands "Remove object beginning" or "Remove object end" (keys **D** and **U**) in the "Edit" menu to remove superfluous beginnings and ends of a recording.

To do this, set the object's position line to the beginning of the part of the object you want to keep (e.g. the music) and press **D**. Now set the position line to the end and press **U**.

Alternatively, you can use the scissors mouse mode. Use it to click on the parts of the waveform where you want to split the recording. Objects that are no longer required can now be removed from the track with the delete tool or Del key.

If you cut objects, a short fade is created automatically at the cut position to prevent crackling.

If you separate the material into small objects, you can rearrange the order entirely. For such arrangements we recommend using the second track (view page 150), which can be used for shifting the objects.

To find the best positions for object cuts we recommend working with a zoomed waveform display. Use the zoom functions (view page 41) for this.

Join and mix objects

When you push an object from the right over the object to its left, it will cover it like one sheet of paper covers another (completely or just in part). The invisible part of an object will not be played.

The program automatically inserts a crossfade between the two joined objects if the fader-handle of the second object is dragged a bit to the right. This is another method to remove clicks.

 A fade in a selected object is represented by a Crossfade symbol.

The shape of the crossfade curve can be changed by clicking on this symbol. You can also apply the Surround Transitions here.

You can make the invisible part of the second object visible (and audible) again just by moving the second object to the right.

You can do the same using the second track. Passages that are overlapping on two tracks will be played as overlapping. Now you can search for your ideal mix using the volume and the length handle, cutting your object and moving it.

Fading objects

With every cut the two objects that are created are slightly crossfaded in order to avoid crackling. This is called Auto crossfade. A crossfade is also added if two objects in a track are moved into each other or overlap each other.

 A crossfade symbol is added to each crossfade. By clicking on the symbol, you can change the curve of the transition.

The top handle of the right object allows you to regulate the fading in and out of both objects.

The bottom handle controls the length of the two objects. If you move them, one of them is extended whereas the other is shortened. The length of both objects together remains the same.

Change song order

You do not have to move the objects themselves to change the sequence of the songs. As the following objects will all move up one position, this would only be possible using a second track. It is much easier to move the corresponding track markers in front of or behind another track marker. Doing this will regroup the corresponding objects. The most comfortable solution is to use the arrow keys in the CD track list (view page 115).

Automatic insertion of pauses between objects

When importing individual songs (or other audio material) one after the other, they will be presented in the track as a sequence of objects. The program automatically introduces a 2 second break (space) between each of the objects.

You can change the default pause lenght in the "CD" menu > "Set automatic pause length".

Several songs in a single long object

When you record an LP for example, one complete side of the LP will appear as one single object in your track window. If you want to split such an object into individual song-objects, you will have to search for the transitions in the waveform presentation and cut them "by hand".

In most cases however, it is not necessary to create an individual object for each song. Placing track markers at the beginning of the songs is normally sufficient.

Object effects

Each object can be edited separately with all effects. To do this, cut the object into several smaller objects and edit each object on its own on the object effect page.

The object effect button for the corresponding object must be clicked on.

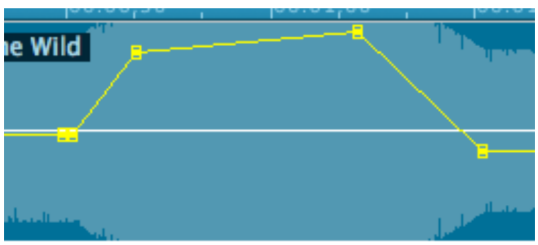
You can find further details about the object effects page in the „Cleaning effects“ (view page 67) chapter.

Draw volume curve

Use the **Volume curve** button to activate a volume curve.

You can use it to add volume curves to your audio material, for instance, for compensating volume fluctuations or increasing the volume of quiet passages.

Volume changes are immediately visible in the waveform display so that it is very easy to visually align the volume of different passages.



There are two ways to edit these volume curves:

A "handle" is created by clicking on the curve (in standard mode). You can then move it with the mouse and create volume progressions. This method should preferably be used if gradual volume changes over longer passages are needed.

Additionally, you can use the Volume curve mouse mode (view page 39). This allows you to "draw" any volume curve using the mouse and lets you create irregular volume progressions quickly.

Tip: The Voice over effect (view page 108) creates volume curves for automatic fading in/out based on the audio material in the second track.

Quick zoom

For many tasks it is quite useful to enlarge the wave shape display.

For quickly zooming it is sufficient to click in the timeline, keep the mouse button pressed and move it up or down. This way you can quickly zoom the cursor in and out at any position without releasing the mouse.

Set track markers

In many occasions you will not load single songs, one after the other, into a project, but a certain number of them at the same time, for example while recording one side of an LP.

If you want to record this LP on a CD, you should first set track markers at the beginning of each song. The track markers can already be set while recording in the Record dialogue – "by hand" or automatically by the automatic CD Track detector (see below). It is however also possible to set, move and delete the track markers afterwards by using the 1click-Burn-Automation.

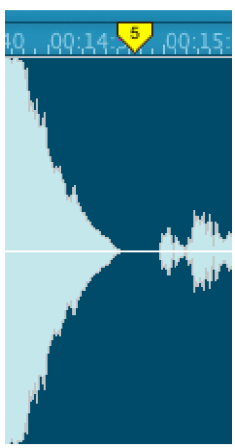
It is furthermore possible to set the track markers directly in the master track. Place the position line on the beginning of a new song and press the m key (or select the option "set track marker" in the CD menu). The new track marker appears just above the position line on the time ruler.

Automatic track recognition

There are multiple options for automatically separating the material into CD tracks:

1. during recording in the Record dialog (view page 47)
2. using the option "Automatically set track markers" (view page 141) (CD menu)
3. with the help of the Track Agent (view page 115)

MAGIX Audio Cleaning Lab 2013 searches for positions where new songs start, i.e. the end of a pause. Pauses are normally 0.5 - 3 seconds long.



Track markers are set automatically at the end of a pause.

The second step checks to make sure the interval between the pauses is long enough. For example, it is very improbable that a recording of the Top Ten hits will contain

pauses a minute long. If this sort of thing is detected, the marker for the second pause is removed.

The third step examines the start and end of the audio material more precisely. Records always feature a loud bump when the needle is placed on the record and another one when it is removed from the record at the end of the recording. MAGIX Audio Cleaning Lab 2013 attempts to recognize these noises and to exclude them, i.e. object edges are automatically moved inwards to match the start and end of the actual music.

There are sensible presets for thresholds and times in the track marker automation which depend on the selected recording source (records, cassettes, CDs/DVDs, Internet). If these don't work properly, you can change them in the Track marker recognition options (view page 153) dialog ("Options" menu).

Sometimes it is helpful to place the first one or two markers manually and to separate the objects using the "T" key, especially if the volume levels are very different. MAGIX Audio Cleaning Lab 2013 will examine the objects individually.

MAGIX Audio Cleaning Lab 2013 cannot recognize the correct track markers in every case (e. g. during live recordings or with classical music). If you've tried using a number of different settings and still aren't satisfied with the results, then you should set the track markers manually in the menu "D" > "Set track marker".

Check and move track markers

Before writing your audio material on the new CD, you should check if all track markers are located on the correct places. The Track Wizard ("1 Click Track Creation and Burn") offers you an easy to read list, which includes all track markers that can be selected, moved or deleted individually.

Move the position line from marker to marker pressing the Alt- and the cursor key (arrow keys of the numeric key pad) in order to select the track markers directly in the track window, and replay the material from that starting point on. If the marker should be unnecessary or placed at the wrong position, just click on it and delete it or move it by holding the mouse button.

If a track marker is dragged in front of or behind another track marker, the corresponding objects will change their position in the track. This allows you to quickly change the sequence of the songs. This is even more easily done if you use the arrow keys in the CD track list (view page 115).

Cleaning

Most cleaning functions are activated in the Cleaning FX section – either as master effects on the main screen or as object-related effects on a separate object effects page.

All effects in the "Cleaning" section are applied in realtime. You can switch them on and off during playback or change their parameters and hear the results immediately.

Additional cleaning functions can be found in the "Effects" menu.

Choose preset

Click on "Select presets" to open the "Cleaning effects" menu. Here (or in the "Edit" menu) you can save and load your favorite effect settings as "Cleaning effects settings" for your projects or objects. Different presets (for example, "Restore a poor quality record") are supplied with the product and can be tried out right away.

This allows you to listen to each preset by clicking on the corresponding speaker symbol.

Cleaning FX presets can be applied to individual objects, as well as to the entire sound.

Using the effect modules

On/Off: Individual effects modules can be turned off and on using the buttons to the left.

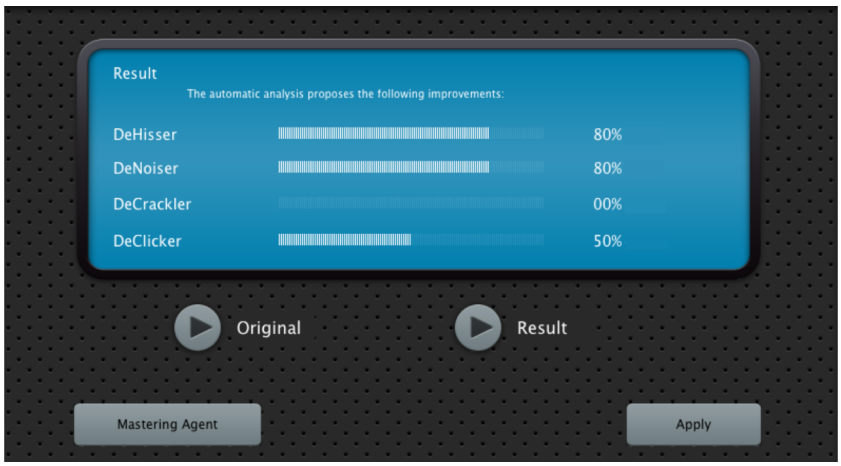
Control knobs: Each feature has a knob that controls the intensity of the cleaning effects.

The "Cleaning" section effects include a range of useful presets which can be chosen from a flip menu. Click on the arrow to access the feature you want. In most cases one preset is enough to achieve good results.

Audio perfectionists can perform their own editing with the effects in the cleaning section. For this the "Effect device" is opened with the button on the right of the module. Now the cleaning effects can be edited.

All effect devices can be activated and deactivated using the "On/Off" button. Click on "OK" to apply the settings, "Cancel" closes the effects device without applying the settings. "Reset" returns the settings to their defaults.

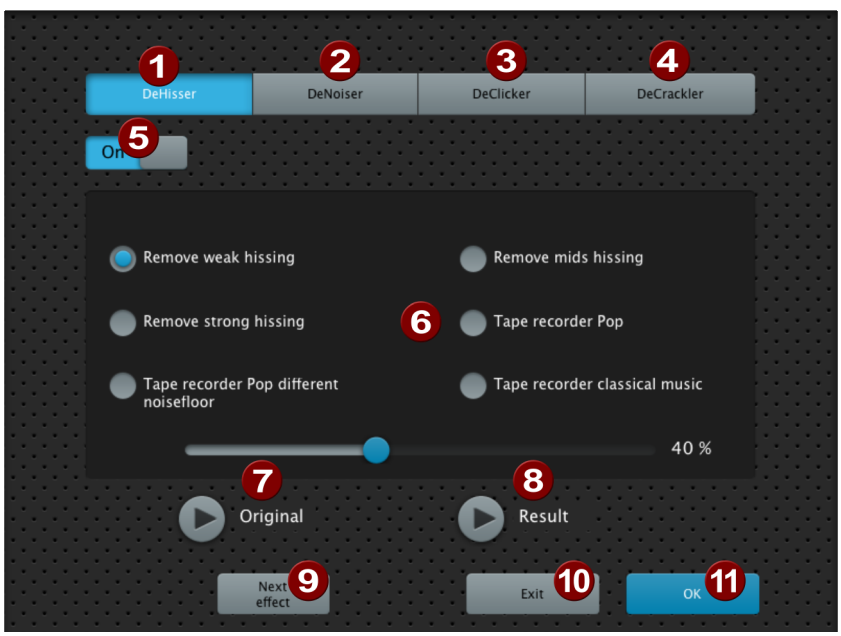
Set automatically



The "Set automatically" button opens the Cleaning Agent. This analyzes the audio material and selects the appropriate effect.

Original: Plays back the audio without the suggested editing.
Result: Plays back the audio with the suggested editing from the Cleaning Agent.
Step-by-Step: Opens the Step-by-Step mode (view page 66).
Apply: Closes the Cleaning Agent and applies all the suggested changes.

Step-by-Step



In Step-by-Step mode the various effects are introduced one at a time. For each effect you can choose whether or not MAGIX Audio Cleaning Lab 2013 should apply it and which preset should be used.

1. **DeHisser:** Opens the settings for the DeHisser.
2. **DeNoiser:** Opens the settings for the DeNoiser.
3. **DeClicker:** Opens the settings for the DeClicker.
4. **DeCrackler:** Opens the settings for the DeCrackler.
5. **On/Off:** Here you can turn each effect on or off.
6. **Presets:** Here you will find typical settings for different applications of the effect. You can use the controller at the bottom to adjust the intensity of the effect.
7. **Original:** Plays back the audio without the suggested editing.
8. **Result:** Plays back the audio with the suggested editing from the Cleaning Agent.
9. **Next Effect:** Moves to the next effect dialog.
10. **Close:** Closes the Step-by-Step mode without applying any of the effects.
11. **OK:** Closes the Step-by-Step mode and applies all of the effect settings.

Bypass

You can use this button to turn all effects on or off to compare the edited material with the original.

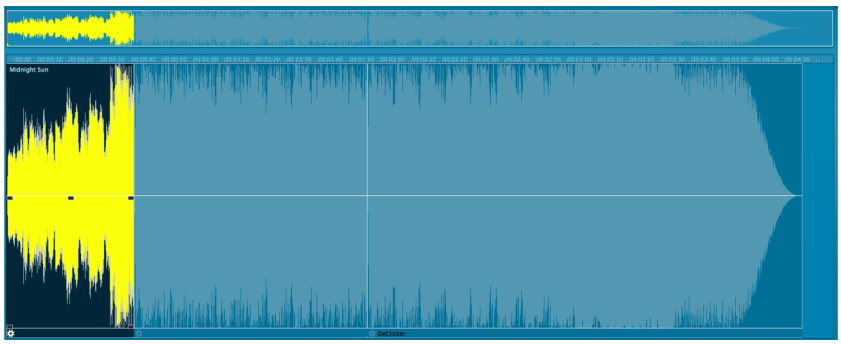
Project and Object Effects

The effects in the Cleaning and Mastering area can be applied to individual objects or to entire projects. The default setting applies them to the entire project. You can change this setting using the two buttons under the project window.

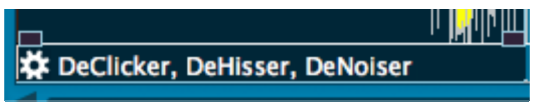
The object effects for an audio object can be accessed with the button in the bottom left corner of the object.

- Just like on the main interface, you can switch between cleaning and mastering effects. All other controls, such as presets and step-by-step settings, are available on the Object Effects page as well.
- All effects, except for Spectral Cleaning, are also available as object effects. In addition, you'll also find Temp/Resampling (view page 75).
- In Object mode you can control the level using the volume control for the object (the object handle in the middle). The auto button located at the level controller of the object performs a normalization (view page 137) to 0dB.

- You'll recognize the object you are currently working on by its colorful background.

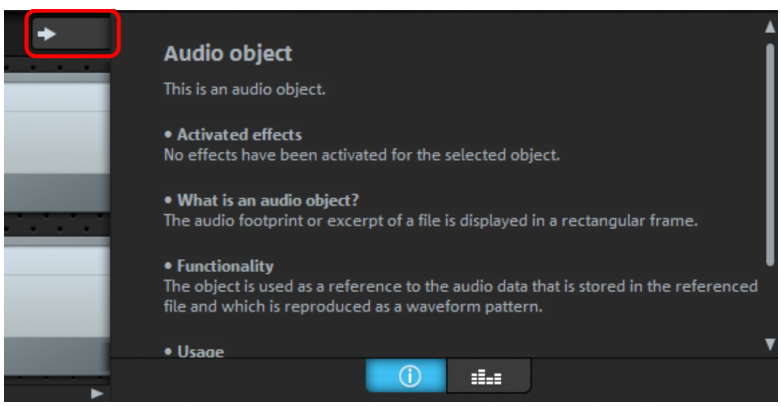


- Beside the object effect button on the object you can see which effects are being applied to the selected object at any given time.



Info Box

The Info Box offers fast and immediate help when working with MAGIX Audio Cleaning Lab 2013. You can open it with the arrow button on the right side of the Cleaning and Mastering section.



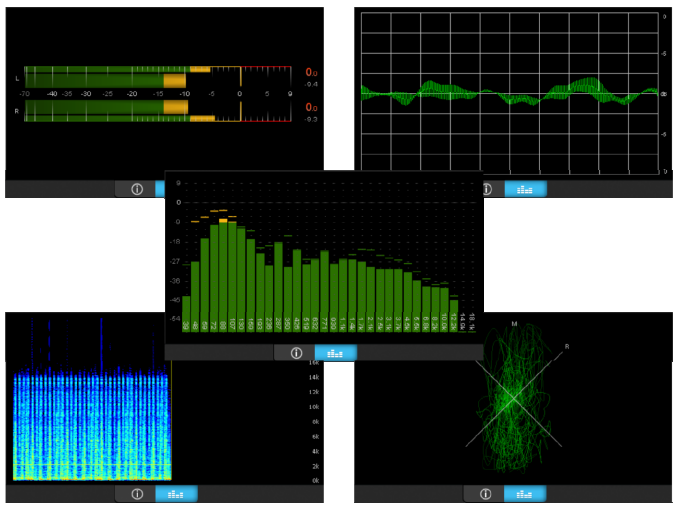
With the two buttons below the Infobox you can switch between the Infobox and the Analyzer

Click on an effect to get information about its range of application, functionality, correct handling and possible sources of error.

Clicking on an object displays the applied Object effects (view page 67), if available. The Info Box also offers useful tips for other program areas.

Analyzer

Audio material being played is graphically illustrated in the visualizer. You can choose between the following display options: Peak Meter, Oscilloscope, Phase Correlation, Spectroscope and Spectrogram.



The visualizer can be modified to your taste. To do this click on **Setup**, a context menu will then open in which you can select the display mode. There are numerous presets for every display mode under "**Presets**".

DeClicker/DeCrackler

This functions removes crackling and clicking noises which are typical on scratched records.

This function can be used on objects if the clicking and crackling noises only occur in specific parts of the audio. Search for the noises in the track window. Once you have found a noise, cut it with the "Scissors" tool just before it begins and once again where it stops in order to make it into an individual object.

Then activate the "Object" button in the cleaning area to use the DeClicker only on the area where the noise occurs.

Tip: If the DeClicker is not able to remoive the noise, you can also cut it out manually. To do this you have to zoom in as much as possible on the object to cut out the noise (preferably on a zero crossover - use the stereo display to get a as close to a zero crossover as possible on both channels) and move the second object created back to first object (zero crossover). Then you can move the object ends of both objects sightly over each other to blend them together.

Marker DeClicker

Along with normal crackling on a vinyl recording, there can be some more noticeable noises on a record which is scratched. If the DeClicker is set very high for those sections which are particularly noisy, it can lead to several components of the wanted signal being affected by the DeClicker if they exhibit similar characteristics as the noise.

To avoid this we recommend setting the DeClicker at a lower setting and removing the sharper pops and clicks with the help of the Marker DeClicker. These sections can be set using a click marker (SET). The special "Marker DeClicker" affects the audio material only at these positions and the normal DeClicker can be set at a weaker level to avoid compromising the audio material.

"SEARCH" allows you to search the entire project for especially strong clicks and have them marked automatically. With the "SENSITIVTY" controller you can set the sensitivity of the search. If the this is set high, more clicks will be found.

DeCrackler

The DeCrackler has been specifically developed to remove crackling noises from old records. Loud, individual click sounds can be removed more easily with the DeClicker.

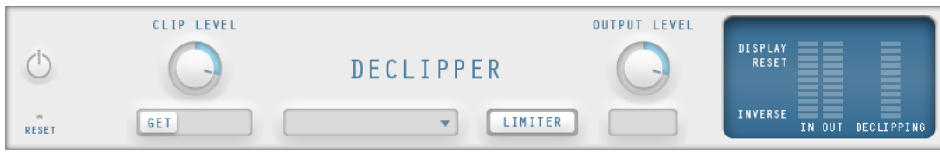
DeClipper

If the input level of an audio recording is too high, distortion may result at the louder parts (the signal peaks). This digital distortion is also called "clipping". At the overmodulated area, the values that are too high are simply cut off and the typical, annoying crackling and distortions are heard.

MAGIX Audio Cleaning Lab 2013 has a special function for dealing with digital clipping.

Distorted sections are discovered and filtered out based on the material in the selected object. Lastly, the master volume of the material can be reduced so that the interpolated parts can be played back without distortion.

The DeClipping algorithm is particularly good for audio material with clearly audible clipping, e. g. distorted piano or vocals. The sound of distorted drumbeats on the other hand is hardly ever improved.



Clip Level: Here you can enter the level at which the algorithm register the samples as distorted and corrects them if necessary. This is important because different sound cards have different clipping characteristics.

Get: Here you can determine the clip level automatically.

Output Level: The interpolated signal peaks create a change in the master volume that must be balanced with the output level fader to avoid further distortion. Keep an eye on the peak meter to the right of the dialog when doing this.

To be safe you can activate the "Limiter" which reliably prevents clipping.

DeHisser

The Dehisser eliminates regular "white" noise typically produced by analog tape recordings, microphone preamplifiers, or AD transformers.

Noise Level: Here you should set the threshold of the DeHisser as precisely as possible. Setting the value too low will result in insufficient removal of the hissing. Incomplete removal of hissing produces artefacts and should be avoided. Setting the values too high leads to dull results – parts of the wanted signal that are similar to noise, such as the blow-off from wind instruments, are filtered out.

The setting doesn't cause any problems at a reduced hissing level.

Adaptive: The value for the noise level parameter is set automatically by determining the level of the hissing present in the signal. If the value for the noise level is changed, the effect will be relative, i. e. the resulting value will be derived from the automatic setting and the setting of the noise level fader.

An advantage of this you no longer have to adjust the noise level manually and the values are adjusted for fluctuating noise levels, e. g. if you use different tracks with varying noise levels in one project.

If the noise volume is constant, you may be able to achieve better results by setting things up manually (adaptive off). But the value for noise level has to be set exactly.

Removed: For test purposes the filtered out audio material from the DeHisser can be previewed.

Noise Reduction: Here you can adjust the dampening of the hissing in decibels. It is often better to reduce hissing in smaller increments, e. g. -3- to -6 dB, rather than as much as is possible to keep the sound natural.

Audio Type: Set the type of edited audio material here and the algorithm will be adjusted accordingly.

Presets: Here you can select from various DeHisser presets.

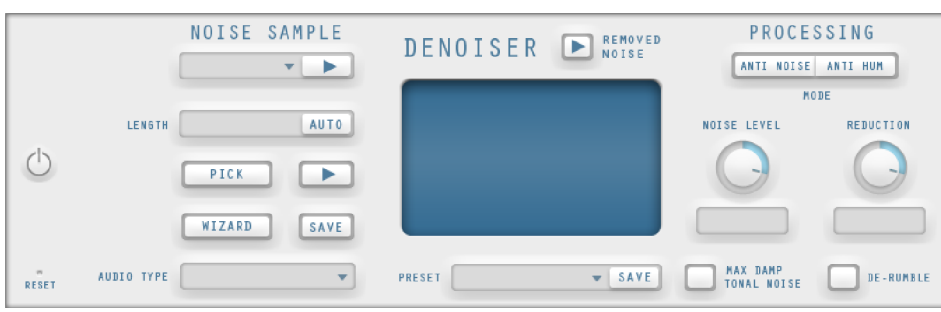
DeNoiser

The DeNoiser removes persistent background noise like computer humming, hissing, noises from sound cards, disturbance from ground wires, interference from audio equipment with high-impedance outputs (e.g. turntables). Subsonic noise or rumbling can be removed effectively from LPs with the rumble filter.

The DeNoiser requires a short section from your music which contains a sample of the audio noise, usually from the start or end of the recording.

When the DeNoiser is activated in the project for the first time, a sample of the noise will be searched for immediately under the playback marker. These automatically detected noise samples can help with achieving good results even without opening the DeNoiser dialog.

For even better results, open the dialog with the "Edit" button.



Noise sample: If the automatic noise sample settings were not suitable for finding noisy material, then a noise sample can be selected from the list. There are several typical noises to choose from.

An even more specific option is to create a noise sample yourself.

Length: The length can be set in ms if the "auto" button is switched off, otherwise the length of the noise sample will be determined automatically.

Pick: generates a noise sample. A short noise sample is taken from the selected play range. The playback marker can also be moved with the transport console when the dialog is open to search for a suitable position. If the playback position is between two objects, a noise sample cannot be generated. The play button allows the noise sample to be previewed for testing purposes.

Wizard: This opens a wizard that helps to create the noise sample. The wizard mainly consists of a search function which helps you find the suitable noise sample in the audio material. Various types of noise can be selected.

Save: The noise sample created can be saved in the noise sample folder. It is then available as a new noise sample in the noise sample preset list for any other project.

Audio type: Set the type of edited audio material here, and the algorithm will be adjusted accordingly.

Removed noise: The part of music that was filtered out by the DeNoiser can be previewed for testing purposes.

Processing

Anti-noise: In this mode the DeNoiser works in an optimized mode to remove noise.

Anti-hum: In this mode the DeNoiser works in an optimized mode to remove tonal interference. This includes feedback from power cables, power humming, PC fans, video cameras, or ventilation noises.

If the "Max. damp tonal noise" option is active, all sounds of this kind will be removed. The "Reduction" controller now affects all possible existing noise components simultaneously. This makes sense because tonal disturbances are much more annoying than other noise - a small amount of "extra" noise in the recording may be allowed in order to avoid a greater loss of highs in the wanted signal.

Noise level: The threshold of the noise reduction function should be set as precisely as possible. Values that are too low will result in insufficient noise dampening which causes artefacts like interference or "twittering" (see below). High settings produce dull results – useful signals that sound similar to hissing noises are also filtered away. Take your time to find the best setting for the individual case.

Reduction: This sets the balance between the original signal and the signal with the applied noise reduction. It's often better to reduce interference signals in small imcrements, e. g. 3 to 6 dB, rather than as much as is possible to keep the sound "natural". For buzzing, it's best to apply complete removal.

DeRumble: Here you can activate a special filter for deep-frequency rumbling noises. Examples of these noises are mechanical noises from old record players, wind, and subsonic noises in microphone recordings.

Preset: All the DeNoiser settings, i. e. the noise sample applied and the settings of the processing section can be saved as a preset for later use.

Artefacts

With incorrect settings, the DeNoiser and the DeHisser may leave behind a metallic chirping or twittering sound, the so-called artefact noise. The cause of this is the incomplete removal of the distortion. The ear is quite sensitive to this sound because of its synthetic character. This problem, in practice, only occurs in especially difficult cases.

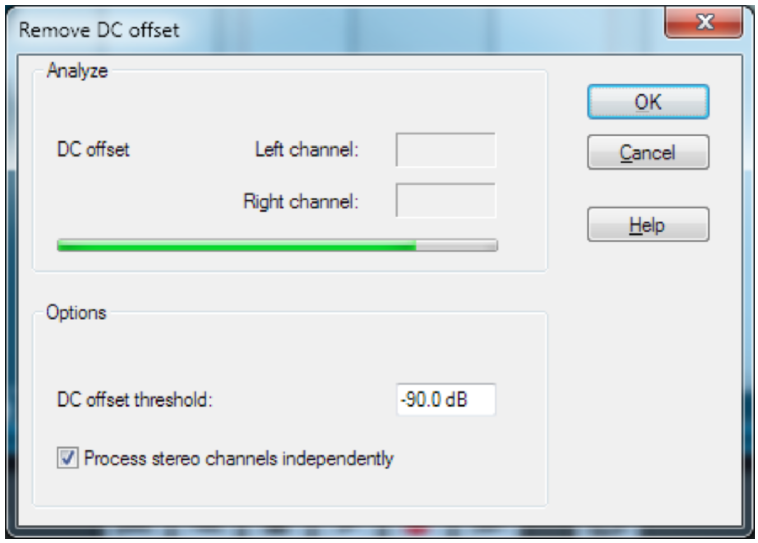
To achieve the best possible results you should pay attention to the following hints:

- First, select a preset from the selection menu. In most cases the result is satisfactory.
- Be careful when "denoising" the effect: Less is more! The distortion sound should no longer be audible, otherwise artefacts may be brought about.

We recommend removing any DC offset that may exist from the material before using it ("Effects" menu > Cleaning > "Remove DC offset" (view page 74)).

Remove DC offset

This function can only be opened via the "effects" menu and can thus only be applied to selected objects. This can be useful if your sound card overlays your sample with a constant DC offset during recording, which leads to crackling during playback or editing. (This is basically always the case with recordings that use the integrated sound card of your PC).



Options: Here you can enter a minimum DC offset threshold, which indicates where DC offset removal will kick in. You can also edit stereo channels together to reduce computing time.

Tempo/Resampling

This effect is only available as an object effect (view page 67).

The fader lets you change the playback speed of objects so that they are better aligned. The effect can be applied in two ways, either as resampling or as timestretching. You can change the mode in the preset list at the very bottom.

- **Resampling** mode can be used to change speed and pitch just like on a cassette. Use this mode to adjust LP recordings made at the incorrect speed.
- **Timestretching** mode applies a high-quality timestretching algorithm (universal HQ) to keep the pitch constant in spite of speed changes. Use this mode to adjust the tempo of different tracks to match each other without influencing the pitch, e.g. for a DJ mix.

The effect is also available as a mouse mode (view page 38) for changing the tempo across a larger range of values.

Resampling for incorrect record speeds

If you want to record a record that was recorded at 78 rpm, then you normally have a problem: These older shellac LPs aren't able to be played back by most turntables. With the help of this resampling technology, it's possible to playback the record at the incorrect speed, record it, and then correct the speed with a single click.

Different presets have been provided for this. The first number indicates the speed at which the record was played back, and the second shows the speed that it should be played at. For example, if an older 78 rpm shellac record was played at 33 rpms, then you would use the "33/78" preset.

A second group of presets are for adjusting wave files with different sampling rates to the project. These are selected automatically when this sort of wave file is loaded into the project. The first number here is also the sample rate of the project (for playback, normally 44.1 kHz or CDs), and the second is the wave file (the target playback rate).

Mastering

The mastering functions are activated in the Mastering section – either as project effects on the main screen or as object-related effects on a separate Object FX page (not available in the MAGIX Music Editor).

All mastering effects function in realtime which means that you can switch them on and off and change their parameters during playback and listen to the result of the changes immediately.

Choose preset

A mouse click on "Select presets" opens the "Master effects" menu. Here (or via the "Editing" menu) you can save and load your favorite effect settings as "Mastering effects settings" for your projects or objects.

Various presets (e. g., to prevent clipping) are included and can be tried out right away.

The Mastering FX presets can be applied to the object effects area for individual objects and to the project effects for the entire sound.

Using the effect modules

Please read the section Using the effect modules (view page 65) in the Cleaning effects (view page 65) chapter.

Mastering Agent

The Mastering Agent applies several mastering effects in a sensible sequence. All effects will now be introduced by means of a suitable recording example and then applied.

It is recommended that these effects are used in the following sequence:

1. Stereo processor
2. Graphic equalizer
3. Brilliance enhancer
4. MultiMax

Using the mastering assistant is the same as using the Step-by-step (view page 66) cleaning assistant.

Bypass

You can use this button to turn all effects on or off to compare the edited material with the original.

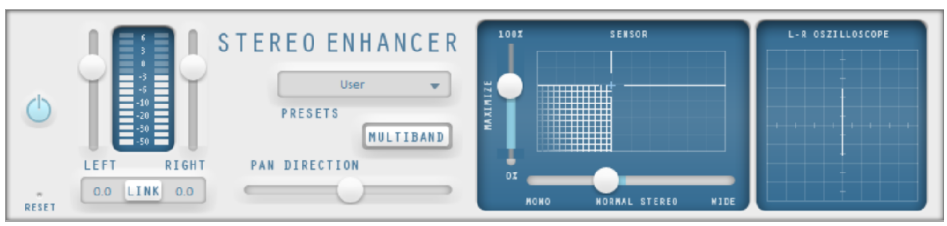
Project and Object Effects

Please read the section Project and object effects (view page 67) in the "Cleaning effects" chapter.

Enhancer

The Enhancer enables the justification of the audio material in the stereo panorama to be adjusted. If the stereo recordings sound unfocused and undifferentiated, an extension of the stereo base-width can often provide better transparency.

Use the maximize function to move the echo and improve the stereo picture, for example, into the foreground.



Volume controller: Adjusts the volume of every single channel to adjust the complete panorama. The reduction of left and right levels is displayed under the control buttons.

Pan-direction: Use this controller to move the sound source from the middle into stereo panorama. The signals at the outer edges of the sound picture remain unchanged.

Multiband: This option switches from "Stereo FX" to "Multiband" mode. Stereo editing only applies to the middle frequency, the bass and highs remain unchanged.

Bandwidth/maximize sensor field: Adjusts the base width between mono (extreme left), unchanged base width (normal stereo), and maximum base width (wide, extreme right). Raising the bandwidth (values over 100) diminishes the mono compatibility. This means that recordings edited this way sound hollow when listened to in mono.

Maximize strengthens the spatial component of the recording, which also increases the stereo transparency without influencing the mono compatibility.

Stereo meter (correlation gauge): This provides a graphical display of the phase relation of the audio signal. You can use it to review the orientation of the signal in the stereo balance and the effect of the stereo enhancer. To maintain mono-compatibility, the "cloud" shown should always be higher than it is wide.

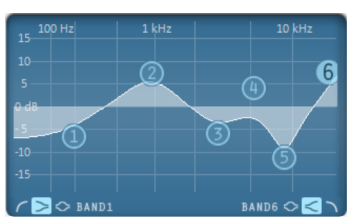
Equalizer

The Equalizer consists of two modules, the Parametric 6-band Equalizer and the 10-band Graphic Equalizer.

6 Band Equalizer

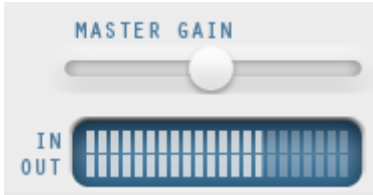
The parametric equalizer has six filter bands that you can use to shape the sound of the music track. Each band is a filter with a typical "bell shape". Within a certain frequency range around an adjustable middle **frequency** you can increase or reduce the signal level **gain**. The width of this frequency range is called bandwidth. The bandwidth is defined by the **Q** value. The higher the Q value, the narrower and steeper the filter curve.

You can influence the basic sound of the mix by increasing and decreasing the broadband so as to give it more "depth" (lower center 200-600 Hz) or more "air" (Highs 10Khz). You can also decrease the narrowband width (high Q-value) in the frequency response to remove disruptive frequencies.



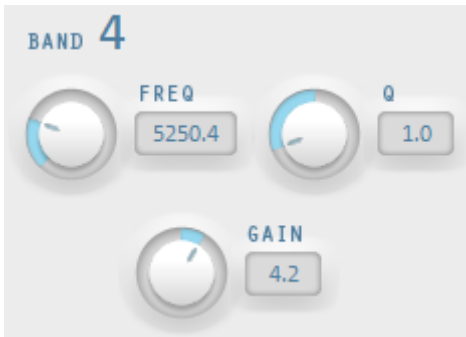
Sensor field: The sensor field displays the resulting frequency response of the equalizer´. The frequency is displayed horizontally and the increase or decrease of the respective frequency is displayed vertically.

The **blue bullets 1-6** symbolize the six frequency bands. You can move them around with the mouse until you find the frequency response you want.



You can control the output level of the equalizer with the **Peak Meter** . With the **Master Gain Controller** beside it you can offset the level changes resulting from the EQ adjustments.

You can access additional settings for each frequency band by clicking on the bullets.



You can use the knobs to set the values for each band. There is also a numeric field for each parameter where values can be entered.

Gain: This controller allows you to raise or lower the filter. Setting the controller to 0 deactivates the filter so it does not use any CPU power.

Freq: The center frequency of the individual filters can be set between 10 Hz and 24 kHz with the frequency controller. Freely choosing the frequency enables multiple filters to be set to the same frequency in order to have a greater effect.

Q (Bandwidth)**:** Here you can set the bandwidth of the individual filters to between 10 Hz and 10 kHz.

Bands 1 and 6 are special: Their **Filter Curves** can be edited in three different modes. The four editing points in the graphic have different functions in each mode.

- **Peaking:** Here the effect curve is brought closer to the working point (which represents the peak of the curve) from both sides simultaneously.
- **Shelving** (Basic setting): Here the working point displays the beginning of the filter curve. From this point on there is a gentle increase or decrease in the frequency.
- **High** or **Low Pass:**In Band 1 the working point displays the frequency which is filtered out of particularly high or low frequencies.

Graphic Equalizer

The 10-track equalizer divides the frequency spectrum into 10 areas (tracks) and supplies them with separated volume controls, which allows you to achieve many impressive effects, from the simple rising of the bass, to total sound transformation. If you raise the low frequencies too much throughout the whole level, it can cause distortions. In this case, lower the master volume using the master volume control on the main screen.

Thumb Controls: All of the 10 frequency areas can be raised or decreased separately by the 10 volume controls.

Link Bands: Using this switch you can match the frequency areas in a flexible way to avoid the overemphasizing of single frequency areas that sound artificial.

A/B: If you have selected a preset for the effect and later you change it manually, you can compare the original-preset-sound with the new adjustments using the A/B-switch.

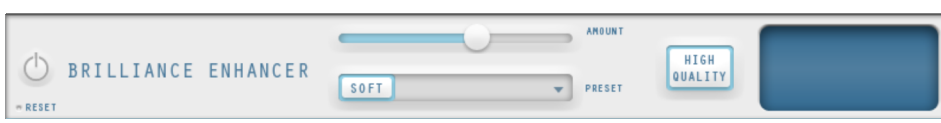
Reset: Reset inserts the sound effect into the neutral starting position where no processing power is used and where no effect is calculated in the sound.

Touch-screen (right EQ-Section): This is the "sensor-field" of the EQ: Use your mouse to draw a curve that will be transferred immediately into the corresponding EQ control adjustment.

Brilliance Enhancer

The Brilliance Enhancer is a high-end audio tool with which, for example, losses in high frequencies, which occur with MP3 compression or while recording older records, can be regained.

In contrast to the equalizer, which only works on the currently available frequency, the brilliance enhancer calculates new harmonics and noticeably revitalizes the sound from residual material



Soft: Activating this option depends upon your own perception of sound. If you would like to produce a more lurid sound (such as grunge) you should deactivate the "soft" option. This option does, however, reduce eventual distortion.

High Quality: This option improves the results of the effects while demanding more of your computer's performance. As with the "soft" option, your own notion of sound should come into play when choosing this option.

SoundCloner

SoundCloner 2 analyzes the sound characteristics of songs and transfers them to other recordings. Allowing you to apply the sound of a 60s soul recording to a modern pop song for example. You can also use SoundCloner to analyze compilations of different songs and compare their sound.

SoundCloner features an FFT Filter (1024 - band equalizer) and a compressor. The filter curve and compression properties are automatically calculated and presented as a combination of the cloned sound and output sound.

As well as "Clone" presets the SoundCloner presets menu contains a few useful filter settings that provide a typical sound for a range of eras (70s, 80s, 90s etc.).

Filter curves can also be edited manually, SoundCloner can therefore also be used as a filter for creating strange effects. It can also prove more effective than the DeNoiser at removing noise in certain circumstances, e.g. for removing whistling in the background.

Using the SoundCloner

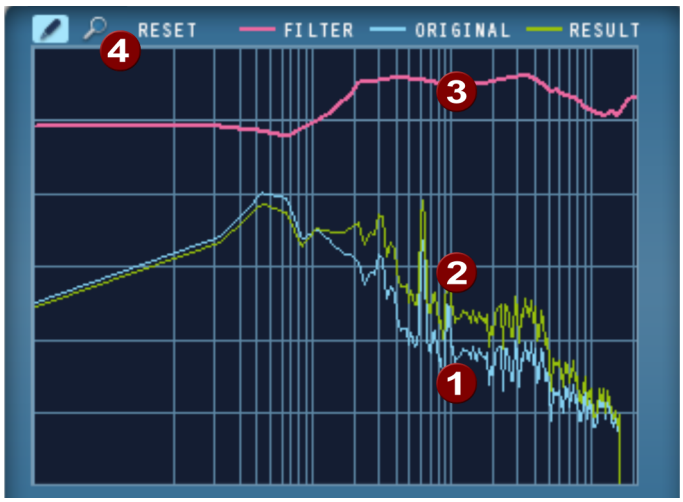
1. Load a song with a sound you really like.
2. Now change to "Object" on the effect page and click on the cog wheel icon next to the audio object to activate the object effects.
3. Open SoundCloner 2 and click on "Get Sound". The sound characteristics are now calculated. After that, the sound will be available as **SOUND CLONE** preset and can be stored permanently for later use by clicking "Save".
4. Activate SoundCloner on the object you want to apply sound to and load the SOUNDCLONE preset. SoundCloner detects the sound and dynamic properties of the target object and calculates the filter curve and/or the dynamic setting, which resulted when the audio characteristics of SOUNDCLONE and the edited object were combined.
5. The filter curve and the dynamics editing of SoundCloner compare the audio characteristics of the target object to those of the analyzed object. Using the "Strength" slider under the filter graphic you can regulate the intensity of the frequency adjustment.

Note: The SoundCloner has to be used as an object effect because the final filter setting depends on the audio characteristics of the "cloned" object and of the target object.

Controls

1. **Preset:** As well as "Clone" presets the SoundCloner presets menu contains a range of useful filter settings. These are independent of the source material and can be used at project level.
2. **Get Sound:** This button analyzes the audio characteristics and makes the SOUNDCLONE preset available.
3. **Save:** Save the SOUNDCLONE preset under another name for later use.
4. **Last Used:** Lists the last 5 presets used.
5. **Original/Result:** Plays the edited/unedited object.
6. **Reset:** Resets SoundCloner 2.
7. **Filter graphic:** This is the centerpiece of SoundCloner, it is a freely-drawable filter that displays in realtime the frequency response, before and after applying the filter. (See below for instructions on how to use).
8. **Strength:** The strength slider allows you to enhance or diminish the differences in the curve movement. You can are therefore control how much SoundCloner adjusts the sound to the presets.
9. **Compression:** This slider lets you change how much the preset's dynamic range should be adjusted. Dynamic range can only be reduced, so if the SoundClone preset has a higher dynamic range than the edited material this slider won't have any effect.
10. **Audio Type:** You can choose from a range of different audio types (speech, pop music etc.) to optimize the compressor's function.
11. **Volume**: The volume slider allows you to balance out any volume changes caused by the compressor. The peak meter next to it displays the input and output levels.

Filter graphic



The frequencies are listed in ascending order from left to right. The height of the curve represents the amount of a specific frequency in the entire sound. The blue curve (**1**) shows the original frequency response, the yellow curve (**2**) displays the corrected frequency response, i.e. the frequency response the spectrum has after applying the filter.

The pink curve (**3**) is the filter curve, its height determines to what extent the respective frequency should be amplified or attenuated. When using SoundCloner as a filter this curve is a combination of the desired frequency response (= content of the SoundClone preset) and the current frequency response. The means the red curve will always look different regardless of the object when using the same preset.

The filter curve can be drawn using the mouse in the filter graphic. Draw or rotate a straight line by pressing and holding the "Shift" key.

Click on the Magnifying glass icon (**4**) to change zoom mode. Zoom in using the left mouse button, zoom out using Ctrl + left mouse button. You can move zoom areas by holding down the left mouse button.

Click on the pen icon to change back to draw mode. "Reset" resets the red filter curve to neutral, i.e. to be on a straight line with the initial position.

Removing audio distortions with SoundCloner

Sometimes the DeNoiser isn't the right tool for removing certain kinds of noise interference. For example if the noise doesn't occur anywhere "alone" in the recording it is hard to get a sample to use, or if the noise is particularly loud the DeNoiser filters too little of the useful signal resulting in a hollow, artificial sound.

Some noise interference consists of a few frequencies, and often only one frequency (pure tone, such as the "pips" on the radio) A typical example of this is a constant,

clearly-audible drone in old video recordings. The FFT filter is perfect for this kind of noise as it allows you to remove specific frequencies without affecting the rest of the recording.

Follow these instructions to do so:

1. Reset the filter curve ("Reset" button in the bottom left of the window).
2. You will be able to spot the noise interference during playback as it is the only peak that remains constant in the otherwise constantly changing blue filter curve. Under certain circumstances you may have to zoom in on the area you think the interference signal is located.
3. If necessary, switch to the drawing pencil and draw a horizontal line below the peak on the lower edge of the filter display, ideally it should be just long enough that the peak in the yellow (resulting) filter curve disappears.
4. If the noise interference can still be heard you can also remove the overtones of the signal, which are weaker peaks that can be found in the second, third, fourth frequency etc.

MultiMax

MultiMax is a compressor with three independent frequency bands. The dynamics are edited separately for each band.

The advantage of a multi-band compressor in comparison to a "normal" compressor is that the "pumping" tendency and other disturbing side effects are dramatically reduced while editing dynamics. For instance, it can prevent a bass top peak from "dragging down" the entire signal.

Multi-band technology also lets you specifically edit individual frequency ranges.

Link bands: When this button is activated and one fader is adjusted all faders are changed in the same ratio. The type of dynamic editing is not influenced.
Limiter: MultiMax includes a limiter that prevents clipping by automatically lowering the level. Quiet parts remain unaffected.
High quality: When the "High quality" setting is activated, an even more precise algorithm is used, but it also requires more processing power. We recommend that you switch on this setting before you export the project.
Setting the frequency bands: The settings of the frequency bands are changed directly in the graphic. Simply click on the separator lines and move them.

Bass/Mid/High: These knobs control the level of compression for each frequency band.

Presets: In MultiMax you can use the presets to open two more special functions.

- **Cassette NR-B decoder:** MAGIX Audio Cleaning Lab 2013 simulates decoding of Dolby B + C noise suppression if no Dolby player is available. Casettes recorded with Dolby B or C sound more muffled and slurry if played back without corresponding Dolby.
- **DeEsser:** These special presets are for removing overstressed hiss sounds from speech recordings.

Dynamics

The compressor is an automated dynamic volume control. It limits overall dynamics, maintains the volume of loud passages so they stay loud, and increases the volume of low passages. A compressor can be put to good use for e. g bass recordings and vocals, but also as a master effect in the mixer for subsequent editing of the overall sound.

Processing is carried out using a "look-ahead" method, similar to high-quality studio appliances. There are no peak overmodulations or other artifacts as the algorithm can never be 'surprised' by sudden level peaks.

Ratio: This parameter controls the compression level.

Threshold: This sets the volume threshold below and above which compression is applied.

Attack: Sets the algorithm's reaction time to increasing sound levels. Short attack times can create an undesirable "pumping" sound, as the volume is quickly reduced or increased correspondingly.

Release: Sets the algorithm's reaction time to falling sound levels.

Gain: The gain controller amplifies the compressed signal.

Presets: Here you'll find settings for a variety of standard applications of the compressor.

A/B: If you have selected a preset for the effect and make manual changes to it, you can compare the original preset sound with the new settings by using the A/B button..

Reset: This resets the effect device to its original neutral starting point where minimal processing power is required and no effect is added to the sound.

Special presets

In the compressor you can use the presets to open further special functions.

Dynamic expander: Too high a compression rate will result in audible noise (usually defined as a pumping sound). Radio recordings in particular are recorded with very high compression rates to increase the perceived volume. Unfortunately, compression reduces the dynamics (interval between the quietest and loudest part). The expander enhances the dynamics of the recording.

Noise Gate: This cleaning function suppresses noises which are completely below a certain volume threshold. This lets you create, for example, song transitions that are entirely noise-free.

Leveler: This setting automatically sets the entire material to an identical volume level. The volume control knob is no longer required. You can use this function to equalize greater volume differences within a song. To equalize volume variations between different songs you can also use the function "Normalize loudness" in the "Effects" menu.

Reverb/Echo

The reverb effect device offers newly developed and very realistic reverb algorithms to add more room depth to your recording.

Reverb is probably the most important but also the most difficult effect to generate.

Parameters

The reverb effect has the following parameters:

Size: defines the size of the room (or the system for the plate and spring). The larger a room, the longer the sound travels between walls or objects. With some low "size" settings you can also reduce the distance between the individual reflections. This allows resonance to develop (accentuated frequency ranges), which can sound oppressive if the reverb sustain is too long.

Time: With this knob you can adjust the echo time and determine how much of it will be absorbed and, simultaneously, the reverb's decay.

Color: You may influence the sound characteristics of the effect within certain limits. The effect of this controller depends on the used preset. In rooms, "Color" controls the dampening of the highs in the reverb (from dark to bright) as well as pre-filtering of the signal. With plate and spring presets, this fader determines the dampening of the basses as well.

Mix: This controller sets the mix ratio between the original and the edited signal. For rooms, you can therefore move a signal further into the room by increasing the effect share. The last four presets are intended for use in an AUX channel of the mixer and are set to 100%.

Presets

The presets represent the basic settings for the various room algorithms, which can still be varied along with the other parameters. Hence, they are more than just simply parameter sets.

Delay

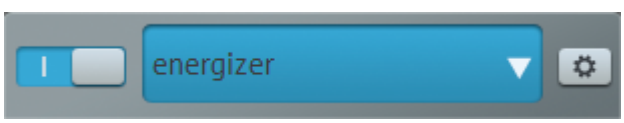
This effect is like an echo which delays the signal and repeats it.

Delay: This sets the period of time between the individual echoes. The more the control is turned to the left, the faster the echoes will follow each other.

Feedback: This adjusts the number of echoes. Turn the dial completely to the left, there is no echo at all; turn it completely to the right and there are seemingly endless repetitions.

Mix: This fader determines how much of the unprocessed original sound (dry signal) is subjected to the echo (wet signal). Application of this effect in an AUX bus requires the controller to be set to 100% (all the way to the right).

Plug-ins



Microsoft's DirectX and VST-compatible plug-ins may be used for effects calculation in MAGIX Audio Cleaning Lab 2013. This allows you to use almost any effect algorithms of third parties in addition to the effects integrated in MAGIX Audio Cleaning Lab 2013.

Some of the supplied effects will be loaded as Plug-ins. These are:

- Tape simulation

- De-esser
- Energizer
- AM-Track SE
- Chorus

Selection menu: Select the plug-in via the selection menu on the right hand side of the module. For this, you will need to have plug-ins installed on your computer. The path to search for installed VST plug-ins can be set in the "Options" menu via -> "Set path settings". All recognized plug-ins will be added to the menu list.

Edit: The selected plug-in is opened to define specific effect settings.

VST Plug-in Editor

The VST Plug-in Editor can be opened by right-clicking on the instrument's name in the MIDI Editor, via the corresponding plug-in slot in the Mixer, or via the "VST Instruments Editor" entry in the instrument list.

The Instrument Editor has two views, the so-called "GUI" of the plug-in (Graphical User Interface) and the parameter view. This is either automatically activated when the VST plug-in does not have its own GUI or can be used if the GUI of the plug-in is too unclear or takes up too much space on the screen. The parameter view displays the eight parameters of the plug-in as sliders. In the File menu you can change between these views (plug-in dialog/plug-in parameter).

Load/save patch/bank: The instrument settings can be saved and loaded in the patch formats typical for VST plug-ins (*.fxp) and bank formats (*.fxb).

Random parameters: This function can be an important source of inspiration. However, before using it please save the current preset you've just created as this feature does not ask before it is applied.

Menu program: Here you can select the presets integrated into the plug-in or loaded via the File menu.

Tape simulation (plug-in)

Tape simulation offers you the possibility of giving your recordings an "analog touch" by imitating typical aspects of a tape recording. In a lot of studios, 1" and 2" tape machines are still used because they are thought to create a fullness of sound, "warmth" and "saturation" that contrasts with the more neutral and analytical sound of digital technology.

There are numerous factors that are decisive for the sound expressiveness of tape-based recordings. Some of these are:

- Distortions that occur when the tape is played in the saturation range,

- changes to the frequency response, since recording and playback-side filter steps prepare the signal. All machines also feature more or less pronounced peaks in the frequency spectrum, above all in the bass range (so-called "head bumps"),
- loss of highs through self-erasure resulting from the HF stream ("bias", pre-magnetization) and intermodulation between the wanted signal and the HF signal.

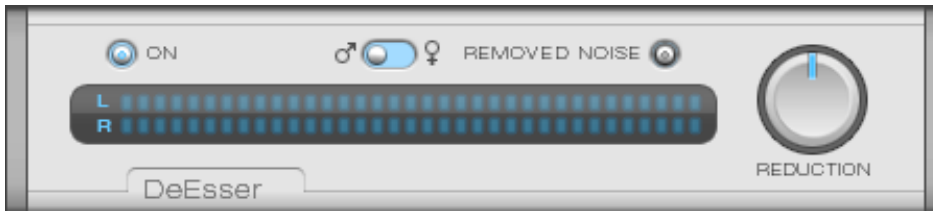
Level: Sets the input level. You decide when the "virtual tape" is saturated and how strong the effect of this color effect should be. The signal will gain more "loudness".

EQ low/hi: Adjusts the frequency response (spectral balance controller). You can choose whether you would like the output signal to have a richer bass level or whether it should have more highs. This adjusts the pre-filtering at the "recording end" as well as playback equalization.

However, please note that the frequency response of the simulation will not be neutral even if the "EQ low/hi" controller is set to neutral. There will always be some slight frequency-selective amplification.

The distortion resulting from use of the tape simulation can quickly create "acoustic fatigue", especially for material that is rich in highs. A direct 1:1 comparison with the tape section switched off reveals the differences more easily. Slight editing with the simulation is generally sufficient to achieve an "analog touch".

De-Esser (Plug-in)



If you have ever edited or restored your own spoken or sung recordings, you've most certainly come across the occasional unpleasant loud "S" or "SSHH" sound. This hissing can ruin an otherwise perfectly good recording.

The De-Esser works according to the "dynamic filter" principle, meaning that it contains a filter switch (band pass and high cut), whose frequency and implementation depends on the input signal and the recognized "problem area".

So-called detector circuiting reacts to the input peak levels in the mid and high areas. This level recognition occurs automatically in a comprehensive modulation area. For this reason the De-Esser can manage without having to set a threshold.

Using the De-Esser is quite simple:

You have to notify the detector circuiting which areas contain the "S" or other sibilant sounding distortions. A switch for **male and female voices** has been designed for this. Depending on the switch setting, it will select the internal parameters for the most exact recognition possible.

After you have set the switch, the Reduction fader has to be adjusted enough that the "S" parts of the signal are reduced to a normal level.

An overly strong reduction of "S" sounds in speech or song recordings can, however, result in a "lisping" sound. Often, a small reduction can be enough to balance the ratio levels.

The **Removed Noise** button can be used to control the recognition and adjustment of the De-Esser. With it you can pick up the detector circuitry and evaluate whether the switch is in the correct position.

You can also try to edit other sound sources, partially complete mixes and drum recordings with the De-Esser. For the latter, the adjustment control can bring about an improvement in the sound of cymbals and high hats that were too loud. For humming signals/complete mixes, the De-Esser (discreet setting) can be used to design the sound characteristics more softly.

For such 'forced adjustment' the correct setting for the switch can be found out quite simply by testing ot out.

Energizer (plug-in)

The Energizer belongs to the so-called psycho-acoustic processors genre. These devices are used in the studio, acoustic irradiation, and restoration areas in order to enhance the sound.

An effect like this usually can only be partially achieved with standard methods like equalizing since an equalizer can only compile the frequency parts that are already in the signal. Additionally an excessive increase in the signal (of the highs) increases the chances of hissing.

With bass the problem often arises that for each device in an analog processing chain (for example, tapedeck, mixing desk, pre-amp) slightly delays the signal compared to the remaining spectrum. This type of phase lag cannot be restored with an EQ and increasing the depth often results in a washed-out and feebler sound.

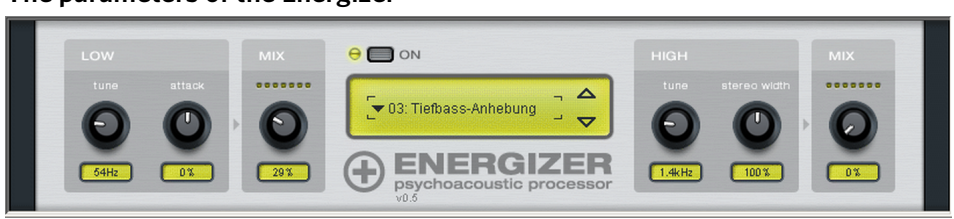
Psycho-acoustic devices are based on our hearing's ability to perceive attributes like "freshness", "liveliness" and "naturalness" in a recording as a result of various parameters. One of them is the harmony spectrum. The mid and high frequency ranges of a loudly played instrument are richer than those of a quietly played instrument. The "Exciter" tries to imitate this property with artificial harmonies. However, this type of method cannot function statically as the noise and low-level signals will be influenced otherwise.

The order in which individual frequencies are heard is just as important for lively sound.

The psycho-acoustic method used in the Energizer is based on a combination of frequency-dependent phase correction, additional harmonics creation and recognition of so-called transients (short signal peaks).

The Energizer is subdivided into a bass and middle/high area. In both of these areas, the audio can be enhanced independently of one another.

The parameters of the Energizer



The available effect presets cover typical areas of usage and are already set up as presets in order to, for example, format a CD for playback on the car radio, use as a soundtrack for your home entertainment system or for restoring distorted frequency response curves of old records. The Energizer can have a drastic effect on the sound even if only small changes are made to the parameters. So that you know which

faders to change to get the audio results you want, the following section describes the available faders in detail.

Low tune: Here you can tune the bass processor to a specific input frequency (between 50 and 150 Hz). This is the preferred frequency at which, for example, a kick drum or an acoustic/electric bass is played. The phase position of the bass range can be influenced according to the set frequency, resulting in deeper sounds sounding more "succinct" and "broader".

Low attack: Using the transient recognition fader the attack behavior of the tuned range can be increased (fader to the right) or decreased (to the left). You can use this to create a "hard" or "dynamic" bass foundation or have a range sound "legato" or "soft.

Low mix: Here the processed bass signal is mixed with the unprocessed input signal. Please note that material that is already highly modulated may become overmodulated/distorted. For strong increases in the bass you should, if required, reduce the source material in order to have enough reserves. It is also recommended that you use the Audio Cleaning Lab Limiter as the next step.

High tune: This fader specifies the input frequency of the high tone circuitry (between 1 and 10 kHz). A part of the input signal is filtered and a phase lag is created depending on its frequencies. Simultaneously, the dynamic harmony is enhanced. When turned to the left you can influence the mids and highs of the signal so that, for example, the "articulation" of speech and instruments can be edited. The further up the frequency you go, the more the harmonies or bright sounds, like drum cymbals, are registered. You can use this to add "shine" or "silkiness" to your recordings.

High stereo width: Use this fader to specify whether the signal that's added to the high tone processor should be edited in mono, stereo or as a broadened signal if at all. This way you can specify whether the range should be compiled from the stereo mids of a recording or from the parts of the pages (for example, room information)

High mix: Here you can specify the amount of data from the high-frequency processor that should be mixed into the original sound.

Tip: At the beginning when using psycho-acoustic devices there is a danger of overkill. We recommend regularly toggling from unedited signals to processed ones. In order to make subtle changes in the sound it is often enough that the change be just about audible or that when switching off the effect, you get the feeling that there's something missing. If the effect sounds like it's in the foreground, this usually means that it's exaggerated too much.

Analogue Modelling Suite: AM-Track SE

am-track SE is a pure analog compressor simulation. The tape simulation contained in the full version (Analog Modeling Suite am|track http://pro.magix.com/de/audio-plugins/analogue-modelling-suite.175.html) isn't included. It is primarily used for so-called "tracking", i.e. editing individual channel strips or subgroup signals. The compression takes place in the "vintage" setting, whereas an additional "vca" setting is available in the full version. The plug-in recognizes the number of incoming signals and, if necessary, edits the signal in mono.

am|track SE limitations compared to the full version:

- No Tape simulation
- no "VCA" mode in the compressor, only "Vintage" operation can be implemented along with the presets.
- Some Expert compression settings (view page 98) are integrated in the interface, parameters: "ahead" (pre-delay) and "adapt release" (switchable release automation) are missing.

(Release automation is always activated in the SE Version, which corresponds to the set value of the middle setting of the 'capacity' controller.)

Below, am-track is explained and its features compared to "normal" software compressors and available features.

Compressor Section

Two completely different compressors work in AM-Track, each with their own independent control and sound methods.

You may be wondering why we mention sound when talking about a compressor, since compressors merely relate to control actions. This isn't as simple as the idea of "making loud quiet".

Various designs, algorithms, and topologies for solving the actual problem (dynamic reduction), which all have their own unique character, have come from the history of

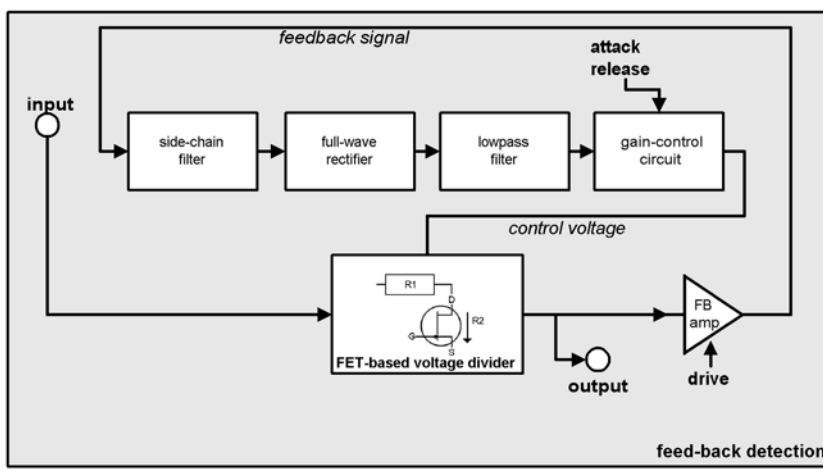
analog and digital signal processing. For example, pre-filtering in the detector circle and the type of detection have a large influence on the audio results. Plenty of hardware compressors have the same established VCAs (voltage controlled amplifier), but they all sound different and influence a signal, an entire production (or even a genre) with their "signature sound". We intend to provide you with acoustic variation via these dynamic tools in the digital world.

The two operating modes of the AM-Track may be selected using the switch "vca/vintage":

VINTAGE Mode

This mode appears as a preset when AM-Track is started. It has less parameters than the VCA mode and has audibly less of a "surgical" quality, but more of a trimmed sound character.

"Vintage" mode simulates a circuit design from the time when VCAs were not yet or could not be fully implemented. Instead, a FET (field effect transistor) was often used as a controllable resistor. This, together with constant resistance at the circuit's gate, builds a so-called voltage splitter, i.e. this forms a resistance change at the FET (caused by a change in voltage at its gate), which results in a damping of the input signal. A very simple detector circuit is used to activate the FET, which obtains its signal from the output of the compressor (behind the whole control circuit).For older designs, this feedback loop provides a stabilization of the work parameters and is one of the decisive factors for the often-quoted soft and musical compression of exponents of this design, e.g. the Urei 1176 or 1178. The control circuit sees the layout of its previous work and oscillates to the signal.



The disadvantage: The set time parameters for attack and release depend slightly on the program. In some cases, it's actually advantageous with vocals, bass, or even

drums (e.g. subgroup, ambience, mics). You should rely completely on your ear for this.

Because of the feedback topology, the maximum gain reduction is usually lower than VCA devices with forwards detection, usually 20 dB. This way, there is almost always a level-matching amplifier in the feedback loop. The "drive" fader of the AM-Track regulates the so-called feedback amplification. This can be so high that the detector be saturated by a loud input signal, resulting in signal peaks being swallowed up. Simultaneously, the setting becomes more intense as quieter signals also start reaching the threshold. You can creatively implement this according to the situation to create complex signal compression, which doesn't much sound like dynamic compression due to the transients that slip through and release at high "drive" levels.

The stated release of the signal, technically known as a ratio reduction, is also caused by the centerpiece of the circuitry: the FET. Level reduction works entirely as a function of its characteristic curve, resulting from the non-linear behavior of this element. The FET virtually comprises part of the input resistance of the compressor circuit. As a result, the input/output response curve does not create a plateau when "drive" is high, which would be the case for a reference line featuring a high ratio or even limiting. A saturated FET may no longer complete the job it was marked out to do, i.e. to keep its output at low Ohm values. Once again, signal peaks pass through the entire circuit unaffected, but the average level may be compressed severely. From a technical point of view, the control process appears incomplete, but sounds pleasantly open and airy depending on its application.

The entire detection is dependent on the spectral balance in the virtual AM-Track circuit, the highs are automatically less strongly compressed, so that even extreme settings sound less flat and more lively.

It's the same story with deep bass. On closer listening, you'll find that with strong compression, the signal still retains its power, which would otherwise be lost if the envelope were to follow shortly afterwards.

"Vintage" mode has another feature: the output of the compressor in the signal flow features an emulation of a transformer-coupled matching-level amplifier. This contributes to some subtle, non-linear distortions at high levels, but is very much frequency-dependent.

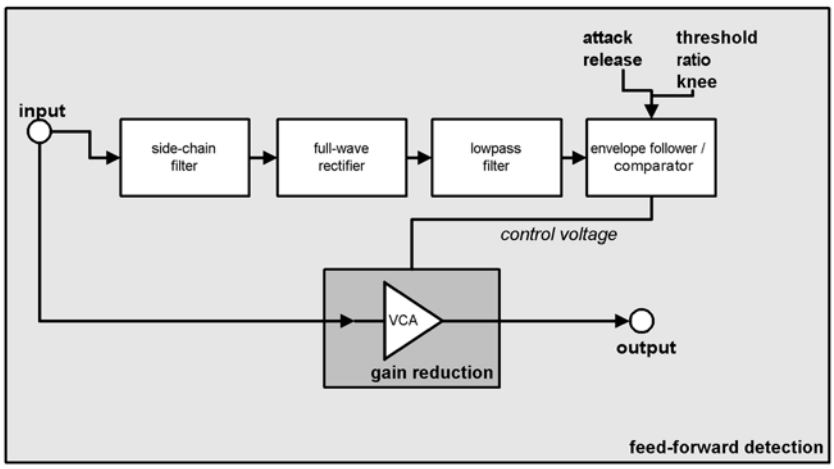
VCA Mode

In VCA mode, the parameter selection and the circuitry design correspond to a modern compressor with a VCA element as the control circuit and a forward automatic gain control in the detector section ("feed-forward design", i.e. the controlling signal for level reduction is taken from the input signal).

The typical basic sound for this category is accurate, largely neutral and, in relation to the adjustable parameters, easily predictable.

In VCA mode, the control signal is accessed at the input where it firstly executes a controllable low-cut (which may be set up via "detector hp freq" in "Expert" mode). The filter makes sure that deep-frequency signals have less influence on the adjustment settings; this is a popular trick for more power, e.g., when using drums in a sub-group.

The filtered signal then arrives at the detector. With the forward gain control, previously set parameters apply fully and affect the adjustment settings immediately.



In contrast to this, there is a "feedback" method which provides a second compressor mode.

Compression Parameters

Vintage Mode

In this mode, you can intuitively (by ear) use the dynamic editing features with just three knobs. Do whatever you want, but keep in mind: less is sometimes more...

- **Drive**: You can use the "drive" potentiometer to control the amplification factor in the feedback loop, i.e. the signal strength which the detection circuit calculates. Furthermore, the internal "ratio" changes within a limit, the more "drive" there is, the higher the compression ratio.
- **Attack** and **release**: The same basic conditions as VCA mode apply here. However, not only do you change the actual control response time after detection, but the "temporal window" in the detector must be adjusted as well. Additionally, the feedback arrangement method does cause a certain amount of unpredictability. You should expect less control over the device in this mode, but more leniency on its part.

VCA Mode

The regular set of parameters of dynamic compressors is available in this mode:

- **Threshold:** The threshold above which dynamic reduction begins.
- Check the threshold display if necessary (**thr**): If the input signal reaches the set threshold, the blue dash will move around the arrow symbols. If this dash moves upwards, the threshold is below the average level and compression is active. Inversely, if the dash moves below the marking, the input signal becomes too quiet to be able to reach the threshold; compression will be applied.
- **Ratio**: This ratio (1:n) specifies by which factor the signal should be reduced once the threshold has been reached. For example, if the threshold is set to -20 dB and the ratio to 1:4, an input signal of -10 dB will only be amplified by 2.5 dB (10 dB : 4 = 2.5 dB).
- **Attack**: This is the response time, e.g. how long the arrangement takes to execute the required level reduction. Short attack times intercept level peaks, and longer ones let them through unimpeded (compression only starts past this value).
- **Release**: This is the time allocated to the circuit to reach the normal amplification factor.

Note on attack & release: In general, short attacks are used for moderate compression and making the transient response softer; longer times retain the "bite" of a specific instrument at larger compression rates or make the sound a bit snappier. With more difficult sources, like a very dynamic vocal track (ballads), for example, you can use a longer attack so that the arrangement runs more smoothly and quietly; the release time may be trimmed audibly to match the pauses or the song speed.

Shorter release time may be used for modern, aggressive "close up" vocals, e.g. when breathing sounds are an important stylistic device and the voice should sound very full and compact.

- **Knee**: Use this parameter to specify the shape of the characteristic around the threshold. A "hard knee" means that the transition of 1:1 amplification for level reduction occurs abruptly; a "soft knee" on the other hand starts much lower than the threshold and moves the characteristic softly into the reduction. A "hard" setting is useful for effect-filled, acoustic compression, e.g. individual drum tracks. A softer setting is useful for complex and sensitive sources like guitars, pianos, or vocals. The more complex the signal, the easier it will be to notice a difference. For less sensitive sources, this parameter is usually less important. Note that for "soft knee" settings, the "threshold" value will need to be re-adjusted, since the compression starts at a much lower level.

Compression Expert Settings

Of course, you can efficiently compress a lot of data with AM-Track without having to press the "**Expert**" button or try out additional options. However, we have added a few "handy" parameters behind the front panel. This applies equally to both compression modes.

- **Look ahead**: AM-Track is always ahead of the signal. You can specify how many milliseconds you want to "look ahead". The audio signal path is delayed according to the signal route so that the detection circuit is fed first with the input signal (so-called "look-ahead delay"). You can increase the attack time and still avoid fast peaks. The latency compensation in the host program ensures that other tracks in the arrangement are adjusted and that no time delay occurs. For percussive signals, you can even set the delay all the way to "0".
- **Detector hp filter**: This high-cut filter is positioned before the two compressors' detection circuit. You can use it to specifically exclude basses and mids from these rules. Complex signals with bass and hi information like a subgroup or complete mixdown produce fewer "pumping" artifacts. This is because low-frequency signals feature the most power and therefore always trigger regulation and modulate other frequency ranges in the volume
- **Auto makeup gain**: Normally, you have to continuously adjust level reduction to generate "compression" at the same maximum level. This is done by activating auto makeup gain. The volume difference expected from the set working parameters is determined and applied as an output factor after master regulation. If you prefer to adjust the "classic" level reduction and amplification manually, you can deactivate this function.
- **Adaptive release**: This is "semi-automatic", i.e. you can roughly adjust the release time, and AM-Track reduces it according to the current signal power from "a little (1%)" to "considerably slower (100%)". In "Vintage" mode, this regulation method is particularly intense, since it affects the feedback loop process. For instance, if you are editing vocal tracks or dense, complex material, it can sound "calmer" or more "musical" if adaptive release is activated.
- **Capacity**: Adjusting the "capacity" controller sets the time response of the "adaptive release". The greater the capacity, the more sluggish the release adjustment. You can therefore influence larger parts of the compensation response. For instance, if you want to use vocals that have been "moved forward", you should use a short release time (maybe 80-100 ms) and a greater value for semi-automatic (e.g. 80). Vice versa, you can reduce automatic feed by switching the relation (smaller capacity, generally greater release time).
- **Comp mix**: Parallel compression is a popular "studio trick", particularly with complex material. Adding the original signal retains the transients and spectral balance of the source. You can add compression by turning the mix controller. A mixed signal is particularly discreet, more transparent, and less "squishy" with vocals, whereby the compressed portion usually has a higher level reduction than without adding the original.

Sound Effects

Surround mode

MAGIX Audio Cleaning Lab 2013 provides an easy-to-use mode for creating surround sound. To play surround sound you require a stereo system with a Dolby Pro Logic compatible decoder and rear loudspeakers. You can even burn surround sound onto CDs or export it as an MP3 file.

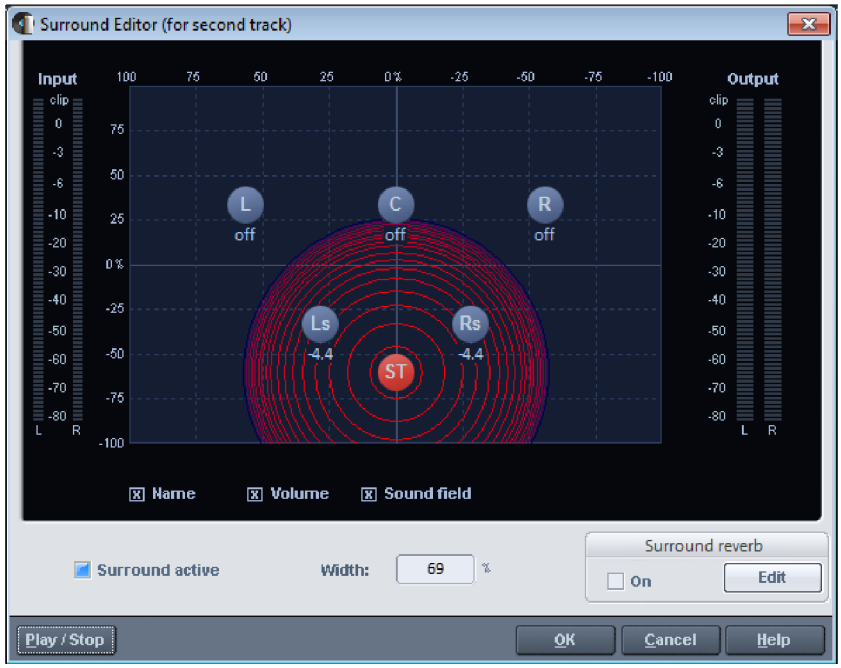
Activate surround sound by going to "Options" then "Surround". A second stereo track for audio material will appear.

The surround panning window will open at the same time. In this window you can specify at which position in the room certain sounds should come from. The default setting is "Back - Centre".

It is highly advisable to use surround mode in combination with the room acoustic simulator from MAGIX Audio Cleaning Lab 2013. This provides surround reverb times whose latter reverb portion is automatically routed to the surround track. Resulting in a truly incredible spatial impression.

Note: The Surround Editor settings only affect the second track. If you want to apply surround sound settings to an object you first need to copy it to the second track before continuing. To do so, hold down the "Ctrl" key and drag the object from the upper track to the lower track. This will copy the upper object. If you simultaneously hold down the "Shift" key, the horizontal position will remain the same and both objects will be exactly underneath each other on the track.

Surround Editor



Graphics: The blue circles are the loudspeakers -- three in front (right, left and center) and two at the back (right and left). The red circle is the position of the acoustic source, as perceived by the listener. Place the acoustic source in the space by shifting the red circle with the mouse; downward motion moves it to the rear, upward motion moves it forward. The preset position is at the back and centered. This is the "pure" surround signal.

Surround active: Activate the Surround Mode and the second track opens simultaneously. Audio material on the second track ('surround' in the track display) can now be positioned in the space.

Width: Determines the dimensions of the sound field. The sound field is made up of the concentric circles that clarify a drop in the signal level dependant upon the distance from the acoustic source. A circle corresponds a drop in the dB level. The smaller the width, the smaller the sound field (and the faster the signal level drops as the distance from the acoustic source increases)and subsequently, the virtual space is perceived as being larger.

Switch different items of the display from visible/invisible:

Output dB: Relative level in dB at the individual loudspeakers (0db = full level, -90 dB = silence)

Loudspeaker names: Name of the loudspeakers according to their position in the space

Sound field: Concentric circles around the acoustic source that clarify a drop in the signal level dependant upon the distance from the acoustic source. A circle corresponds to a drop in the dB level (see width)

Surround Reverb: Reverb is added to the surround signal if this option is activated.

Surround Transitions

MAGIX Audio Cleaning Lab 2013 can also create so-called surround transitions in addition to normal crossfades (see also Editing in Track View (view page 60)) In this case a movement of the music tracks within the room is simulated in addition to the volume change when crossfading. The old track will fly away, and the new one will come flying in.

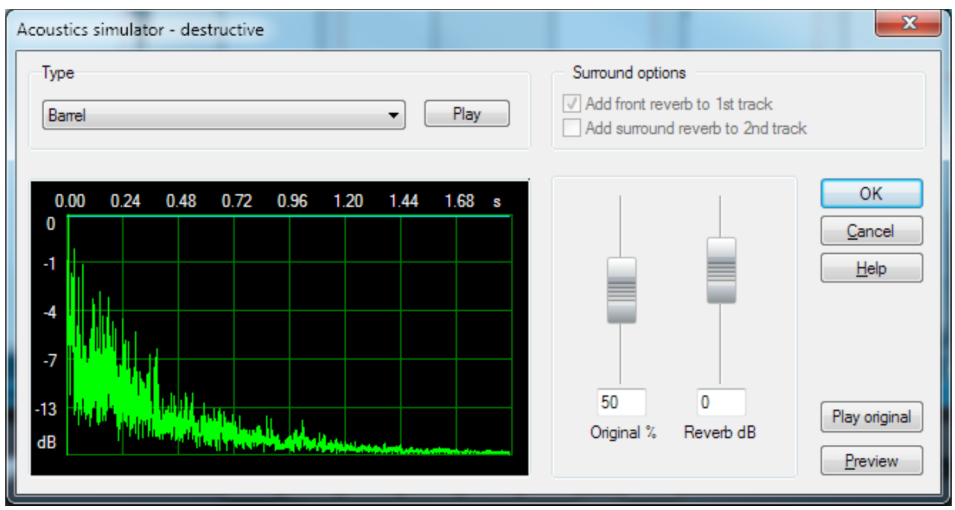
You can create a surround transition by first creating a normal crossfade. Move an object backwards in the time line across the preceding object and then fade it by using the upper handle. The previous object is faded in the same manner and a so-called crossfade is created.

Different presets can be selected from the "Surround Transitions" submenu by clicking on the crossfade symbol.

This is done more easily by using the following menu command: "Edit" menu > "Create Surround Transitions". A surround transition is created for each object.

Acoustics simulator

Open the acoustics simulator via the menu "Effects" > Reverb/Echo. You must select the object you want to apply the effect to first.



This very efficient high-end effect can transfer the sound characteristics of any room and effect device to your audio material. To do so, a so-called impulse response is

extracted in the original room, this is like recording a "bang". There are several impulse responses to choose from; listen to the list and you will be able to identify the type of room easily. Different sound characteristics of rooms, such as reverb, reflections, echo, damping and resonance can be "copied" using this method.

Sophisticated algorithms can "add" your audio material to "this room" – after that a "dry" voice will sound like it was sung in a church. The quality of the reverberation and spatial impression is much higher than all standard synthetic reverb methods. No more undesired crackling, rattling, and rumbling.

Some impulse responses are available in surround format, that is, the reverb was recorded separately at the front and at the back of the original room. This way, MAGIX Audio Cleaning Lab 2013 can reproduce this surround reverb in your audio material. Simply activate the "Surround" option in the dialog.

MAGIX Audio Cleaning Lab 2013 automatically changes into the surround mode, the audio material with the surround reverb is placed on the 2nd track.

Functions of the controls:

Preset: Select the room impulse response you want to use for the room acoustics simulation. Click on "Play" to start playback of the impulse response for testing purposes. Some presets have the word "surround" in their names, they contain separate impulse responses for the front and rear reverb share. The result is a very high-quality surround reverb.

Apply to original object: If you activate this option, the original audio object in the first track is edited and room reverb is added.

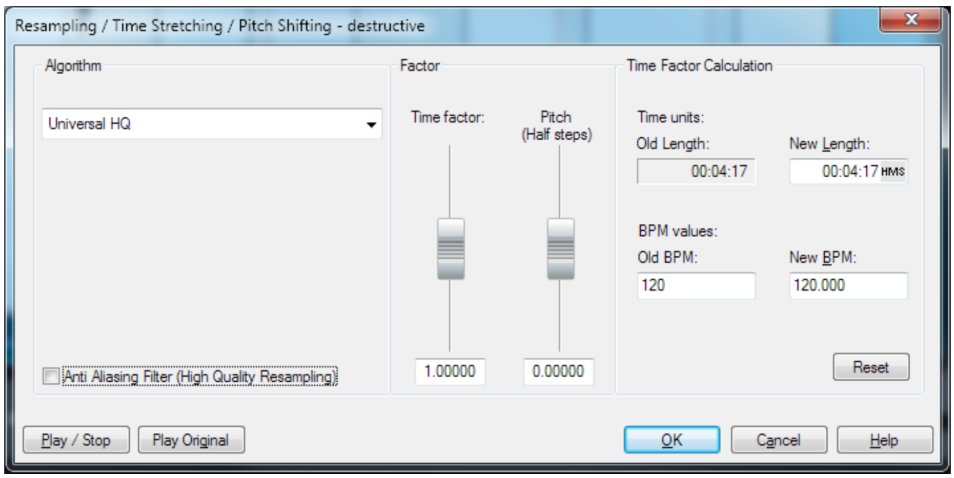
Surround reverb: If you activate this option, a 2nd object with the reverb is produced in the 2nd track. To do so, the 2nd track changes into surround mode, so you can hear the reverb from the rear via a Dolby pro Logic compatible stereo set.

Reverb share: Adjust the ratio of original sound to hall share here. To generate a surround reverb, deactivate the "Apply to original object" option, activate the "Surround hall" option, and set the controller to 100% reverb share.

Reverb volume: Adjust the volume of the reverb here. This is useful if you want to balance the different depths of impulse responses.

Resampling/Timestretching

The pitchshifting/timestretching/resampling editor opens. This effect can change the tempo and pitch of the audio material separately. The effect is also available as a mouse mode or object effect. The dialog's advanced settings options and the pitch changing options are missing, however.



Algorithm: Selects the applied timestretching process.

Time factor calculation: All algorithms in this dialog apply a time factor as the input parameter. The input fields for the group "Time factor calculation" enable convenient detection of the time factor from the desired new length or a new tempo in BPM in relation to an old tempo (required beforehand).

Pitch (semitones): For any algorithm except resampling, the pitch can also be set independent of the tempo. Use the pitch fader beside the factor fader to experiment.

Play/Stop/Play orig.: "Play/Stop" can be used to immediately control the result of the algorithm. "Play orig." plays the unedited material for comparison.

Algorithms for timestretching/pitchshifting

- Standard: Timestretching and pitchshifting in standard quality. This method is suitable for audio material without a pronounced beat. Beat markers are evaluated to improve audio quality.
- **Smoothed**: Timestretching and pitchshifting for audio material without pulsing elements. The method is suitable for polyphonic orchestral instruments, pauses, speech, and singing. Beat markers are not evaluated.
  In this case, a considerably more complex algorithm is used which requires more processing time. The material can also be processed with very large factors (0.2... 50) without causing serious artifacts. The material is "smoothed" to make the sound softer and emit it at an adjusted phase level. This smoothing is hardly

audible, for example, with speech, singing, or solo instruments. Problems may arise with more complex spectra (sound mixes from various instruments or finished mixes). For smaller corrections (factors approx. 0.9... 1.1), we recommend setting the **smoothing level** as low as possible.

- **Beat marker slicing**: Beat-synchronous timestretching and pitchshifting via splitting and temporal repositioning. Exactly set beat markers are required at the beats or transients. The markers can be generated in real time (automatically) or read from the WAV file if available (patched). In the deluxe version's included MAGIX Music Editor, a patching tool is provided for users to set the markers themselves. The algorithm is suitable for rhythmic material that can be divided into individual beats or notes. This requires a low audio level before each beat or note.
- **Beat marker stretching**: Beat-synchronous timestretching and pitchshifting in standard quality. The material is stretched between beat markers positions so that the beats or attacks at the beat marker positions are not impaired by stretching. The markers can be generated in real time (automatically) or read from the source file if available (patched). This method is suitable for rhythmic material that can not be divided into individual beats or notes because the beats or notes overlap each other.
- **Universal HQ**: Universal methods for timestretching and pitchshifting in very high audio quality. Suitable for all types of audio material. Beat markers are evaluated to improve audio quality. This method requires a lot of time for processing, so application of the "Calculate all real-time effects (view page 136)" function ("Edit" menu) is recommended.
- **Monophonic voice**: Timestretching and pitchshifting for vocal solos, speech, or solo instruments. The material must not contain background noise, and excessive reverb may also be detrimental to the use of this method. With suitable material the audio quality is very high. The "Correct formant factor" option preserves formants if pitches are changed. These are characteristic basic frequencies of the voice that are independent of the pitch that is sung. In other words, the characteristic discoloration of pitch ("Mickey Mouse") effect does not occur in this case. The formants, however, can be shifted by +/- 12 half tones. This achieves suitable vocal distortions. Beat markers are not evaluated.
- **Resampling**: Pitch shift and tempo cannot be changed individually. This method requires considerably less CPU time. If the pitch is increased or the sample is shortened, then resampling is almost completely free of loss, and the sample material will suffer almost no damage. In other cases, resampling causes loss of overtones. For example, if the length of a 44.1 kHz sample is doubled, then the freqency level of the result will be limited to 11.025 kHz. The sound is the same as when the playback speed of a record player or tape recorder is changed.

Chorus (Plug-In)

Chorus creates a "floating" sound typically associated with guitars and synth pads. It can acoustically "thicken" an instrument, making it sound fuller or creating the illusion that several instruments are playing.

Speed: Modulation speed. Low speeds create an even, continuous development. High speeds produce vibrato-like qualities but can also result in an ‘under-water’ effect.

Depth: Modulation depth. This determines how strongly the speed affects the pitch modulation.

Mix: This sets the balance between the direct signal and the effects signal.

Mode:

- "Normal" is a combination of the direct signal and the detuned delay signal.
- "Normal, low cut" is designed for bass-heavy signals such as bass guitar. The bottom end of the signal stays clear and well-defined, the effect is only audible for the mid and treble frequencies.
- "Dual" makes the source sound more lively than a single ‘part’. The sound is spread over the stereo panorama, which makes this mode seem ‘wider’.
- "Quad, low cut" is ideal for creating sounds such as deep synth pads with tight bass frequencies.

Tip: Like on the stomp boxes our vintage effects are modeled on, there is a 'footswitch' below the pedal's logo that can be clicked to turn the effect on or off for A/B comparisons. All the effects of the Vintage Effects Suite have been designed like this.

Distortion

The distortion pedal is a "high gain" distorter for crunch and lead guitar sounds. If you like typically "British" amp sounds and want to quickly record a guitar track with little effort, this pedal is for you.

An entire valve pre-amp circuit has been modeled, including the typical EQ curve. The amplification is "valve-typical", i.e. it doesn't start quickly but is harmonic and soft. Even at full power the pedal still reacts softly to a guitar and its settings (e.g. pick-up choice and tone controller). For instance, you can influence the distortion even more by using the volume knob on the guitar.

There are only three parameters on this effect; however, these interact with each other and can thus generate quite a variable sound:

- **Low**: the "bass" controller. This allows you to set the share of basses, even after the distortion. The type of prefiltering is important for guitar amps in particular, and is characteristic for the basic sound. You should set the bass controller

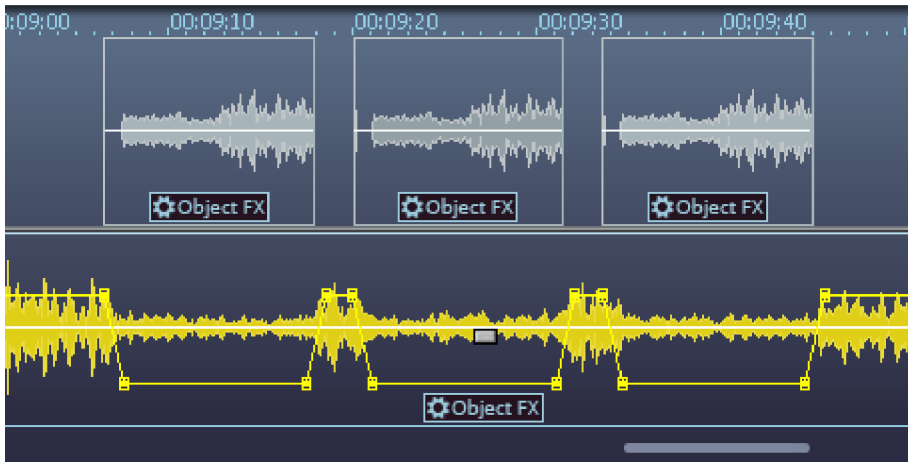
depending on the basic sound of the guitar and the sound you are aiming for ("powerful" or "cutting").

- **High**: Mainly controls the share of highs before and after the distortion. If you are not using an external guitar speaker as a monitor, we recommend setting the controller to the middle position or even moving it slightly to the right. This way the "sharp" highs disappear, which all guitar amps generate without the suitable loudspeaker. At the same time the mids stand out more, which gives the sound more "kick". On the other hand you can further emphasize the highs if you want the sound to be more neutral.
- **Drive**: The level of distortion. This controls the amplification used to operate the "virtual valve circuit" (max. 60dB). As the level increases, the valve goes into overdrive and generates typical distortions. For a slightly distorted sound ("Crunch") it is surely sufficient to set the controller to 10-11 hours at maximum. Furthermore the modeled circuit provides the usual "weight" for power rock chords and more. The further you turn this controller to the right, the more the mids of the signalmove to the fore so that the "high-gain" lead sound is better heard.

Voice over

The "Voice over" effect creates a volume curve for automatically fading background music during spoken sections. To do this, proceed as follows:

1. Record speech.
2. Load your background music.
3. Move the object containing the background music to the second track below the spoken portion. Note: The second track can be opened with the "2" key.
4. Place your speech recording at the correct position, then cut and edit it with the object handles to remove undesired noise or mistakes.
5. Now open the voiceover dialog via "Edit" and activate the voiceover effect.
6. A volume curve (view page 39) is created on the second track which automatically fades the background music at the correct positions.



Use the faders to set by how much the volume of the background music should be reduced during speech passages and how quickly this should happen.

Use the selection list to apply the curve to the first track as well, should you have placed your background music there.

If you later want to move or shorten your voice recordings, click on the **"Update"** button to adjust the volume curve.

Export

In the export section, you can either save the project as audio file(s) or burn it directly to an audio CD or DVD.

Export audio

Via "WAV an other file formats" you can save the tracks from the current project as audio file(s) in different formats.

The "Export project" dialog will open. Here you can specify file name and path as well as the file's format.

Options

All tracks in one file: Saves the project, named after the project name, in one audio file.

Track only at playback position: Saves the track that is currently placed at the playback position, namely the project area between the last track marker before the position line and the following track marker. This way you can cut out parts of an audio file and save them separately by simply placing markers.

Each track in its own file with names: Exports each track (i.e. the area between one track marker and the next) into a separate audio file list. If the tracks are saved individually, then a file (.m3u) will be created which contains the names of the individual audio files in the correct order. This is practical since you can open the list file again and load all of the tracks that belong to the project in the right order all in one go. The list file contains the name of the project; the list field allows different naming schemes for the audio files.

Scheme	Example
(File name)_(Track number)	CD_1.wav, CD_2.wav ,CD_3.wav
(Track name)	AAA.wav, BBB.wav, CCC.wav
(Track number) (Track name)	1 AAA.wav, 2 BBB.wav, 3 CCC.wav

File names for a project "CD.vip" with the tracks AAA, BBB, CCC

Format settings: This button opens another dialog where you can set export formats and adjust their settings. With compression formats like MP3 or OGG you can select codec compression rates.

Wave: The audio material is exported as a standard Wave file. This is the conventional format for further use on Windows PCs. These files are not compressed and retain their full sound quality.

FLAC: FLAC is the abbreviation for "Free Lossless Audio Codec". This is a freely savable format that can be used to compress your audio data to 50% of their original size. Unlike lossy compression methods like MP3 or OGG, the full sound quality is kept intact with FLAC.

MP3: Use the MP 3 files (view page 110) button to quickly access the export in MP3 format option.

AAC: This is a modern competitor format to MP3, which is primarily used for portable music players (iPod, etc.).

Note: To export in MP3 or ACC format, you may need to activate your encoder first. Simply go to "Help" >Activate additional functions (view page 157).

OGG:OGG Vorbis files have all of the important characteristics of MP3 files, except that they do not require any kind of licensing for their codecs. – They can be freely decoded and encoded. Not all portable devices support this format.

AIFF: The audio material is exported as an AIFF file. This is the most commonly used audio format for Apple™ computers.

Windows Media: Exports the arrangement in WMA format (Windows Media Audio). These are streaming audio files which are used on the Internet to guarantee real-time audio streaming. The sound quality is slightly diminished, but the files are extremely small.

Keyboard shortcut: K

MP3 files

Use the button "MP3 files" to export individual tracks into MP3 format.

This is a quick access option to the Export project dialog (accessible via "WAV and other file formats" (view page 119)), where all necessary settings for MP3 export have been defined already.

MAGIX Audio Cleaning Lab 2013 contains a high-quality and extremely fast MP3 encoder. Use it to quickly save complete LPs along with the cleaning effects as MP3 files. You can now use them on MP3 CDs, for instance. To do so, use the function "Burn data CD/DVD" (view page 120).

For good quality, we recommend a setting of at least 160 kbit high quality. Sound quality will hardly be affected despite the compression. If you have memory to spare, full CD quality can be retained at 256 kbit high quality – at approximately 1/5th of the original memory. This is ideal for building up a large high-quality music archive on your PC's hard disk.

Note: For exporting as MP3 format, you may need to activate your MP3 encoder first. Simply go to "Help" >"Activate additional functions" (view page 157).

Format settings

Output format: Here you can set the output bitrate. The bit rate is the data stream during playback of audio data. It is given in kilobits per second (kbit/s or kbps) and also determined the file size. An MP3 file that is 3 minutes long and has a constant bit rate of 128 kbit/s is ca. 2.8 MB in size.

Common bit rates for music are 192 kBit for good quality, 256 kBit and more for excellent quality. For Internet streaming and speech recording (in mono), 128 kBit are enough.

Encoder quality: The included MP3 encoder can be operated in three "Gears": An especially quick ("Fast"), an especially powerful for high sound quality ("Highest"), which however requires more time, and a compromise between the two.

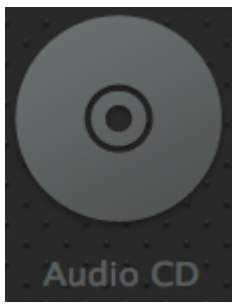
Format: Here you can set whether your MP3 file is exported in Stereo or Mono format.

Variable bitrate: "Use VBR" adjusts the bitrate of the audio material, which means that a lower bitrate will be used during quieter parts. Therefore, VBR files are smaller than files of comparable quality without VBR. Instead of a constant bitrate there is a

quality setting. Not all playback programs can process VBR correctly, some will result in problems during title length display or when rewinding.

ID3 editor: Opens a dialog, where you can set ID3 meta data for files to be exported.

Audio CD



Open the burn dialog of MAGIX Audio Cleaning Lab 2013 via the "Audio CD" button in the export section. Burn any project in MAGIX Audio Cleaning Lab 2013 to an audio CD one-to-one.

For basic information about this, please read the section entitled "Burning audio CDs" (view page 117)!

Make CD/DVD dialog

Burn CD "On the fly", all effects are calculated in real time: This option instantly starts the writing process if a new recordable CD is located in your CD-R-drive.

Create image file before burning Audio CD: This option will first create a stereo file, which already contains all object-settings, cleaning- and mastering functions, track-markers etc. before the writing process starts. This is recommended, when the system is too busy or too slow for creating a CD in real time ("On the fly"). Have a look on the System-information in the main menu! Multiply the displayed value with the intended burning speed (e.g 4x, 8x..). If the product is coming critically close to the 100%-mark, then we recommend you to create an image file before burning the new CD.

For example, when you want to burn an Audio CD with 8x speed, the CPU display shouldn't go over 12%

After image creation, the image is instantly burned in CD and deleted again after successful burning.

Burn MP3 CD/DVD: Burn a Data CD (view page 120) or DVD with MP3 files The "Format Options" button takes you to the MP3 encoder settings.

CD Title: Type in a name for your new CD. The project name is preset. This title can be displayed by some of the CD-players if your CD-writer supports the CD Text function. (The supported CD-writer functions can be seen if you use the Display CDR-

Drive Information option). If the writer supports CD Text, the track names will also be transferred to the new CD.

Track list: Option that allows you to control the track list (view page 115) – also accessible via the CD menu. All tracks can be played and markers can be shifted.

freeDB CDinfo: Query title information from freeDB internet database (view page 144).

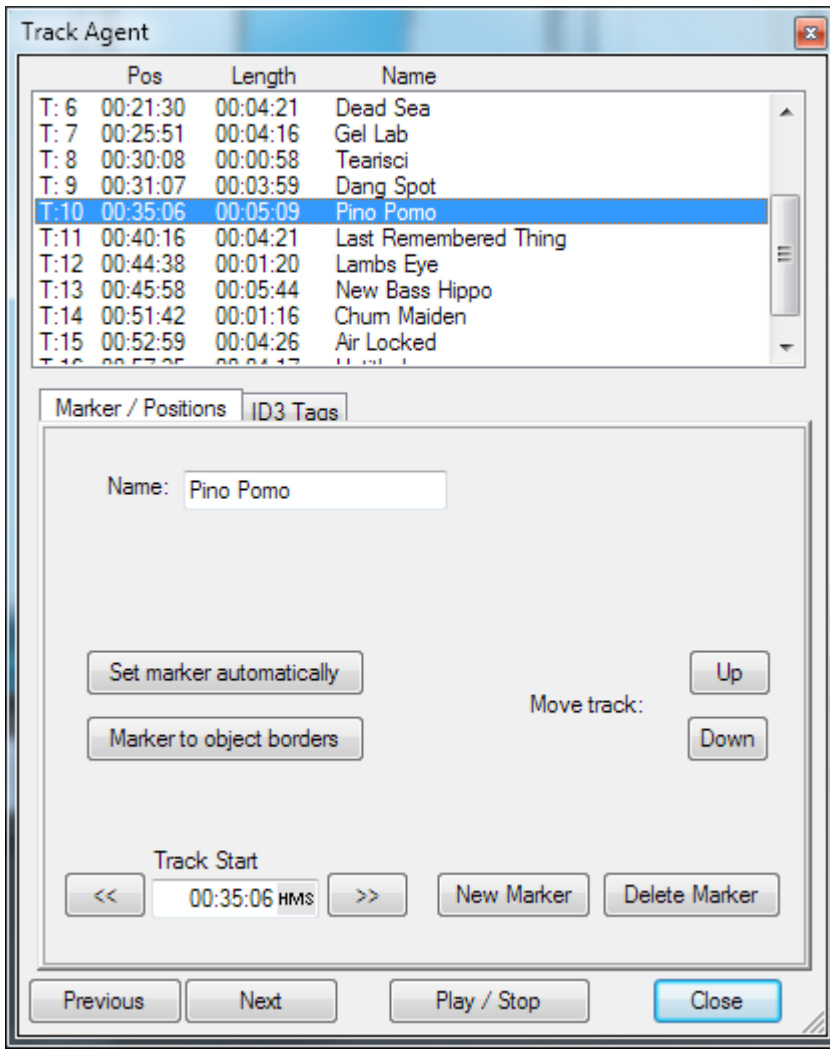
Burn CD: opens the burning dialog from where you can select the burning speed, the CD text to be burned on the CD, simulation of the burning process as well to assign the CD as a CD Extra Project. You can also compare the CD after burning with the project data to determine the error rate. If it is too high, the burning speed must be slowed down.

Cancel: closes the "Make CD/DVD" dialog without creating a disc.

Keyboard shortcut: b

Track Agent

In this dialog, all the CD tracks in the current project are displayed in a list. Every track can be given a name which is then shown in the master track.



The track list and the buttons underneath it are always visible. You can change the dialog view with the "Marker/Positions" and "ID3 Tags" tabs.

By choosing all tracks on the list, the corresponding objects are selected and the playback position placed at the track marker. All of the objects which belong to a track will also be selected and the playback position placed at the track marker.

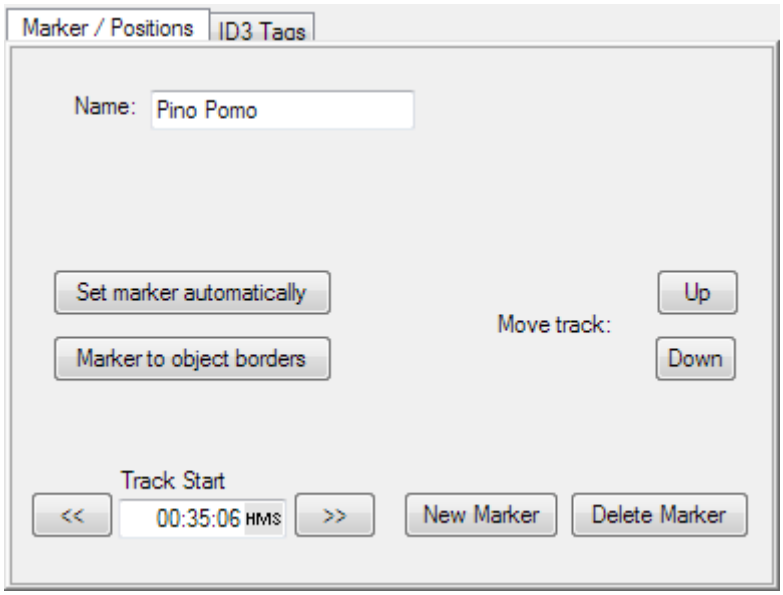
Previous/Next: Selects the previous or next track.

Play/Stop: Plays or stops the selected track.

Close: Closes the dialog and applies the changes that were made.

Keyboard shortcut: I

Markers / Positions



You can edit the track markers in your project in the "Marker/Position" tab.

Name: The name of the track.

Set markers automatically: MAGIX Audio Cleaning Lab 2013 analyzes the audio material and sets the track markers automatically.

Markers on object edges: Automatically sets track markers on all object edges. This option only makes sense if you have already cut a recording into individual tracks using the Cut mouse mode (view page 38).

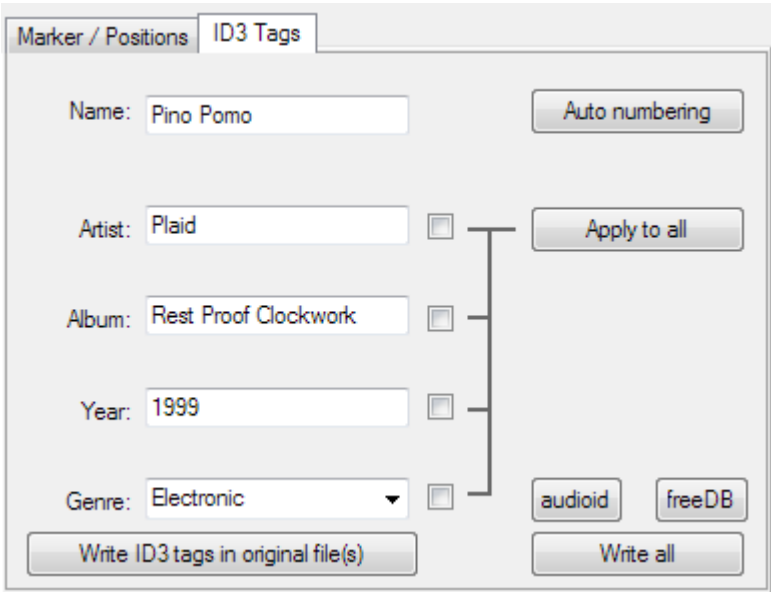
Track Start: Here you can set the exact starting point of the track. The two arrows change the position of the track marker. This means that the track remains in the same position and the same order but starts earlier or later.

Move track: The position on the CD of the track that is marked by the track marker can be changed by using the two buttons.

New marker: Sets a track marker at the position of the playback marker.

Delete marker: Removes the selected track marker.

ID3



In the "ID3 Tags" tab you can enter information about the artist, album, year and genre. This info will be included as ID3 tags when the MP3 is exported. This information will be used by database and search functions in programs like MAGIX Music Manager.

Track name/artist/album/year/genre: More details about the tracks (ID3 tags).

Auto-numbering: Automatically numbers the tracks.

Apply to all: applies the respective entry to all tracks in the project. If you want to apply an entry simply tick the small box behind it. This way you can standardize information which is imported from different files, e.g. the spelling of an artist's name etc.

You can identify unknown tracks based on their sound characteristics using the **audioid online track query** online database. See audioid (view page 145) for more information. freeDB loads all the data from a CD or record from a public database, for more information see freeDB. (view page 144)

Write ID3 tags in original file The ID3 tags will be added to the MP3 file you loaded. "Write all" updates all the files in the project.

Make audio CDs

Basics

In order to unify the data structure of the CDs and to facilitate the use of the CD-drives, different standards were created for the different types of CDs. The names for these standards refer to the colour of the books in which these standards were

written down. Apart from the Red Book standard for audio CDs, there exists for example a Yellow Book standard for CD-ROMs and a White Book standard for video CDs in MPEG format. The term "Red Book" stands for "Compact Disc Digital Audio Standard".

The Red Book standard includes the Sampling rate of 44,1 kHz and the 16-Bit-resolution, which is supported by the commercial CD-Players and is also valid for the audio CDs. Furthermore the audio CDs have to count 1-99 tracks, which can be directly selected by the CD-players. The information concerning number and duration of the tracks as well as the breaks are transmitted from the CD to the CD-player through special sub-channels.

Data transfer

Writing a CD is especially demanding when transferring data from the hard disk to the CD-writer. The data has to reach the CD-writer in a constant flow. If at any time during writing the cache of the recorder runs out of data, the "Buffer Underrun"- error message will appear. This will make the CD useless. For this reason, it is recommendable to use modern SCSI- or IDE-hard drives. The average access time should be 15ms or faster and the steady Data-transfer rate should not be less than 800 Kbytes per second. This is the case for all modern hard disk drives.

The Burning Function

The audio material on the audio CD is digital data, which the CD-player reads and transforms into analogue signals. The track markers indicate the CD-player, at which point the song starts. The MAGIX Audio Cleaning Lab 2013 can write an audio CD right away from the program. The track-markers are set in the track window before writing the CD. MAGIX Audio Cleaning Lab 2013 transforms the stereo sum and the indices into a data flow, which is directed to the CD-writer.

The CD-R-drive modifies a specially designed layer on the medium using a laser, so that the audio CD-player will be able to read this information later as digital audio data.

Audio CD creation

1. For writing an audio CD, the track window must contain audio material. Edit the audio material using the real time functions of the MAGIX Audio Cleaning Lab 2013 deLuxe. The CD will sound exactly like the playback when you listen to it through your stereo sound card. All Cleaning and Mastering effects will also be present on the CD.
2. Mark the starting position of each song by setting (or moving) the track markers. All track markers can be moved using the mouse or the Track Wizard (1Click button)
3. Click on the "Make CD" button. In the "Make CD" dialogue you can choose, if you want to write the CD directly or if you prefer to create an Image file on the hard disk. The creation of an Image file is then recommendable, when the available system resources are not enough for writing the CD in real time ("On the Fly").

4. Now the CD can be written. You will only need a CD-R-drive, which is supported by MAGIX Audio Cleaning Lab 2013 connected to your computer and an empty CD in the drive. Clicking on "Write CD" starts the writing process. If you should have more than one CD-R-drive connected to your system, you will be prompted to select one of them.

Track Length

According to the RedBook Standard, the minimum distance between two Track Markers is 4 seconds. Since Track Markers normally show the beginning of a song, no problems should arise. If you try to set the MAGIX Track Markers at a lesser distance, an error message will appear.

CD tracks als separate wave files

In order to burn more CDs later, without having to produce a new image file, you can export all CD tracks as single .wav files. Select the option, "Each CD track in a file", in the Export dialog. Later, you can load the tracks and burn them directly. Exporting will make a play list file with the "m3u" extension. If, instead of opening each wave file, you open the Playlist File, all project tracks will be loaded in the right order, and the standard pause of two seconds will be inserted between songs. All effect editing is included in the wav files, so you can burn additional CD copies "on the fly".

Checking Audio CDs

In the burn dialog it is advisable to activate the "Test and compare CD after burning" option in order to examine the error rate. If it is too high, the burning speed must be slowed down.

Create audio DVD

MAGIX Audio Cleaning Lab 2013 also burns DVDs, and there are essentially two different types of DVD that are possible:

Stereo DVD: These are normal video DVDs that can be played on any DVD player. Since they don't contain any video data, there is more room for the audio data. This can be stored either in CD quality with 16 resolution or in high-resolution 24 bit audio.
Surround information is encoded as two-channel stereo audio (Dolby Surround ProLogic compatible)

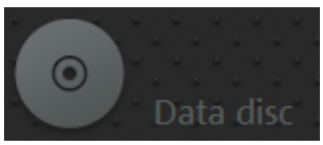
4 channel DVDs: These are so-called "audio DVDs" and require a special DVD player for playback. Music is recorded in true 4-channel Surround sound for these devices, and 16 or 24 bit resolution is also available in this case.

Burning 24 bit DVDs is only sensible, if the original audio material was also recorded in 24 bit quality.

Depending upon the format, different project lengths are possible.

DVD video	16 bit:	6h 33 min
	24 bit:	4h 23 min
DVD audio	16 bit:	3h 36 min
	24 bit:	2h 24 min

Data disc



This option opens the CD burn dialog with the preset option "Burn MP3 CD/DVD". This option allows the project to be burned onto a data CD or DVD as MP3, OGG VORBIS or WMA format.

You can change the format settings of the respective encoder in the dialog.

If your project already contains files in compressed formats, then you have the choice to encode these files again or to use the original files. In this case, these files will lose all editing and effects changes which you have made.

Batch conversion

Batch processing lets you automate work processes. You can extend a specific editing process from a single audio file to a list of files any size (i.e. the "batch"). The files are then executed automatically, over night, all day, or however you like.

Possible jobs may include:

- Normalization, volume adjustment, loudness
- Linear fading (in and out)
- All real-time cleaning and mastering effects
- Removing direct current
- Resampling/Timestretching (view page 104)
- Format conversions: Bit width (8/16/24-bit), sample rate, stereo/mono/left/right
- Save in all available export formats (view page 119).

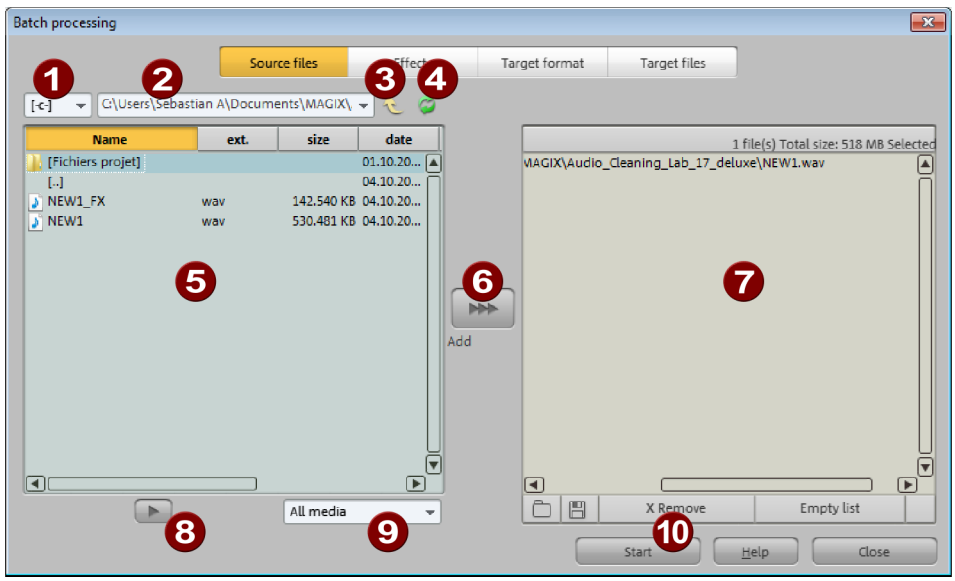
Examples of use:

- Encoding a large number of wave files into MP3 while simultaneously adjusting volume and freshening up higher frequencies
- Loss-free conversion of wave files into FLAC to save up to 50% hard drive space
- Correcting multiple LP recordings with incorrect speeds
- Denoising original sound tracks

The process for batch conversion is as follows:

1. In the "Source file" tab, select the files for editing.
2. In the "Effects" tab, select the required editing processes.
3. In the "Time format" tab, select the output format.
4. In the "Target files" tab, specify where and under what names the files should be saved.

Source files



1. Drive
2. Path
3. Superior folder level
4. Refresh
5. File browser
6. Add to editing list
7. Editing list
8. Preview
9. File filter
10. Start editing

Create the list of files you want to edit. You will find a file browser on the right side. Select the files you would like to edit by clicking them; multiple selection is also possible (Ctrl + click for individual files, Shift + click for series, Ctrl + A to select everything). The view can be limited to certain audio formats via the file filter at the bottom. Every audio file can be pre-listened with the preview button.

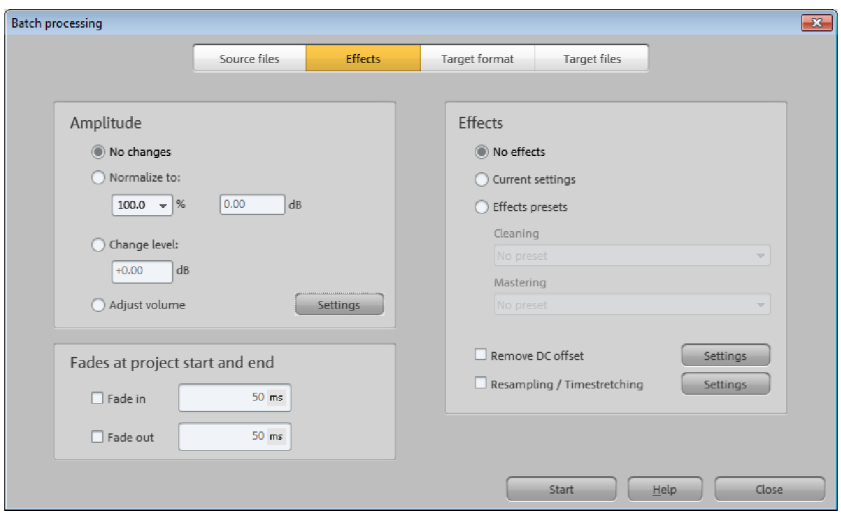
The "Add" button in the middle inserts all of the selected files into the editing list. If a folder has been selected, then all audio files in the folder, including all subfolders, will be added to the list.

Loads a list (*.m3u format).

Saves the list in *.m3u format for using your selection of files later.

"Remove" deletes all selected list entries. "Remove all" deletes the complete list.

Effects



Amplitude

No changes: The amplitude remains unchanged.

Normalize/change level to: You can normalize to a specific maximum value in %/dB or sink/raise the level by a certain value. Read more about this in the section "Edit menu -> Normalize object volume (view page 137)".

Adjust loudness: Loudness adjustment ensures a balanced average volume for each audio file. Read more about this in the section "Edit menu -> Adjust loudness".

Fades at project start and end

Linear fades of any length can be added to the beginning and/or end of files.

Effects

No effects: No effects editing takes place.

Current settings/effects presets: This section allows all cleaning and mastering effects in MAGIX Audio Cleaning Lab 2013 to be used for batch conversion (including

plug-ins). The batch processing dialog does not in fact offer direct access to the extensive settings options for the individual effects; instead, there are two choices:

- "Current settings": All effects settings in the currently loaded project will be applied (except object effects). First you can load one of the edited files into a new MAGIX Audio Cleaning Lab 2013 project and make the required effects settings in real time there. Then you can open batch conversion and apply these settings to all of the other files.
- "Effects presets": You can select the cleaning or mastering effects presets included with the program or the ones you created yourself.

Remove direct current: Remove direct current noise from analog recordings; see "Remove direct current (view page 74)" in the "Edit" menu.

Resampling/Timestretching: Changes the playback tempo; see "Resampling/Timestretching (view page 104)" in the "Edit" menu.

Target format

File format: All export formats (view page 119) available in MAGIX Audio Cleaning Lab 2013 are available here with their associated format options.

Stereo/Mono: You can convert in stereo (mono sources feature the same signal on both channels), save one of the stereo channels as a mono file, or mix both stereo channels together to create a mono file.

Bit resolution/sample rate: The bit resolution can be changed to 8/16/24-bit, and the sample rate to 11,025, 22,050, 32,000, 44,100, or 48,000 Hz.

No changes: This means that the output format is applied unchanged.

Destination files

There are several ways to save edited files:

Replace source files: The original files are replaced by the edited files. If the file is used in a project, then the project will be closed first.

Save files in source directory with changed name/save files in following directory: The edited file is saved in the source directory or in any chosen directory. The specified suffix/prefix is added to the file name. Optionally, you can delete the source files after editing them.

Keep source directory structure: This option saves all files including the source path. The folder structure is preserved if the source files originated from different folders.

File Menu

New Project

Using this option you can set up a new MAGIX Audio Cleaning Lab 2013 project (view page 57).

Keyboard shortcut E

Load project

Using this option you can load previously saved projects (view page 57).

Keyboard shortcut: O

Save Project

The current project (view page 57) is stored under its given name. If there is no name chosen, the program opens a file requester, where the path and name can be determined.

Keyboard shortcut: S

Save project as

It opens a file requester where you can determine the path and the name of the project (view page 57), under which it will be stored.

Keyboard shortcut: Shift + S

Burn project backup onto CD/DVD / Burn data CD/DVD

In addition to the integrated audio CD burner routines, MAGIX Audio Cleaning Lab 2013 contains the CD burning program MAGIX Speed burnR. It can help you burn data CDs/DVDs, too.

Burn project backup on CD/DVD: The current project (including all audio files) can be burned directly to CD or DVD as a backup directly from the "File" menu in MAGIX Audio Cleaning Lab 2013. Even extremely large files do not present a problem, since they are automatically distributed across several dics. The first of the backup discs contains a "Restore" program. This automatically begins the restore process to the hard disk as soon as it is placed in the drive.

Burn data CD/DVD: This command opens the MAGIX Speed burnR program with an empty burn queue for burning desired files to disc.

Load audio file

MAGIX Audio Cleaning Lab 2013 can import audio files in the formats WAV, quicktime (*.aif), Ogg Vorbis (*.ogg), MP3, WMA and AVI (soundtrack only).

To do this, click on the corresponding button of the Import section (Import Audio), which opens the "Load audio file" dialog. Here you can select any folder containing audio files. Every listed file can be previewed and loaded into MAGIX Audio Cleaning Lab 2013.

The selected file is attached behind the last following a pause of 2 seconds.

You can also load several files simultaneously. Just like in the Windows Explorer, you can increase your selection with Ctrl+Click and select a range of files with Shift+Click.

Hint: Due to peculiarities of the Windows Explorer, the line in the file selection dialog is created from back to front. Therefore, if you click it subsequently, you will see "Track 3", "Track 2" and "Track 1" in the input line. This is also the order in which the tracks will be loaded into MAGIX Audio Cleaning Lab 2013. Therefore, if you want to load several titles, you should select them in the **opposite** order of how you want them to be later.

However, if you want to select a range in the Explorer (with Shift+Click), you should proceed as follows: first mark the **last** track of the list, then press Shift and mark the **first** track of the list. If you now click on "Open", all tracks are in the VIP in the correct order.

Keyboard shortcut: W

Load audio CD

You can import entire Audio CDs or individual CD tracks into the project. Unlike data CDs, audio CDs require special treatment while importing ("grabbing" or "ripping"). The data is imported digitally, thus eliminating loss in sound quality.

To import audio tracks you should proceed as follows:

1. Insert an audio CD into the drive and click on "Import CD". A dialog with a list of the CD tracks will open. If you have more than one drive, you may have to first select the drive containing the CD. You can do this in CD drive options.
2. Select the desired tracks (multiple selection by Ctrl + mouse-click).
3. Click on "Copy selected track(s)."
4. The "Import project" dialog will now appear. Here you can enter the file name and select the target directory.
5. The audio material is then copied from the drive onto the hard disk. A progress bar is displayed.

Once ripping is complete, the dialogs will be closed and the tracks are inserted into the project as individual objects.

Keyboard shortcut: D

Import DVD audio

This command imports the audio contents of a DVD into MAGIX Audio Cleaning Lab 2013.

Note: Importing the audio track(s) from a video DVD is not possible!

Record

With this command you can open the MAGIX Audio Cleaning Lab 2013 record dialog. More information on this topic can be found in the chapter Record audio (view page 44).

Keyboard shortcut: R

Export audio

Read the section "WAV and other file formats" (view page 119) in the "Export section" chapter.

Batch conversion

Opens batch processing to automatically edit multiple files. Read more about this in the separate chapter "Batch processing (view page 120)".

Shortcut: Shift + B

Load video sound

MAGIX Audio Cleaning Lab 2013 gives you the option of editing the audio tracks of video files like audio files. The file selection dialog contains a video preview window for this purpose.

Permitted import formats are: QuickTime (*.mov), MPEG (*.mpg;*.mp2), AVI (*.avi), and Windows Media (*.wmv)

After the video audio track has been loaded, a video window opens playing back the image and audio tracks of the video synchronously. Show and hide the video window via the "Options" menu.

Keyboard shortcut: j

Export video sound

After editing the audio track of AVI video files, you can write it back into the video file.

Video source: This is where the loaded video file is usually displayed (only with AVI files, see below). If you wish to write the audio track back into a different video file, you can choose it here via the folder symbol.

Audio length: Displays the length of the audio track and video audio track. Their lengths should be identical.

Audio format: The audio track is always written as a WAV file, compressed storage formats, such as AC3 or MP2, are not possible. You can change the compression format of WAV files here provided that the corresponding compression codecs (ACM codecs) are installed. They must also be available on the computer used for playback of the finished video.

Target file: You can either replace the sound of the video in the original video file or create a new AVI video file. You don't have to recompress the video data, which is very time consuming, because the existing video data is connected to the new audio data.

Warning: The option of replacing the audio track in the loaded video or writing a new video file with new sound **only works with AVI videos**. Other video formats (MPEG, MOV, WMV) require a video editing program, such as MAGIX Movie Edit Pro, to save the new audio track in the video.

Keyboard shortcut: g

Internet

This is a list of menu entries regarding all of the services that are available directly from within MAGIX Audio Cleaning Lab 2013.

MAGIX Online Album

In the MAGIX Online Album, you can post your favorite photos online and then send the link to your friends. All photos are immediately available from anywhere in the world on a professionally-designed photo website, in well-organized photo galleries, as full-screen slideshows, or in the form of a personal photo e-card.

- Personalized photo website in many designs.
- Unique Internet address (URL).
- Upload your pictures directly from a camera phone, send the link, and share the picture with other camera phone users.
- Full-screen online slideshows with fade effects and music.
- Send custom designed e-cards with your own photos.
- Share your photos with friends, including Internet management and password access to private albums.

Your photos online

MAGIX Online Album is available in three versions, of which the smallest (the FREE album with 500MB webspace for your photos) is entirely free.

The larger versions (CLASSIC or PREMIUM) are available for a monthly charge, but also come with many handy features, such as a faster website, 2,000 MB or 5,000 MB storage space, more website designs or access by mobile phone/PDA.

More information about prices and included services is available at www.magix-photos.com.

Just three easy steps: Within minutes your first pictures will appear on the Internet:

1. Select photos

Choose your favorite photos directly from the program and optimize them in just a few clicks. Put completed photo albums together and integrate music of your choice.

Do it all offline on your PC - saves you money! Then select "Services" from the program's menu bar "MAGIX Online Print Service -> Send selected".

2. Upload photos

In order to upload photos to your MAGIX Online Album simply log in using your email address. Naturally, access is protected via your personal password.

If you still don't have access, click on **Register now!** to activate your own album in just a few minutes. Then off you go!

3. Done! Your own personal photo website is finished

and your best photo memories are on the net. As a photo gallery or fully automatic slideshow (fullscreen).

Now, invite all your friends with just one click or show your photos on the road using your WAP-compatible camera phone.

Using your **MAGIX Online Media Manager**, you can quickly manage your photo website, upload photos and music, create new albums, add designs and text, and much more. All **online** without even having to download any extra software! Worldwide, easy, and quick in just a few clicks. At http://www.magix-photos.com

The following options are also available:

Send e-cards and photo emails

Send your photos as unique e-cards with great designs, or as a photo email to your friends and acquaintances.

Order photo prints and gifts

Order paper prints or great photo gifts from your MAGIX Online Album and have them delivered directly to your home, or pick them up from a photo lab in your area. Delivery time is usually just 2 - 3 days.

Upload arrangement as MP3 to MAGIX Online Album

Converts your arrangement into an MP3 file and uploads it to your personal MAGIX Online Album.

Download media

This command loads files from MAGIX Online Album to your PC.

Open my online album...

This command opens your own MAGIX Online website. You must login and enter the page's Internet address (URL) to continue.

MAGIX Website Maker

Not only is Internet surfing easy! Thanks to MAGIX Website Maker creating websites also becomes child's play!

This service offers:

- Your desired domain (www.desiredname.com) and a subdomain (http://your-name.magix.net/website).
- 250 MB memory space with 5 email accounts, 1 GB each.
- Website Maker with website templates, intros. Also animations, text effects, form and design objects, picture and graphic templates, and buttons. And everything without any ad banners!
- Photo (*.jpeg), video (*.wmv) & music (*.mp3) options.
- Additional software: MAGIX web mail for managing your email inbox.

MAGIX Website Maker offers 3 months of free, non-binding service. This way, you have enough time to find out everything about MAGIX Website Maker and all existing possibilities for editing and managing your homepage.

MAGIX Website Maker offers everything for the perfect Flash website:

- **Design templates:** Numerous high-quality website templates in the latest professional Flash® design with pre-finished, customizable subpages, start pages, profile pages, photo pages, video pages, and much more.
- **Text & text effects:** Freely positionable text fields with fantastic fonts and animated text effects can be added and individually formatted with ease.
- **Multimedia content:** Select your favorite photos, spectacular slideshows, videos and an online video player with your own background music, or integrate it all as an online music player with playlists.
- **Decorative elements:** Attractive design objects, plenty of vector shapes, background images, buttons, and much more offer more possibilities for designing unique websites than ever.
- **Animation objects:** Large selection of dynamic, impressive animation objects for breathtaking, moving websites.
- **Links:** Easily add links to your own or external websites.
- **Top extras:** Enhance your website with a visitor counter, guest book, contact form, and many other useful extras.

  Export function: Conveniently add individual components of your website (e.g. video player, slideshow, online music player) or even the entire website to external sites as an embedded website.

Proceed as follows:

After registering your desired domain, you can start creating your website right away.

1. First, select a design for your website in MAGIX Website Maker
2. If you would like to place an intro (start animation) at the start of your domain, select your intro as a next step.
3. Now you can replace the mock text with your own text as you see fit. All free-standing elements on all webpages can also be moved as you please. To do so, click to select the element and move it using your mouse.
4. Once everything is just how you want it, you can put your page online, so that your domain can be accessed.

Catooh – the Online Content Library

Catooh provides you with high-quality photos, videos, and music for every theme, expanded by intelligent iContent with professional Soundpools, DVD menu templates, and brilliant MAGIX ShowMaker styles to help you make your photo, video, and music projects reality. All of this is available directly from your MAGIX software.

Just choose "Share" from the menu "Catooh" to set up an Internet connection.

Browse through the thematically sorted categories or view the results directly by entering a keyword. After downloading, you can drag the objects from the Media Pool directly into your arrangement.

Tip: Read the introduction online http://rdir.magix.net/?page=JRF6LASAR2Z3!

Import media backup

iContent (for example, 3D transitions) which you buy and download from Catooh is stored directly in your central **My files\MAGIX Downloads\Backup** directory. If you have downloaded these files from other MAGIX programs, then you can use the command "Import media backup" to make them accessible for use in MAGIX Audio Cleaning Lab 2013.

Find media and download in the arrangement...

Opens Catooh and loads your files directly into the arrangement.

Shortcut: O

Manage login details

These are options for managing user names (email addresses) and the associated passwords so that you are able to access your Online Services without having to enter the details each time.

This information applies to all of my Online Services: If this option is activated, then the account details you have entered will be applied to all Online Services. Deactivate this option if you have different details for individual services, then choose the corresponding service via "Select service and enter the associated login details.

Delete old projects

The command "Delete old projects" is a convenient method for deleting old projects with all affiliated audio files.

Project: All of your most recently saved projects as well as all projects contained in the Project folder (view page 154) are listed here. You can choose one that should be deleted. Use "Search for project" to add other project files from any folder to the list.

Select the project file (.vip) that should be deleted by clicking on it. Of course, a project can not be opened if it is to be deleted.

The "Open in Windows Explorer" option opens an explorer window with the folder of the selected project. Here you can...no longer required files manually.

Used files: Lists the files used in the project that you want to delete. Use the small boxes to select the files you wish to delete.

With **"Delete"** you can delete the project (.vip) and the files selected for deleting in the file list.

When you select a project you wish to delete, some files in the list, i.e. files located in the project folder are selected already. They are recording files, files that are automatically produced when importing specific formats, and back up copies. In other words, data which is used only within one project of MAGIX Audio Cleaning Lab 2013.

Files which are not located in the project folder, MP3 files from music collections or videos, for instance, are not selected, as you will probably use them in other projects or with other programs. You can select them if you're sure you don't need them anymore. In general, it's quite sensible to have the preset apply to the project folder because it allows you to simply choose a project at the top and to click "Delete" at the bottom to delete files which are no longer needed in a project.

Exit

Closes MAGIX Audio Cleaning Lab 2013.

Edit Menu

Undo

In the project you can undo the last changes you made. This way, it's no problem if you want to try out critical operations. If you don't like the result, you can always revert to the previous state using "Undo".

Shortcut: Ctrl + Z

Redo

The “Redo” function undoes the previous “Undo” function.

Keyboard shortcut: Shift + Y

Undo list

The last 20 editing steps are listed. This makes it easy to go back to a specific editing step.

Set marker

With this command you set a marker into the track to mark a certain time position in the project. You can jump between the markers with the keyboard commands Alt+Arrow left/right.

Keyboard shortcut Alt+M

Split

A selected object is split into two objects at the position line. This also works during playback.

Keyboard shortcut: T

Remove object beginning

This command removes the part of an object beneath the position line, chronologically located before the position line. The audio material following it is moved forward to the initial position.

Keyboard shortcut: D

Remove object end

This command removes the part of an object beneath the position line, chronologically located after the position line. The audio material following it is moved closer.

Keyboard shortcut: U

Cut

The selected object is cut out from the project and placed on the clipboard. It can then be reinserted elsewhere.

Keyboard shortcut: Shift + Del

Copy

The selected object is copied from the project into the clipboard. It can then be re-inserted elsewhere.

Keyboard shortcut: C

Paste

The content of the clipboard is inserted into the project at the position line.

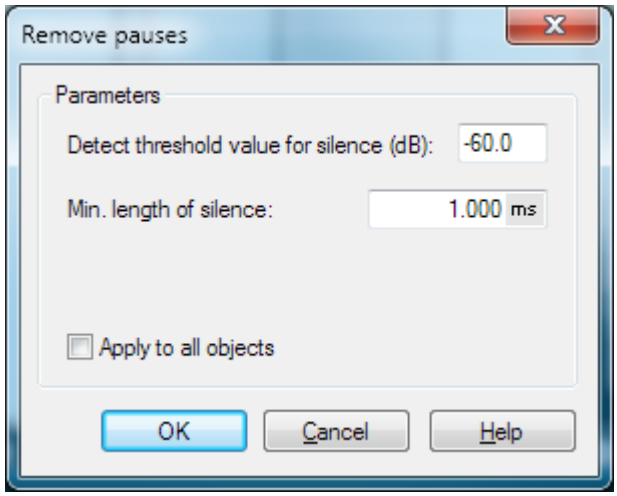
Keyboard shortcut: Ctrl + V

Delete

The currently selected object will then be deleted from current project. The subsequent objects are moved forward so that there is no gap in the track.

Keyboard shortcut: Del

Remove pauses



This function automatically removes sections without or with low audio level in the selected object. In the dialog, you can set a minimum time and threshold for recognition.

Threshold detection for pauses (dB): The threshold is set here. The value is specified in decibels, 0db corresponds to the maximum level. Typically you will enter negative values. The higher the numerical value, the lower the level and the less audio material is removed.

Minimum pause length: The minimum pause time is set here. If the function removes intended (musical) pauses in the music, increase the value.

Apply to all objects: If this option is activated, the function will be applied to all audio objects in the project.

Voice-Over

More on this you can read in section "Voice-Over" (view page 108) in chapter “Sound FX”!

Surround Editor

Opens the Surround Editor.

More on this you can read in section“Surround Editor” (view page 101) in chapter “Sound FX”!

Create Surround Transitions

Creates a surround transition.

More on this you can read in section “Surround Transitions (view page 102)” in chapter “Sound FX”!

Load/Save realtime effects settings

Here you can save and load your favorite effect settings as "Mastering effect presets" or "Cleaning FX presets" so you can use them in other projects or objects.

FX presets can be applied to the "Object FX" page for individual objects or as project effects for the whole sound.

Since the available object effects are different from the project effects, some settings may be ignored.

Apply all realtime effects

If the effects settings become too full to manage or you just want to ”summarize” your production, use this function to convert the entire audio arrangement into a single audio file. It will appear as a long object in a new project.

Once the effects have been added they will no longer require CPU power.

Effects menu

Here you will find all effects of the "Cleaning" and "Mastering" tabs, as well as other effects in submenus, which are sorted according to different topics.

If the cleaning or mastering effects are open in Object (view page 67) mode, the effect will be loaded as an object effect, which means it will only affect the selected object and not the entire audio material on the master track.

A description of any effects not explained in the next section can be found in Cleaning effects (view page 65), Mastering effects (view page 77), and Additional sound effects (view page 100).

Destructive effects

Along with effects from the cleaning and mastering sections you can also find other effects that can't be applied in realtime. When using "destructive effects" copies of the audio material are created in WAV format, with an "_fx" at the end of the file name. The effect is added to it directly. As we're essentially working with copies there is no danger of changing or destroying the original material.

The advantage is that the effect does not have to be calculated during playback and burning, which saves computing power. The disadvantage is that the effect's settings can't be changed later. However, since you are working with a copy, the Undo (view page 133) function is available in case you made a mistake.

Destructive effects are only ever applied to the selected object.

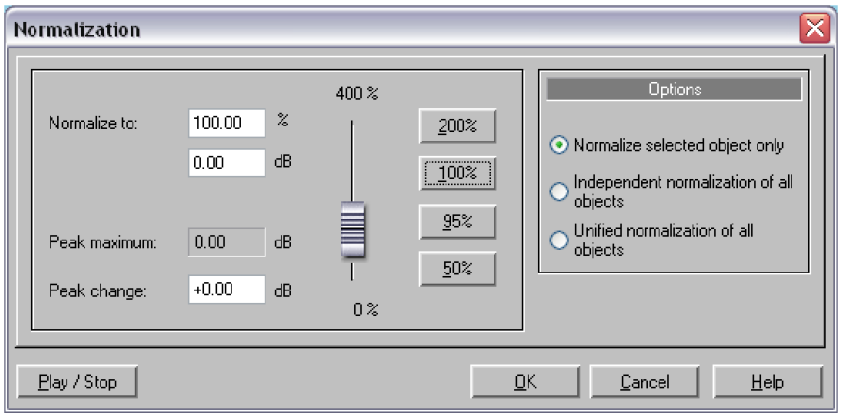
The following effects from the menu are destructive: "Remove DC", "Acoustic Simulator", "Resampling / Timestretching", "Reverse", "Swap channels"

Normalize object volume

This function raises the volume of an object to the maximum level without the material being clipped. This utilizes the dynamic range the best way possible. First the highest levels are detected, and then the object level is adjusted so that the max. level amounts to 0 dB, i.e. the maximum volume (or another value between 1% and 400%).

Note: If you experience very slight clipping during recording and then proceed to normalize the material, then you won't achieve the same quality as if you produce a correctly clipped recording! For example, if you only modulate half of the material,

then your recording will have a quality of 15-bit samples – normalizing to 100% doesn't change anything.



Normalize to: Here you can set the value to which the audio material should be normalized by entering it into the input field, moving the fader, or selecting one of the presets (50, 95, 100 or 200%). The value will be shown in % and dB (100% = 0 dB = max.). Values above 0 dB bring about digital clipping.

Maximum level: Displays the highest detected peak in the selected range/object.

Level change: Displays the level change in dB, in accordance with the selected normalize level and the detected maximum level.

Different methods can be specified under "Selection":

Normalize the selected object only: Normalization is only applied to the selected object. This function can also be executed in "Object FX" mode by clicking the "Auto" button below the volume controller (always normalizes to 100%).

Normalize all objects separately: Each object in the project is normalized according to its own maximum (peak) level. The level ratios between the individual objects changes for this reason.

Normalize all objects as a single unit: The maximum level is detected for all objects in the project, and each object is normalized according to that value. The level ratios between the individual objects is preserved, but only the object that contains the maximum level is optimally clipped.

Start loudness adjustment (RMS normalization): Starts normalization including the average loudness (RMS) of objects, see Loudness.

Shortcut: N

Loudness adjustment

This function unifies the volume of the individual tracks in the project. First all of the levels for every object are increased separately to the maximum without clipping the material (see Normalization (view page 137)). Depending on the musical production, however, each title may have a different volume at full level, since the relation between loud and quiet sequences within the track also influences how we perceive volume. In the second step, the average volume (RMS) of the song is determined and the object level is adapted accordingly.

Tracks with higher peak values but lower loudness may be normalized at a level above 0 dB (full clipping). To avoid overloads, the limiter is automatically activated (see MultiMax).

A target loudness (RMS) can be given in dB. Since this is the average value, the loudness value is always less than 0dB; -15 is the preset.

The degree of adjustment decides how strictly the loudness normalization is applied. At 0%, no adjustment is made to the target RMS. At a value of 50%, the level is raised to half the difference between the detected loudness and the target value. Volume differences remain between the tracks in this case. At 100%, every track is raised to the RMS target value regardless of its loudness. This is only recommended in rare cases because even in a single party mix, a dance hit will not have the same volume as a ballad.

Tip: Volume fluctuation within a song can be balanced with the MultiMax loudness presets.

Keyboard shortcut: Shift + N

Isolate Stereo Channels

Displays a stereo file from two mono objects. The two mono objects are totally independent, are located one above the other on two tracks and can be worked on separately. This option is particularly suitable for removing undesirable audio interference that can only be heard on one channel.

Switch channels

This function switches the left and right stereo channels.

This is useful for correcting recordings with switched channels. This function can be reversed if you don't re-select the range; opening it again will bring back the original material.

Invert phase

The sample data is inverted along the amplitude axis, which means that negative values become positive and vice versa. This function allows you to adjust recordings with different phases to one another.

An incorrect phase occurs if during an analog recording parallel cables are switched. To correct such errors, some mixers have a switch that can be used to invert the phase of an input. If you press the switch by mistake, errors might occur as well.

This function is reversible, so if you repeat it, the original signal is restored.

Backwards

When Backwards is applied the sound file will be played in reverse. This way you can create very interesting effects, not to mention the “hidden messages” in many songs...

CD/DVD menu

The CD/DVD menu contains all special functions for audio CDs, DVDs and the CD/DVD mastering processes, e.g. setting CD tracks and subindexes as well as the "Create CD" function.

Set track marker

Allows you to set a track marker at the current location of the position line. All the following markers will automatically receive a corresponding number. Each CD track needs a track marker. The minimum length for a track is 4 seconds, whereas the maximum length of a track is only limited by the capacity of the CD.

Keyboard shortcut: m

Set Pause marker

This function lets you set pause markers. At these points some CD-Players switch to absolute silence during playback until the next track marker appears. The CD-player displays a countdown for the next title.

Keyboard shortcut: Shift + m

Set track markers automatically

Use this function to set Track markers automatically by analyzing the audio.

For more information read the "Automatic track recognition" section in the "Editing in the track view" chapter!

Keyboard shortcut: Ctrl + m

Set track marker to object edges

A track marker is set at every object start..

Keyboard shortcut: Alt + m

Split objects at marker positions

This function will split all objects at the position of the track markers.

Keyboard shortcut: Ctrl + t

Set auto pause length

Audio files that have been loaded successively into MAGIX Audio Cleaning Lab 2013 are arranged consecutively in the project. Between the tracks, a standard pause of 2 seconds is preset. In this dialog, the value can be modified.

Delete marker

This function deletes a track or pause marker. To select a marker, you have to place the position line to the marker position by clicking on it.

Keyboard shortcut: Del

Delete all markers

This function removes all existing track and pause markers. This can be useful if you are going to use the "Set track markers automatically." function.

Keyboard shortcut: Ctrl+Del

Delete CD track

This command deletes a selected track marker and the corresponding audio material from the position of the track marker to the next track marker. The audio material following it, is moved closer.

Keyboard shortcut: Alt + Del

Create audio CD

This option does the same thing as the "Audio CD" button in the export section.

Keyboard shortcut: B

Show CD-R drive information

This dialog shows you all available information on the active CD-writer. This includes the manufacturer, product name, product revision, cache and the features supported by the drive.

Show CD-R disc information

Displays all available information on the CD inserted in the drive. The most important feature is the maximum length, which cannot be exceeded during production, for example: 74 minutes and 59 seconds.

Create audio DVD

MAGIX Audio Cleaning Lab 2013 also burns DVDs, and there are essentially two different types of DVD that are possible:

Stereo DVD: These are normal video DVDs that can be played on any DVD player. Since they don't contain any video data, there is more room for the audio data. This can be stored either in CD quality with 16 resolution or in high-resolution 24 bit audio.
Surround information is encoded as two-channel stereo audio (Dolby Surround ProLogic compatible)

4 channel DVDs: These are so-called "audio DVDs" and require a special DVD player for playback. Music is recorded in true 4-channel Surround sound for these devices, and 16 or 24 bit resolution is also available in this case.

Burning 24 bit DVDs is only sensible, if the original audio material was also recorded in 24 bit quality.

Depending upon the format, different project lengths are possible.

DVD video	16 bit:	6h 33 min
	24 bit:	4h 23 min
DVD audio	16 bit:	3h 36 min
	24 bit:	2h 24 min

Track Agent

Opens the Track Agent (view page 115).

MAGIX Xtreme Print Center

MAGIX Audio Cleaning Lab 2013 contains an easy-to-use CD print studio. Here, you can design and print not only simple track listings, but also sophisticated CD covers, CD booklets, and circular CD labels. The track information is automatically transferred from the playlist to the print studio. The print studio can be found in the "File" menu under > "Print Studio...".

Get CD track information (freeDB)

By online freeDB query you can get complete title informations for an imported CD from the internet. The query is based on the exact combination of title lengths in a given order for a number of tracks. This is also working with tracks separately loaded into the the project (as MP3 files, for instance). The single play times of the tracks can even differ by some seconds, mostly the correct CD is recognized anyway.

Just put your Audio CD into the disc drive and select "Get CD track information (freeDB").

CD info options

Here you can start different advanced options for "freeDB CD Database".

freeDB > Submit CD to freeDB

You can add CDs in the online CD database. The enormous freeDB project exists courtesy of the contributions made by worldwide users.

If you have a CD that is not in the database, you can enter the CD information.

- Make sure the right CD is in the drive.
- Select "Enter New CD in freeDB "
- Enter the information, double-checking the details for possible errors.
- Press "OK"
- Within an hour or two, the new information will be online for everybody to access.

freeDB user preferences

User info is entered here for MAGIX Audio Cleaning Lab 2013 to use when freeDB is queried. Of course, using freeDB is completely anonymous, but freeDB often has to process several queries at once, so an i.d. is assigned to identify the user. If you have problems accessing info, maybe someone is using the same data; you can change the settings to avoid this problem.

freeDB proxy options...

If you are having difficulties connecting to the freeDB server, then you can choose another server from the list, or you can increase the "timeout" value. An increased work load causes the server to react slowly and a connection cannot be made properly.

freeDB > Delete freeDB Cache

The freeDB online database creates a cache on your hard disk, containing all data available via the freeDB button. This allows you to access the data without having to

go online. You can of course delete the cache, should it contain false data or when up-to-date current data is available.

Open CD track list online

When recording cassettes or records onto your computer, one large file is created in which all tracks are arranged one after the other without track markers, much like a CD. You can, of course, use the function "Set track marker automatically" to analyze the audio material and, with the help of the pauses, separate the file into individual tracks. This does not work, however, when the tracks run into one another without a pause.

In this case you can ascertain the exact track division by querying the Online freeDB CD database. To do so, proceed as follows:

1. Start up your Internet browser and go to the freeDB search page by pressing the "Start Internet search" button.
2. Enter the name of the album or band into the search field. One or more albums, which match the search request, are listed. If you know that a certain album fits your recording, then click on "Details". It will display the CD track list you were looking for alongside other details.
3. Click on the link above the disc ID (a combination of 8-digits of numbers/letters, e.g. 7e120419). freeDB data record is displayed for this CD.
4. Copy the URL (Internet link) from the address bar of your browser onto the clipboard.
5. Change back to MAGIX Audio Cleaning Lab 2013 and enter the Internet link into the text field in the lower portion of the dialog. Then click on "Apply CD data". The CD tracks will be added to the project.

Warning: Sometimes the first track may begin very quietly (for instance an intro or applause in live recordings) and the start of the recording occurs too late. Due to this, it may happen that the length of the first track does not correspond to the track length suggested by the database. As a result, all track markers will be a little bit too far back. In this case, move the second track marker forward while holding down the Ctrl-key; all subsequent track markers will then be moved by the same amount and should be positioned appropriately at the start of each track.

audioid

With this function you can identify audio files. As opposed to the freeDB search, the audio file doesn't have to make up part of an album or CD, it doesn't even have to be a complete recording.

MAGIX Audio Cleaning Lab 2013 analyzes parts of a song's typical sound characteristics and sends this information to an Internet server. The server then

compares this "acoustic fingerprint" with song information in its database and responds with the track information.

You can apply this function either onto the selected object, onto the object at the current playback position or onto the object within the project.

An Internet connection is necessary. If you have a personal firewall, you may have to adjust the settings so that MAGIX Audio Cleaning Lab 2013 can access the Internet.

Options menu

Edit mouse mode

The Edit mouse mode is preset. You can take care of all important tasks with this mode.

Select objects in the track window with a left-click. Selected objects can be moved. All subsequent objects are also moved so that no unwanted gaps develop later in the track.

In Edit mode you can use the 5 handles to fade or shorten all objects or to adjust the master volume.

Right-clicking on an object opens the so-called context menu from which you can select important editing options for the object.

Keyboard shortcut: V

Cut Mouse mode

The cutting mode converts the mouse pointer into scissors. Every object can be cut on the mouse position.

This creates two separate objects that can be edited separately.

Moving the mouse over the wave form depiction of the audio material you move the Position Bar along with the mouse pointer. So you can control exactly the point where you want to cut. The perform precision editing we recommend zooming the wave shape display before using the cut mode.

Like in move mode, right-clicking on an object opens the so-called context menu from which you can select important editing options for the object.

This mode is suitable for dividing a recording into different parts in order to apply object effects to each of the passages.

Keyboard shortcut: H

Zoom mode

Right mouse button: Zooms out of the project.
Left mouse button: Zooms into the project.

Delete mouse mode

If the "Delete objects" mode is activated, the mouse pointer turns into an eraser. In this mode, objects can be deleted from the project.

This also automatically moves the position of subsequent objects back to the position of the deleted object.

Keyboard shortcut: F

Resampling/Timestretching mouse mode

This mode lets you change the playback speed of objects with the mouse so that they are better aligned.

You can use this mouse mode by stretching or squashing the object at the rear object handle below. The mouse pointer turns into a clock.

Resampling mode (preset) can be used to change speed and pitch just like on a tape, i.e. speed and pitch are changed together as one. If an object is compressed with the mouse, the speed and pitch increase just like a tape when it is played faster.

In the timestretch mode, the pitch remains unchanged if the object length and with it the speed are changed.

You can switch modes by switching to the cleaning effects, selecting "Object" editing and then selecting timestretching from the tempo/resampling effects presets list.

Volume draw mode

In **volume draw mode** the volume curve can be "drawn".

This way, you can create irregular volume progressions quickly.

To delete volume curve points, double-click on the corresponding point or click on a point in the delete object (view page 38) mode (view page 38).

Wave drawing mode

Repair short distortions such as crackling directly in the wave form of the audio file by using the Wave drawing mode. Such distortions usually only last a few sample values, so you can use the mouse and try to draw along the original waveform without the distortion.

There is an automatic zoom function in the wave form display when you switch into the Wave drawing mode, so sample values become visible.

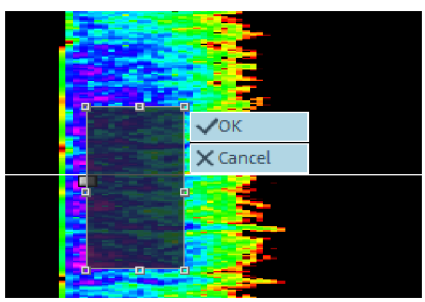
Warning: Unlike other editing of the master track which only affects the project, this mode lets you work directly with the Wave audio file, i.e. on the recorded raw material, which is changed directly and permanently. Create a backup copy to undo changes. Back up copies are created automatically when working with MP3 and other compressed formats, since such files have to be converted into the Wave format for this function.

Spectral edit mouse mode

You can remove individual noises within the sound spectrum of the audio material with the help of the spectral edit mouse mode.

In that case, it is a simplified version of Spectral Cleaning that is integrated into the master track.

The view of the master track changes to Spectral display (view page 36) and you can create an area around the noise with your mouse. Its size is still adjustable afterwards by simply stretching the handles at the frame.



You can hear the impact of the effect straight after playing the corresponding passage. Two buttons are located at the frame of the disturbances. By clicking "OK" the editing will be calculated into the audio material instantly. A copy of your original material has been automatically saved beforehand so you can undo any editing (Ctrl + Z).

By clicking "Cancel" you delete the frame and end the filtering process.

2 tracks

You can use the "Double track" button to create a second stereo track for your background music.

All objects can be moved randomly between the tracks. If moved between tracks while holding the Shift key, the horizontal position will be retained, i.e. only the track is changed.

Important: On the lower track you can move the objects without moving the subsequent ones as well. Therefore, if you want to exchange objects, you should do this in the second track.

Keyboard shortcut: 2

Stereo display

Using this option you can switch the view of the wave shape, which splits up the material between the two stereo channels. This view is useful to visually control the material in the stereo panorama or to find zero-crossings for cutting operations.

Keyboard shortcut: Tab

Surround Mode

See "Surround Mode (view page 100)" in the “Sound FX”chapter !

Activate volume curve

This option activates the volume curve.

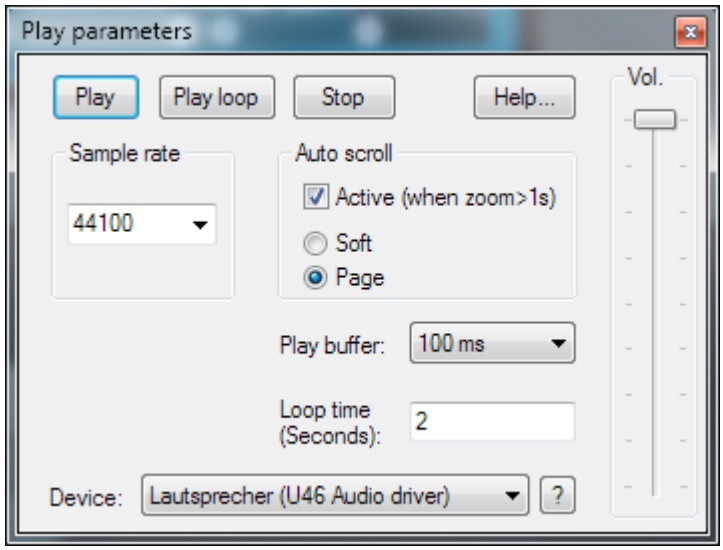
You can read more about that in the chapters „Arranging in the master track“ (view page 57) and „Track window“ (view page 34).

Overview mode

Use the "Overview mode" in the "Options" menu to show or hide the overview track (view page 35).

Play parameter

This menu opens the window with the playback parameters.



Sample rate: Here you can adjust the play rate, if the sound card allows so.

Device: Here you can adjust the sound cards driver, which is in charge of playback, provided that the sound card allows this. This becomes especially important if there are several sound cards in the computer.

?: Here the supported audio formats of the sound card, as well as the sound card driver's information can be displayed. Furthermore you can switch between driver types (MME and WDM). Adjust this setting only if you have problems with audio playback or recording.

Autoscroll: Here you can activate a feature that is especially useful when working with long projects: the graphic turns over when the Position Bar leaves the visible part. So you never lose the overview. The scroll operation requires a certain calculation time (depending on the processor, the graphic chart and the resolution), so that the computer can become overloaded in critical cases, which produces dropouts during playback. In this case, deactivate the auto-scroll mode.

Smooth / turn over: You can choose between scrolling down a page or page turning.

Playback Buffer: To allow a smooth playback of a complex project, the MAGIX Audio Cleaning Lab 11 sets out a data buffer, into which current data areas are loaded. Hence, the whole project with all of its adjustments is calculated in a step by step procedure.

You can determine the size of the buffer in "buffer adjustments", which will be used for the playback of the whole arrangement or for the pre-listening of waves in the data manager.

A rule of thumb: in the case of long waiting and loading times, the buffer should be reduced; in the case of drop-outs or erroneous real time calculation of effects, the buffer should be extended.

Loop time: Here you can adjust the length of the endless loop, which will be used to play the project with activated loop mode. The loop mode itself is activated in the transport control (please see the "control consoles (view page 40)."chapter).

Keyboard shortcut: P

Video window

Show/hide the video window (if a video file is loaded (view page 127)).

Units of measurement

This sub-menu allows you to determine different units for the timeline. You can choose between samples, milliseconds hour/minute/second and CD frames.

Keyboard shortcuts:

Samples	Shift + 1
Milliseconds	Shift + 2
h:min:sec	Shift + 3
Min:Sec:CD frames	Shift + 4

Mouse snap active

When the mouse grid is switched on, the objects snap into place beside one another so that everything fits in seamlessly.

Auto crossfade mode active

With every cut the two objects that are created are slighlty crossfaded in order to avoid crackling. This is referred to as "Auto crossfading" (for more info on crossfades please also see Crossfading objects (view page 60)). As all recorded and imported objects can be easily faded – which is not always desired – this option can be deactivated.

Display values scale

The right edge of the track view shows a values scale. This indicates the level of waveforms in dB, and the spectral display indicates specific frequencies in Hz.

Options for automatic track marker recognition

In this dialog you set the options for the function "Set track markers automatically" For more information read the "Automatic track recognition" section in the "Editing in the track view" chapter!

Minimum length of pauses: This is the time that the audio material must remain below a certain level in order to be recognized as a pause. The longer this value, the fewer pauses will be detected. If the value is shorter, there is a possibility that short silent sequences in a title might be recognized as a pause.

Minimum length of tracks: A new pause will only be recognized once this amount of time has passed since the last track marker. If you are recording a tape with a pop song and want to write it on CD, you can set this value to 3 minutes. But if the tape contains short sound samples, the value has to be consequently much shorter.

Maximum level for pauses and Minimum level for pauses: During the first step, the program searches for a suitable volume level for the pause detection. With these two parameters, you can limit the results before the process continues. If too many pauses were detected, then you should move both sliders more to the right. In the opposite case, move them to the left.

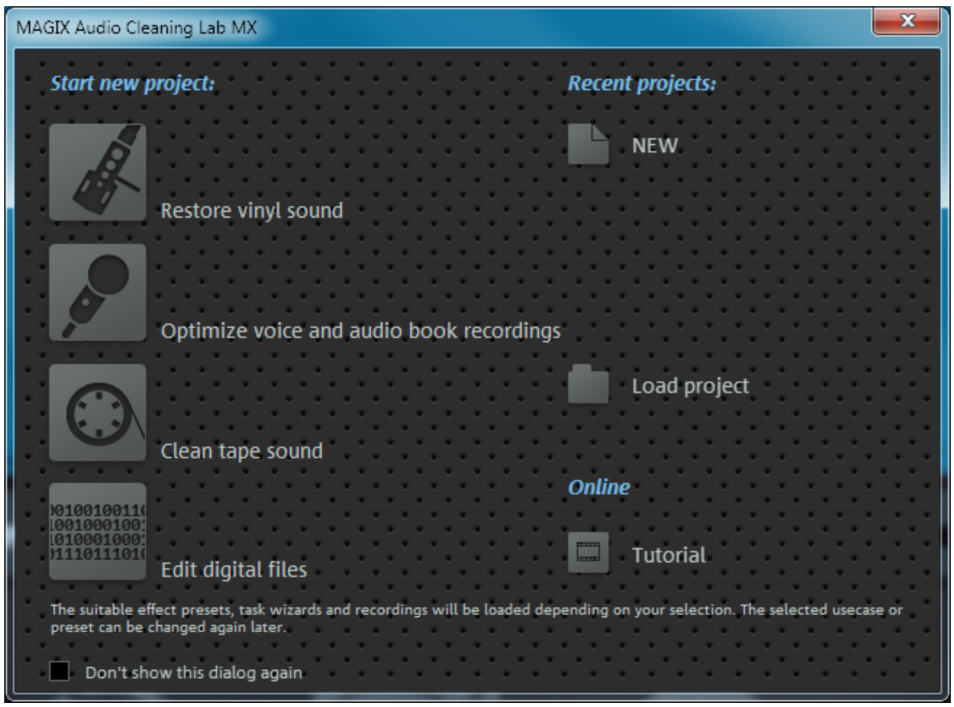
Detection of LP and cassette sides: In certain occasions you might want to record both sides of an LP immediately one after the other, without interrupting the recording at the computer. The result is normally a very long audio file that includes a very silent passage in the middle of the recording (the moment when you turned the LP or CD over). The program detects this as only one section and splits the object into two new objects and tries the same with both of the resulting objects. In the best case, even the noises produced while turning the LP or cassette over will be eliminated. You can increase the precision of this process, adjusting the minimum length of the side of your LP or MC. Here are a few proposals:

Single:	10 minutes
LP:	15 minutes
60 min MC:	25 minutes
90 min MC:	40 minutes

Path settings

In this dialog, you can set the memory path for your recorded audio files (New projects) as well as the search path for VST plug-ins.

Show start selection



Each time the program starts, it will show the start selection and offer presets for the most important program applications.

After choosing an option, a new, empty project (view page 57) and the right presets for all cleaning and mastering effects installed according to their individual applications will be added. This means, you will only have to activate them. On top of that, the settings for the automatic track recognition during the recording will be applied according to the chosen applications.

Furthermore, you can also reload the previous project or view the introduction video.

If you do not wish to use any defaults, you can just close the dialog by clicking on the "Close" button in the right-hand corner. When you activate the box "Don't show this dialog again", the start selection will not pop up the next time you start the program. You can reactivate this at any time via the menu "Options" >"Show start selection".

"Share" menu

The Share menu provides access to online social networks as well as transfer functions to other MAGIX programs.

Here you'll find options for uploading individual objects in the Arranger or files from the Media Pool as well as the entire arrangement, as audio or video. You can also transfer your arrangement to another MAGIX program (if it is installed) in order to, for example, use it as background music for your slideshow.

Community upload

The menu entries featured under "File" > "Export" >"Community upload" or via the Export assistant allow you to upload the finished song to different web communities.

Use as background music

Converts the project into MP3 and forwards it directly to a MAGIX video editing program (e.g. MAGIX Movie Edit Pro deluxe MX) where it can be used as background music.

Note: This function is only available if you have installed an appropriate MAGIX program.

Add to music collection

Converts your arrangement into MP3 format and sends it directly to a MAGIX music management program (e.g. MP3 deluxe MX), where it is added to an existing music collection.

Note: This function is only available if you have installed an appropriate MAGIX program.

Help menu

Help

Open the program's help file. The help file provides explanations of all functions in the program and step-by-step instructions.

Keyboard shortcut: F1

Display tips

Determines whether the **tooltips** are displayed or not. If activated, a small help window will be displayed as soon as you hold the mouse over a button for a while.

Show tutorial video

This plays a tutorial video for MAGIX Audio Cleaning Lab 2013.

System information

Information on the current date and time appear in this Information window, in addition to the number of files that have just been opened, the total size of the memory in the system and the size of the memory used by the MAGIX Audio Cleaning Lab 2013. In short, a list of all available drives and their available memory capacity.

About MAGIX Audio Cleaning Lab 2013

Copyright notices and version numbers are displayed.

Register online

This option opens the MAGIX homepage for online registration where you can register yourself as a MAGIX user.

Registration grants you access to the MAGIX support website http://support.magix.net (see support) where various program updates and help programs can be downloaded.

With the registration form supplied (start menu under "MAGIX Audio Cleaning Lab 2013 -> Service and support -> Register") you can register via post or fax. Simply print it out, fill it in, and send it off!

Keyboard shortcut: F12

Update check

Links directly to the MAGIX online service page (for registered users only). This automatically patches and updates your MAGIX Audio Cleaning Lab 2013 version.

Restore original program settings

Use this function to reset all program settings you made in MAGIX Audio Cleaning Lab 2013 to their original settings.

Activate MP3/AAC encoder

With this menu command you can activate export as AAC or MP3 formats.

Why does it have to be "activated"?
To import (decode) or export (encode) certain video and audio formats, you will require a specific codec. MAGIX Audio Cleaning Lab 2013 will ask you if you want to activate the codec as soon as you need it. The integration of decoders and encoders from third parties into programs usually costs money. These codecs are integrated via additional, voluntary activation in MAGIX programs which, according to usage and degree of prevalence, can be free or fee-based for special high-quality codecs. This way, MAGIX can continue to offer you good value for your money.

The following activations are available on MAGIX Audio Cleaning Lab 2013 for a small fee: **AAC encoder**.

Activating the **MP3 encoder** is free of charge.

Free activation (MP3)

To be able to use the MP3 or MP3 surround encoder (audio export), you will have to activate it for free first.

Activation can be done online via telephone or via post/fax. The quickest and easiest way to order an activation code is via the Internet.

Order activation code online
Click on "Order online..." (Field 1). Your Internet browser will open. Once you have registered, the activation code will be sent to the email address you supplied upon registration.

If your computer has no Internet access, you have the following options for activation:

Order activation code in MAGIX Service Center

Use this option to conduct activation from a different computer which has Internet access.

Order activation code via telephone
The telephone number and necessary details you will need to call to receive activation by telephone are displayed here.

Order activation code via post/fax
After clicking on "Order via post/fax" (field 2), your user code will appear. This automatically assigns your personal activation code to your PC. Click on "Continue to order form" to transfer your user code automatically to the post/fax form. Now send the completed form as a print out to the address/fax no. mentioned. Your activation code will be sent to you in just a few days via post or fax. It can also be sent by mail if an email address is state d.

Enter activation code
After receiving your personal activation code, you can use the activation dialog for the corresponding file format to start exporting for the respective format. if you receive the activation code via email, then copy it into the input field in the dialog and click "Activate...".

Fee-based activation (MPEG-2)

To be able to import video sound from MPEG2 videos, the corresponding codecs must be activated first (fee-based).

Order activation code online
Click on "Order online..." (Field 1). The web browser will open for you to register MAGIX Audio Cleaning Lab 2013 first (if you have not already done so). You will then be forwarded to a website where you can request the corresponding activation.

If your computer has no Internet access, then you have the following options for activation:

Order activation code in MAGIX Service Center
Use this option to conduct activation from a different computer which has Internet access.

Order activation code via post/fax
After clicking on "Order via post/fax" (field 2) your user code will appear. This automatically assigns your personal activation code to your PC. Click on "Continue to order form" to transfer your user code automatically to the post/fax form. Now send the completed form as a printout to the address/fax no. mentioned. Once payment has been processed successfully, your activation code will be sent to you in the post/via fax in just a few days. Optionally, it can also be sent by email if an email address is stated.

Enter activation code

After receiving your personal activation code use the export or burn function to reopen the activation dialog for the corresponding file format. Type or copy the activation code into the input field in the dialog and click on **"Activate..."**.

Fee-based activation (AAC)

In order to export as AAC format, activation of the encoder is required:

Activation is fee-based and can be done online or via post/fax. The quickest and easiest way to order an activation code is via the Internet. Ordering the activation code takes just a few minutes via email. The order of your activation code via post/fax takes a few days.

Order activation code online

Click on "Order online..." (Field 1). The web browser will open for you to register MAGIX Audio Cleaning Lab 2013 first (if you have not already done so). You will then be forwarded to a website where you can request the corresponding activation.

If your computer has no Internet access, then you have the following options for activation:

Order activation code in MAGIX Service Center

Use this option to conduct activation from a different computer which has Internet access.

Order activation code via post/fax

After clicking on "Order via post/fax" (field 2) your user code will appear. This automatically assigns your personal activation code to your PC. Click on "Continue to order form" to transfer your user code automatically to the post/fax form. Now send the completed form as a printout to the address/fax no. mentioned. Once payment has been processed successfully, your activation code will be sent to you in the post/via fax in just a few days. Optionally, it can also be sent by email if an email address is stated.

Enter activation code

After receiving your personal activation code use the export or burn function to reopen the activation dialog for the corresponding file format. Type or copy the activation code into the input field in the dialog and click on **"Activate..."**.

Activation problems

Problem: The entered code is incorrect (telephone activation)

Make sure your entry is correct; in most cases a typo is to blame.
If the code is entered correctly, dial the number of our Call Center. Our support staff will help you personally.

The MAGIX website won't open

Check your Internet connection; you may have to use manual dial-up.

The form for ordering via post/fax won't open

- Check that an adequate text editing program is installed and activated (for example, MS Word).

I still haven't received an email with the activation code

- Check that your inbox isn't full.
- Have a look in your spam folder.

You can always send questions via email to our support whenever you like. Please have the following information at hand so that we can assist you as quickly and as specifically as possible.

- Complete product name
- Exact version number (to be found in the about box in the "About" menu item of the "Help" menu)
- Encoder/Decoder name
- Your user code (accessible via the "Activate via post/fax" dialog)

Problem: I have installed MAGIX Audio Cleaning Lab 2013 on a new computer, installed a new hard drive in my old computer (sound card, memory...), or installed it multiple times on the same computer. My activation code is no longer accepted!

If the program cannot be activated again after it has been activated multiple times, please contact the MAGIX customer service (view page 11).

Keyboard layout and mouse-wheel support

Keyboard layout

Menu functions	
New project	E
Load project	O
Save project	S
Save project as	Shift + S
Load audio file	W
Load audio CD track(s)	Shift + D
Recording	R
Export audio (Wave)	K
Batch conversion	Shift + B
Load video sound	J
Save video sound	G
Finish	Alt + F4
Undo	Ctrl + Z
Redo	Ctrl + Y
Set marker	Alt + M
Remove object beginning	D
Remove object end	U
Split	T
Cut	Ctrl + X
Copy	Ctrl + C
Paste	Ctrl + V
Remove (delete)	Del
Normalize object volume	N
Adjust volume	Shift + N
Spectral Cleaning	Ctrl + D
Plug-ins	X
Object FX editor	Ctrl + O
Set track marker	M
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Playback parameters	P
Units of measurement	Shift+1..4
Mouse grid active	Ctrl + R
Display values scale	#, '
Help	F1

Transporter functions

Playback/Stop	Space bar
Play as loop	Shift + space bar
Pause	,
"Emergency stop" during playback	Esc
Back to the beginning	Home
To the end	End
Fast forward (rewind)	Arrow left (right)
Playback position to next (previous) track marker	Alt + arrow left (right)
Playback position to the next (previous) object edge	Shift + Alt + arrow left (right)

Keyboard shortcuts for zooming the display, please see **Zoom commands** (view page 42).

Mouse-wheel support

Middle mouse button	Start/Stop playback
Mouse wheel	Scroll horizontal
+ Ctrl	Zoom horizontal
+ Shift	Zoom vertical
+ Ctrl + Shift	Scroll vertical

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