



# Music Maker 16

Simply make music

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## Preface

MAGIX Music Maker 16 Premium offers both an easy start and also lets you experience what it's like to dive deeper into the depths of music production. A giant, high-quality sound archive, an especially intuitive approach to creating original music, plus many useful functions result in an unbeatable complete package for making your own songs.

Handling is especially easy and consistent. The included sounds and video files can be combined with the software synthesizers in seconds; MP3s with audio CD tracks, your own music recordings with videos, photos or graphics, and even VST/DirectX plug-ins or MIDI files can be perfectly integrated with one another.

These features will transform your computer into a universal production studio for music and all other kinds of multimedia files. The included CD-quality musical building blocks can all be easily combined since they are all categorized according to tempo and harmony. The video clips, photos, and graphics provide the perfect basis for image production. And for those of you who want to start making songs effortlessly and straight away, "Song Maker" will take care of almost everything for you.

The print manual explains all of the basic functions of the program. In addition, you get a PDF manual which describes each function in detail. If you prefer to discover the many possibilities of the program by yourself, you can also use the PDF manual simply as a reference. An alphabetical index is included at the end. Simply click on an item of interest to jump to that particular section in the manual.

Have fun with MAGIX Music Maker 16 Premium,

The MAGIX team

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# Support

If you experience any problems with your software, please contact our support team:

Support website: <http://support.magix.net/contact/us>

This website takes you to the MAGIX user service page; the following free offers are also featured there:

- **FAQs** (frequently asked questions) and general tricks and tips. In most cases, you'll find the solution to your problem here. If not, use the email support form.
- **Email support form:** Use the special form to inform our support staff about your system. This information is used to solve your problems quickly and competently. Simply fill it out and send it with a mouse click!
- **Support forum:** You are not alone... Perhaps other users had a similar problem and can help you solve yours. Our support staff are also regular contributors.
- **Download section:** Updates, improvements, and patches are likewise offered free of charge via download. Many problems you may experience are already familiar to us, and they can often be solved by downloading the latest patch. Besides patches, there are also wizards for checking and optimizing your system.
- **Links:** The links list contains the contact addresses for all of the most important hardware manufacturers.

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

## You can also reach our support team by telephone:

<b>UK:</b>	0203 3183666 (Monday - Friday, 09:00-16:00 GMT)
<b>USA/Canada</b>	1-775-562-0527 (9 am to 5 pm EST Mon-Fri)
<b>Denmark:</b>	699 18763 (Mon.- Fri. 10:00 - 17:00)
<b>Finland (Suomi):</b>	09 42419023 (Mon.- Fri. 11:00 - 18:00)
<b>Norway:</b>	210 35843 (Mon.- Fri. 10:00 - 17:00)
<b>Sweden:</b>	0852500713 (Mon.- Fri. 10:00 - 17:00)

You can request a free access code to the phone support hotline by clicking on this link: <http://support.magix.net/phone>

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

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

**You can also contact our support team by mail:**

UK/Skandinavia: MAGIX Development Support, P.O. Box 20 09 14,  
01194 Dresden, Germany

US/Canada: MAGIX Customer Service, 1105 Terminal Way #302,  
Reno, NV 89502, USA

**Customer service & upgrades (US only)**

Periodically, MAGIX offers users who purchased their software an upgrade from a previous product to the current version. For details about an upgrade, please call us your request using the following numbers:

Sales Department            1-305-722-5810  
Monday to Friday 9am – 5pm (EST)

# Before you start

## Package contents

### DVD

On this DVD you will find the installation manager for MAGIX Music Maker 16 Premium, as well as the multimedia library with sound and video files in various genres.

The Terms and Conditions for usage of MAGIX sound and video files when releasing your works to the public can be found in the "MAGIX Creation Logo.pdf" file in the installation folder.

### Manual

The printed manual only contains the basic functions of both program versions MAGIX Music Maker 16 Premium and MAGIX Music Maker 16 Premium. Additional features of the Premium version are marked accordingly.

In addition to the printed manual, there is also more detailed documentation which is copied to your hard drive during installation. This electronic PDF manual describes all program functions of the program packet in detail.

## System requirements

### Computer:

- PC with 1 Ghz, or higher;
- Min. 512 MB RAM (1 GB recommended)
- Free hard drive space: 3 GB;
- Graphics card with min.resolution 1024 x 768 at 16-bit-high-color;
- 16-bit sound card;
- DVD-ROM drive;
- Microsoft®-compatible mouse (mouse wheel recommended)
- Operating system: Microsoft® Windows® XP | Vista™

### Optional:

- Burn CDs/DVDs with CD/DVD±R(W) recorder & software
- MP3 export with Windows Media Player 10, or higher

- Access to and publication on [www.magix.com](http://www.magix.com) and in MAGIX Online World only with Internet connection and an up-to-date browser
- Emails can be sent with standard email software Microsoft® Outlook™ or Microsoft® Outlook Express™

## Installation

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

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

**Step 2:** To begin the installation of MAGIX Music Maker 16 Premium, click on "Install". The MAGIX Music Maker 16 Premium installation program will appear.

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

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

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

# Serial number

A serial number is included with each product, and although it is not required for the installation of the software, it does enable access to additional bonus services. Please store this number in a safe place.

## What can a serial number do?

A serial number ensures that your copy of MAGIX Music Maker 16 Premium is clearly assigned to you and only you, and it makes improved and more targeted customer service possible. Abuse of the software can be prevented with a serial number, since it ensures that the optimum price/performance ratio continues to be offered by MAGIX.

## 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, for example, is packed in a DVD box, then you'll find the serial number on the inside.

For versions that have been especially optimized for the Internet (download versions), you'll receive your serial number for activating the software directly after purchasing the product via email.

## When will you need the serial number?

The serial number is required when you start or register MAGIX Music Maker 16 Premium for the first time.

**Note:** We explicitly recommend registering your product, since only then are you entitled to get program updates and contact MAGIX Support. Entering the serial number is also required for activating codecs.

## More about MAGIX

### MAGIX Online World

MAGIX Online World from MAGIX offers you a range of new services for your photos, videos, and music that are accessible directly from the "Online" menu in MAGIX Music Maker 16 Premium:

#### MAGIX Online Album

MAGIX Online Album (see page 309) is your personal multimedia album on the Internet. If you want to present slideshows or videos online, then MAGIX Online Album is the perfect service.

#### MAGIX Blog Service

With MAGIX Blog Service, YOU make the news! Share your thoughts, experiences, and news with a worldwide audience in no time using your own interactive online multimedia journal. Invite family, friends, and acquaintances to join in and enter their comments! A free MAGIX Online Album belongs to the MAGIX Blog Service so that you always have full control over your contributions. You can also read the FAQ (frequently asked questions) on the Internet at:  
<http://rdir.magix.net/?page=GRF14Q24VIRN>

#### MAGIX Website Maker

MAGIX Website Maker helps you create a personal Internet showcase with a professional design in just a few mouse clicks – without prior knowledge, including your own chosen domain and email address. Publish slideshows and videos and accessorize your site with music and various effects – anything from a simple business card to a fireworks display of effects, professional or private – show your best side!

More about this topic can be found under MAGIX Website Maker. (see page 315)

#### MAGIX Online Print Service

MAGIX Online Print Service is perfect for getting your pictures processed online or printed as photo gifts on mugs, t-shirts, or calendars.



## Catooh – the Online Content Library

If your project is missing pictures, videos, DVD menus, sounds, or samples, then you should have a look at the huge selection available at Catooh. There you'll be able to buy media in excellent quality for low prices: DVD menus, MovieShow Maker styles, decorative elements, 3D power effects, 3D transition series, MAGIX Soundpools, songs, ringtones... Perfectly suited to all MAGIX photo, video, and music projects.

## magix.info

**Help and get help** - Directly from within the program, you'll be able to access magix.info, the new MAGIX Multimedia Knowledge Community (see page 312). In the Multimedia Knowledge Community, you'll find answers to all of the most frequently asked questions about MAGIX products and multimedia in general. Couldn't find an answer to your particular question? No problem, just ask the question yourself.

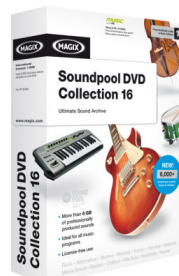


You can go to magix.info in the "Online" menu, or via this button.

## MAGIX Sound Essentials

MAGIX Music Maker 16 Premium includes thousands of sound and video samples, but additional media can also be ordered later. The MAGIX Sound Essentials provides you with professionally produced loops and samples in impressive quality – the ideal enhancement for the most varying of music styles, including:

- Ambient
- Big Beat
- Easy Listening
- Dance / Electro
- Disco / House
- Soundtrack
- Hip Hop
- Rock / Pop
- Techno / Trance
- Special effects



In the upper menu bar under "Tasks -> Discover more", you can

order the MAGIX Sound Essentials directly.

**Tip:** At [www.magix.com](http://www.magix.com) you'll always find the latest Soundpool offers.

# Introduction

## What is MAGIX Music Maker 16 Premium?

MAGIX Music Maker 16 Premium is the new generation of multimedia software. From your private collection of love songs to entirely homemade video clips – everything's possible! For your songs, music videos, video emails, karaoke shows, funny clips, and much more.

Lots of professionally produced sound and video samples come supplied. In the arranger, samples and videos can simply be dragged onto the track, looped, enhanced with effects, and modified for export – done!

There are also various synthesizer plug-ins for creating your own sounds. Audio CDs and MP3s can be integrated, remixed, or used as sound material. Even DirectX or VST plug-ins as well as MIDI files for remote control of the sound card or external synthesizers can be integrated into the arrangement perfectly. All multimedia formats can be combined with one another in any way on any track.

In case your sounds & samples requirements are still not met, the Internet is just a click away. It can be used as a worldwide Media Pool with an unlimited supply of sounds and pictures. MAGIX Music Maker 16 Premium has a direct connection to the Internet for publishing straight to your personal MAGIX Online Album or for directly sending via email. Your own works can also be published directly from within the program to the MAGIX Community. Or you can always be your own radio DJ and publish your beats and grooves as a podcast.

## What's new in MAGIX Music Maker 16 Premium?

### New loops

MAGIX Music Maker 16 Premium is the original for loop-based music production on the PC; no other software can boast as much experience. In the new version, the sound library that comes included has been completely revised with plenty of new audio and MIDI loops.

### **Essential FX**

Thanks to Essential FX, you get the newest effects modules to guarantee the best sound results. Essential FX may be accessed via the mixer's plug-in slots (shortcut: M) or in the object context menu.

### **Vandal SE**

The new guitar and bass amplifier from MAGIX. Sound fidelity never available before even satisfies professional demands. Vandal SE may be used directly in a track by selecting the point "MAGIX plug-ins -> VANDAL\_SE" in the mixer (shortcut: M) under "FX". The Vandal SE interface will open for you to make numerous adjustments, just like you would to the settings on genuine amplifier.

For a more detailed description of the options Vandal SE presents, read the corresponding chapter in the program's help file.

### **Object inspector**

With the help of the practical object inspector, you can work on your arrangement even faster to avoid lost time searching for specific effects. As soon as you have selected an audio object, this will show you the most important editing effects. For MIDI objects, you will see a virtually integrated keyboard for quickly inputting your melodies. The inspector is available via the corresponding button in the Media Pool.

### **Microscope mode**

Activate this mode and click on an object to zoom in for detailed editing. This allows individual drum hits in a loop to be edited in a very detailed way, cut with the separation function, and then processed with individual effects. In the lower right section of the arranger, you will see a button with four arrows pointing outwards on it. Click this button again to reset the view to the original settings.

### **Upload songs to MySpace**

The number of relevant artists without their own MySpace site is becoming smaller and smaller, since this is a great platform for introducing songs. That's why MAGIX Music Maker 16 Premium features a function for uploading arrangement directly to this Internet community. This function is available via "File -> Export -> Upload audio to MySpace/DJ Tunes...".

## Interactive workshop

Learn about MAGIX Music Maker 16 Premium via the interactive tutorial and find out about the important features quickly. This function is presented in the welcome dialog.

### Additional features in the Premium version:

- **Larger sound archive:** Over 3,500 new sounds and MIDI loops from all genres can be accessed via the "Soundpools" button in the Media Pool.
- **Essential FX:** Even more effects modules
- More sounds for **Revolta 2** and **Vita**
- **4-band equalizer:** 4-band EQ directly integrated in every mixer channel

## The features

### 64/96-track arranger

MAGIX Music Maker 16 provides 64 tracks (96 in the Premium version) for multimedia arrangements – enough space to create multiple polyphonic pieces, but most importantly, so that you don't lose track of your project at any point.

### Formats and interfaces

**Import:** WAV, MP3, OGG Vorbis, WMA, QuickTime™, MIDI, CD-A, BMP, JPG, AVI, MXV, WMV

**Export:** WAV, MP3 (optional), OGG Vorbis, WMA, AIFF, AVI, MAGIX Video, QuickTime™, WMV, Real™ Media Helix, BMP, JPG (all via "File -> Export arrangement"), MIDI

**Interfaces:** DirectX, VSTi, and ReWire (host) support (Premium version only, one instrument per track), ASIO.

### Multimedia Library

The multimedia library provides audio and video building blocks ("samples") for combining on the arranger tracks. Loads of melodies, effect templates, and graphical animations also come supplied for you to use in new songs & video clips.

## Software synthesizer

MAGIX Music Maker 16 Premium provides the following synthesizers:

- The "Beat Box" is a drum machine with the latest drum sounds – playable live with the PC keyboard or a MIDI keyboard.
- The "Drum & Bass machine" creates phat beats and booming basslines.
- "Robota" is a complete drum computer with four independent instruments which can be played live. Several faders enable all kinds of sound experimentation.
- MAGIX Vita. Enhance your arrangement with amazingly realistic natural instruments from the sample specialists Yellow Tools.
- "LiViD", our "little virtual drummer" for realistic acoustic drum tracks. Just a few instructions are enough for "LiViD" to play a complete drum track with introduction, chorus, bridge, fill-ins, etc.
- "Atmos" for nature sounds or atmospheres like rain, thunder, or wind.

## BeatBox 2

BeatBox 2, the new groove synthesizer, lets you make great beats with ease. It can be accessed in the Media Pool via the "Synthesizers" button. Easy mode must be switched off to access it.

## Media database

Find your recordings, sounds, pictures, and videos quicker and faster with the MAGIX media database. An existing MAGIX database from the MAGIX Photo Manager or MAGIX Media Manager is integrated in the Media Pool and can be updated directly from MAGIX Music Maker 16 Premium. Use the simple search function to find suitable pictures or MP3 files for your arrangement.

## Audio effects

MAGIX Music Maker 16 Premium provides lots of different audio effects. A few examples:

- You can correct tempo and pitch in real time using "Resampling", "Timestretching" or "Pitchshifting".
- The "Audio Effect Rack" supplies "Reverb", "Echo", "Equalizer", "Compressor", "Time Processor", "Distortion", "Filter", and many classic effects with which almost every sound can be made. MAGIX Music Maker 16 Premium provides these sounds in amazingly high quality. The reverb effect, for example, provides lots of realistic reverb algorithms to add depth and spaciousness to your material.

Design your "Favorite reverb" using the many presets as a base with their various reverb rooms which were designed for specific instruments and applications.

- The "Gater" enables rhythmic splitting of surface sounds
- The "Vintage Effects Suite" covers "good old" guitar effects that were activated using a foot pedal in Jimi Hendrix's era: more warmth and fullness with "Chorus", jet-like special effects with the "Flanger" or ping-pong effects like "Delay". The filter enables beat-matched frequency filtering, the "BitMachine" is a distorting Lo-Fi effect for friends of those who like it a bit rougher.

### **High-end 32-bit floating point**

All sound changes are executed using 32-bit floating point calculation for especially differentiated and high-quality sounds. This technology is also used in professional studios. This way, an audio picture with especially high dynamics can be created. Digital overmodulation and clipping become virtually impossible.

### **Audio CD support**

Audio CDs can be imported directly into MAGIX Music Maker 16 Premium. Just insert them into the drive and press "CD/DVD". All tracks can then be dragged into the arranger and edited with different features or effects. Whether for remixes or as sound material for your own compositions – a new touch will be added to your personal CD collection.

### **Own recordings**

Use this recording function from MAGIX Music Maker 16 Premium to record vocals, noises, or instruments and integrate them into the arrangement.

### **MIDI integration**

MAGIX Music Maker 16 Premium helps you arrange, load, record, edit, and play MIDI data just as easily as audio data. You can combine wave sound files with MIDI files for controlling the sound chip on your sound card or VST instrument plug-ins or external synthesizers, and then arrange everything together.

For MIDI recordings and editing you can use the extensive MIDI editor with piano roll, drum editor, velocity/controller editor, and event list.

MIDI object recording can be started directly from the arranger by setting the recording mode in the track box to MIDI.

### **Mixer**

MAGIX Music Maker 16 Premium includes a professional real-time mixer with effects rack and two insert effects for each channel, two additional effect tracks, two insert effects for the master as well as additional mastering effects. The mixer's size can be adjusted so that more than eight tracks fit on the screen at a time. You can also group a number of faders of a specific type (for example, volume or panorama) and use them all together.

### **Harmony Agent**

The Harmony Agent provides harmony recognition automatically and determines the key and chord of any music title. See the guitar tablature of your favorite song in real time for the arrangement!

### **Song Maker**

The Song Maker lets you create new arrangements quickly and easily and complement existing arrangements by automating the complicated steps such as sample selection and combination. The Song Maker takes over arranging whole sections such as intro and refrain. Therefore, you do not have to do everything yourself – you can omit the arranging and process your selection from the suggestions.

### **Easy mode**

The new Easy mode makes creating radio-ready hits possible even for beginners – no time is required for breaking in, and no previous knowledge is necessary! Extended functions for advanced users which are confusing to beginners are hidden. Easy mode can be switched on and off via the buttons to the top left.

### **InfoBox**

Thanks to the new info box, all important functions can be easily understood as they are applied. Just hold the mouse over a button that you would like to learn about and read the info text in the preview monitor.

### **Live Sessions**

While the virtual instruments and sounds are played on the available tracks, a new track can be recorded simultaneously in realtime. What's more, you can also add realtime effects.



## SoundVision

SoundVision is a new way of visualizing music which shows audio material at a glance in the form of a musical galaxy. Similar sounds are clustered close together; different sounds are organized further apart. SoundVision be activated in the Media Pool via the corresponding button. Easy mode must be switched off to access it.

## Additional features of the Premium version

### Additional audio effects

- "Elastic Audio" for total control over vocals. Voice samples or melodies you sing yourself can be "tuned" to match automatically. With the "Harmonizer" in the Elastic Audio Editor, you can add a suitable second vocal or a whole choir to a specified melody.
- The "Vocoder" produces vocal and robot sounds that have been altered mechanically.
- The "MAGIX Mastering Suite" with important mastering effects (see below).

### Additional styles

The Premium version includes additional styles in genres like MovieScore, Minimal Electro, Hardstyle, Ambient and 60s Soul.

### Additional Vital Instruments

Grand Piano, Soundtrack Percussions 2, Electric Guitar

### Additional tracks

The Premium edition has 96 tracks (instead of 64) – even more space for your most complex arrangements.

### Object and track curve automation

Effect and volume progressions can be controlled using freely drawable curves – for individual objects as well as for complete tracks. In addition, you can fade in or out an echo at a specific position in the song by drawing in a curve peak at the corresponding position.

### Video recording

In addition to audio recording, MAGIX Music Maker 16 Premium provides a recording function for video from analog video sources for

your own video clips.

### **DirectX and VST plug-ins**

MAGIX Music Maker 16 Premium enables the direct use of DirectX and VST plug-ins, a large variety of which is available in retail stores or directly online. Such plug-ins (audio effects or synthesizers from third party manufacturers) can significantly increase the functionality of MAGIX Music Maker 16 Premium.

### **MAGIX Mastering Suite 2.0**

Impressive studio sound just like you hear on store-bought CDs! MAGIX Mastering Suite is a special effects rack for use with the mixer master channel. The included effects help you with so-called "mastering"; put the final touch on your completed and mixed music piece using parametric equalizers, MultiMax, limiter, and stereo enhancers.

### **5.1 Surround-Sound**

MAGIX Music Maker 16 Premium provides real 5.1 Surround Sound. 5.1 Surround is the preferred home cinema sound format which is also supported when importing, editing, and exporting your work. The 5.1 Surround Editor enables you to move your music around the room. The finished 5.1 arrangement can even be exported in the new MP3 surround format (developed by the Fraunhofer Institute, the inventors of MP3).

### **MAGIX Music Editor**

Extensive real-time audio processing, also featuring CD burning, sound restoration, sampling, and audio editing.

### **Revolta 2**

Revolta 2 is a powerful-sounding, varied 12-voice analog synthesizer with highly advanced functions, sound matrix, noise generator, and a complete effects section featuring nine effect types.

This synthesizer can create any electronic music you can imagine. The sound presets were created by sound designers for Access Virus and Rob Papens Albino, which makes Revolta 2 the number 1 choice for beginners and professionals alike.

### **Also in the Premium version**

- **BeatBox 2 plus:** The ultimate groove tool with even more drum kits, automations, and an integrated powerful effects section can be

accessed via the "Synthesizers" button in the Media Pool.

- **Am-Track SE:** This analog vintage compressor produces an especially warm, pumping sound. Launch it via the effects menu for selected audio objects.
- **Timecode sync:** This feature makes it possible to write songs with a friend – simply connect two PCs via MIDI and jam together!
- **MIDI step recording:** Provided for composers unsure of their keyboard playing skills who want to play perfect melodies. The MIDI editor can be opened by double clicking on a MIDI object.
- **ReWire:** This function allows you to embed MAGIX Music Maker 16 Premium in other music programs.

# Overview of the program interface



- 1** **Menu bar**

This list provides the most important editing commands.
- 2** **Toolbar**

This contains the buttons for quick editing and the different mouse modes.
- 3** **Easy mode**

This turns the clearly laid-out beginner mode on or off.
- 4** **Track boxes**

Complete tracks can be turned on or off (muted) or played separately (solo). Use the FX buttons to apply track effects.
- 5** **Arranger**

You can freely position any multimedia material on all of the arranger's tracks.
- 6** **Zoom functions**

Enlarges or reduces the view. The horizontal scrollbar can be stretched and compressed for zooming.
- 7** **Media Pool**

All files listed here can be added to the arranger via drag & drop.

**8 Monitor**

Previews for graphics or video files can be selected in the Media Pool are displayed here. All visual material for the arrangement is also shown here on playback. Alternatively, a peak meter, the arrangement overview, or the InfoBox can be shown.

## Quick start

This chapter explains the basic functions of MAGIX Music Maker 16 Premium with a step-by-step introduction. A systematic description of the program functions can be found in the PDF manual.

**Tip:** Open the tutorial video and the "Quick start" tutorial by clicking on the "Help" menu. A good introduction to the program is also available via the interactive tutorial that may be opened via the welcome dialog.

## Play demo project

The large area with the horizontal tracks is the arranger. Here you can make all changes to the positions and multimedia objects.

You can find the Media Pool in the lower section of the program interface. Here you can load multimedia files with various formats into the arrangement by pressing the left mouse button and keeping it held or by double clicking on the object. The Media Pool works similarly to Windows® Explorer with some additional features, and professionally produced sounds can be downloaded from the Catooh and incorporated into your project

In the Media Pool, you will find some demo songs in the "My projects" folder. Double click on a demo and find the individual tracks of the song in the arranger: In MAGIX Music Maker 16 Premium you can create a complete song simply by compiling objects. Click on the vertical scroll bar on the right-hand side of the screen and drag them down (hold down the left mouse button) in order to be able to see each track.

To play the demo, click the "Play" button or press the space bar on your keyboard. A vertical red line (the playback marker) runs across the screen and music will play from the speakers.

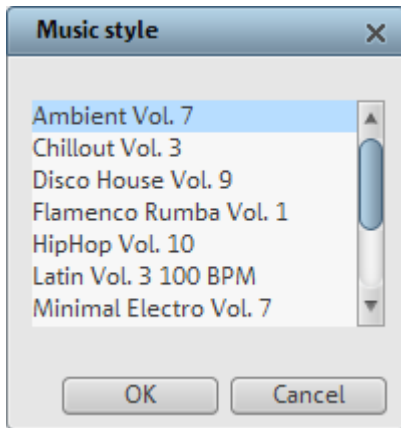
**Note:** If you do not hear anything, check that the correct sound card is active for playback in the "Setup" window ("Y" key). Of course, the output of the sound card has to be connected to the speakers.

## Song Maker

To quickly create a first arrangement, you should let the Song Maker run by itself and sit back and listen. Make sure a new, empty arrangement is loaded by going to the "File" menu and selecting "New arrangement".



Open Wizard...



Select music style...

- Activate the Song Maker with the button in the upper section of the toolbar.
- Select a music style.
- Deactivate the instruments you do **not** wish to use in the selection box.
- Enter the desired length of the song or portion of a song in seconds (ten seconds should be enough to start with).
- Click on "Create new arrangement". Song Maker automatically compiles an arrangement. This is only a suggestion.
- The suggested melody will start playing automatically. The play and stop buttons beside the "Song Maker's



Specify instruments and song length.

Your first musical arrangement is complete! Song Maker can also be used to add more individual samples or whole song parts or to lay down a bass or drum sound. This can then be expanded into a more complex arrangement or refined using your own video and audio files.

## Preview and load audio files

In this step you can load sound files into the Arranger for positioning and editing.

Create another new, empty arrangement. To do so click on "File" and select the "New arrangement" option.

Now click on "Soundpools" in the Media Pool. Various "Styles" are shown on the left hand side of the Media Pool. Click on one of the styles to open a sub-folder. Here you can select and preview sounds. Some instruments are categorized according to pitch. Click on any entry here to have the sound play automatically. Each file in the Media Pool can be previewed this way. Use the arrow keys of your keyboard to select the various pitches. Other instruments, like drums, are not categorized according to pitch.

To load a file into the Arranger, simply press "Enter". You can also drag the file from a table onto a track in the Arranger. Once you let go of the mouse button, the file will appear as an audio object at that position.



## Position audio objects

Each object can be moved in any way in the arranger with the mouse, horizontally on a track as well as vertically between tracks.

Add new instruments to your first song in the arranger. For example, take a drum sample and drag it underneath the object in a lower track which was added beforehand.

This way, any number of files can be dragged from any folder into the arranger and placed on top of one another, on multiple tracks, or behind one another.

Play the arrangement in the meantime. Take note of the two markers at the top of the bar ruler – they represent the start and end points of the range to be played. If you wish to change the playback range, the start and end markers can be dragged (while holding down the mouse button) to any position on the bar ruler.

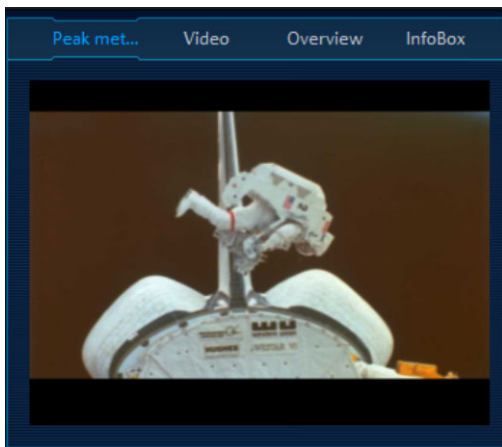


**Tip:** You can also move the playback marker independently of the left start marker by clicking on the lower section of the bar ruler.

You do not need to interrupt playback to load new samples into the arranger. MAGIX Music Maker 16 Premium has a "Smart Preview" function: You can simultaneously preview new samples in the Media Pool – they always run synchronous to the song in the arranger. This function considerably simplifies the search for suitable samples for a song you wish to create.

## Add videos and synthesizers

The next step shows you how to add a video. Access the video folder in the Media Pool and select a video file. On the video monitor to the right, a preview of the selected video file can be shown.



Once you have found a matching video, use the mouse button to drag it onto any track (like previously with the audio files).

To open the folder with the software synthesizers from MAGIX Music Maker 16 Premium, you have to switch to the "File Manager" from the Media Pool and then to the "Synthesizers" folder.



Each synthesizer can be dragged, like any other file, with the left mouse button into the arranger tracks. The control console opens to program the synthesizer. Object synthesizers become independent objects after they are programmed, and then they can be moved around just like other objects on the arranger. Track synthesizers, on

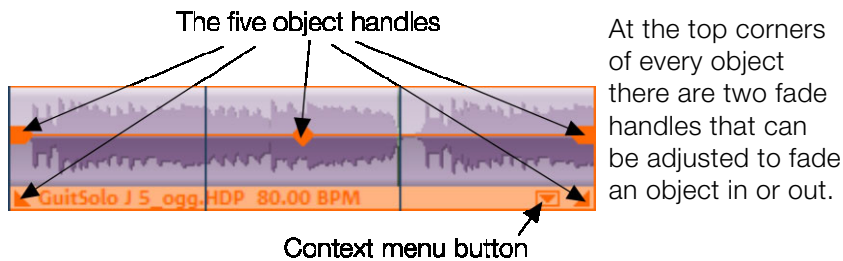
the other hand, remain attached to the track where they have been added.

Experiment with the various synthesizers in MAGIX Music Maker 16 Premium and take advantage of each of their individual strengths.

## Editing objects

To get an impression of the object-based work method of MAGIX Music Maker 16 Premium, you should become more familiar with the "Objects" on the tracks of the arranger.

All objects can be shortened or looped by moving the mouse to one of the lower corners of the object until it turns into a stretch symbol. You can now stretch or compress the object length as much as you like. This way you can create rhythm tracks from short drum samples simply by stretching them.



The handle at the top center can be used to adjust the volume of audio objects and the brightness of video objects.

All objects can be split into multiple objects. To do so, select "Split objects" from the "Edit" menu. The selected object will be split at the position of the playback marker. It goes even faster with the special cutting mouse mode.

Right clicking on an object opens the context menu with the options available for that specific object in "Timeline" mode. The context menu can also be opened by clicking on the button with the small triangle in the lower section of an object.

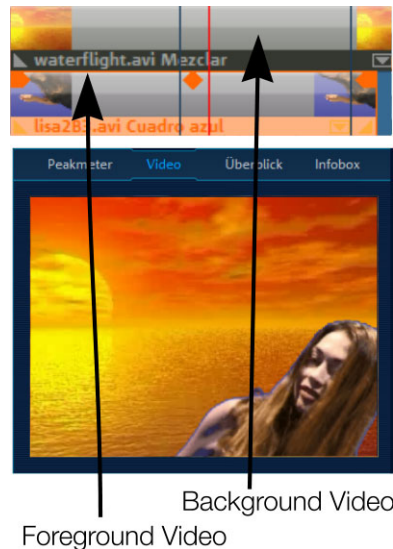
## Effects

You should take time to experiment around with the effects. In the context menu you can select the effects for the objects. Effects modules are opened with which each effect can be set up to meet your exact requirements.

Effects can also be dragged onto objects by holding the left mouse button or double clicking. Simply open the "Templates" folder in the Media Pool and try each of the effects listed one after the other with a mouse click. Like with all other entries in the Media Pool, effects in this folder always have a preview as well. If you like an effect and wish to apply it to an object in the arranger, simply click on it, drag it onto the object, and release the mouse button.

This works in the same way for video effects as well. Here, a video file must be loaded from the Media Pool first. Lots of video effects are mix effects which mix two videos together.

Fundamentally, the following applies: The video on the lower track makes up the background, a video on the track above it, makes up the foreground.



## Export arrangement

The purpose of arranging and editing is usually to have a good quality audio or video file at the end. MAGIX Music Maker 16 Premium supplies various export formats for this purpose.

To export your arrangement, click on "File" and select the "Export arrangement" option. You can then select an export format. The arrangement will then be exported in the chosen format.

**Note:** The export calculations are independent of the playback performance. Even if playback no longer runs so fluidly as a result of too much processing power being required, the export file is still generated correctly. We recommend placing already finished passages of complex arrangements via the export or mixdown function in to a single file to free up some processing power (and tracks). This kind of file can be reloaded into the arrangement and edited further with the other parts.

## Create audio CD

To burn an audio CD, first export your arrangement as a WAV file:

Click "File" and select the "Export arrangement -> Audio as wave..." option. The WAV file created can be burned as an audio CD with the included burn program MAGIX Speed burnR.

**Tip:** You can use an integrated CD mastering tool in the Premium version and a burn program to do this. Click on "File" and select the option "Export arrangement -> Burn audio CD-R(W)" option to export your arrangement. The arrangement will be loaded into the CD mastering program MAGIX Music Editor and can be burned straight to disc from there.

# Arranger

## Normal mode/Easy mode

MAGIX Music Maker 16 Premium can be operated in two different views, and these can be activated by clicking on the button in the top right. If the MAGIX Music Maker 16 Premium interface confuses you at first, then switch the program to "Easy" mode!

 Easy mode active

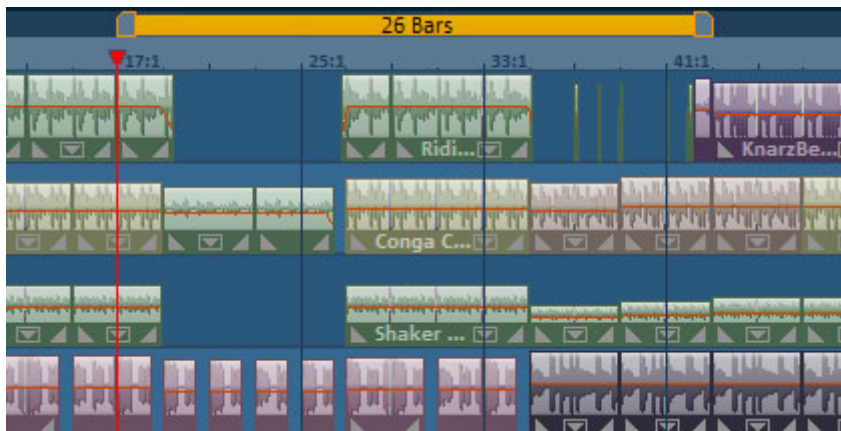
 Normal mode active

In the beginner mode, the program presents a clearly laid-out version which only displays the most important buttons and switches. Functional elements for advanced users are hidden.

This documentation describes MAGIX Music Maker 16 Premium in normal mode. If you can't find one of the functions while reading, make sure that you don't have "Easy" mode turned on.

## Tracks

The arranger offers tracks for positioning and editing multimedia material. Additional tracks can be added by selecting the "Add track" option in "Edit" menu. In total, 96 tracks can be used for an arrangement.

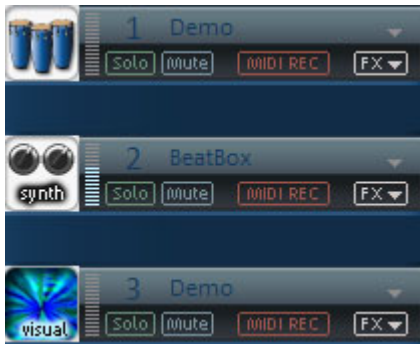


Fundamentally, all object types can be placed on all tracks. You can also combine videos with MIDI and audio objects one track.

If the tracks in the arranger are not long enough, you can increase the length by pressing the minus button (-) to the right. The size of the arrangement adapts itself automatically when objects exceed the space for them on the right-hand side or when new objects are loaded.

Mute a single audio track by clicking on the "Mute" button or play individual tracks separately ("Solo") to emphasize a particular scene.

## Trackboxes and Instrument icons



Each track box contains an instrument icon box. If you drag a MAGIX Soundpool sample onto an empty track, a suitable icon is automatically displayed. You can also exchange the icon by clicking on it and select another one.

At the start of each track there is a track box where you can switch each track to "mute" or "solo". In the lower half of the arranger below the track boxes are two buttons, "Reset" and "Solo/Mute", which you can use to reset all track solo/mute settings.

The **peak meter** can be seen beside the icons. This allows you to control the volume of the track and to see if the track produces any audio sound at all.

Beside the track number to the top, you'll find the **track name field**. You can rename the track by double clicking this field.



The small arrow beside the name of the track opens a menu with which you can load a software instrument (VSTi plug-in) into the track. This will then be used by all MIDI objects of the track. Here you also have access to the individual sounds of the VST instruments VITA and REVOLTA which come supplied.



With REC you can activate the track for an audio or MIDI recording.



A simple click puts the track into "Audio recording" mode. Furthermore, monitoring is now activated, i.e you can hear the input signal of your sound card on playback (learn more in the "Mixer" chapter, "Recording/Live Monitoring" (see page 243))

If you start recording now ("R"), the audio recording dialog will open. The recorded audio material is added to this track. If there is already an object on the same position of the track, the next empty track will be used.



Clicking this button again puts the track into "MIDI recording" mode. If a software instrument is loaded, you can play it with a hooked-up MIDI keyboard (monitoring). If you start recording now, a new MIDI object will be created in the track and the MIDI editor will open. From there you will be able to start the MIDI recording (see page 98).



Here you can open the "Track effects" menu where you will find presets for track effects (see page 167) sorted according to the instrument type.

With the "Move track up/down" commands you can sort your tracks.

## Zooming

The vertical zoom function sets the number of visible tracks in the window. For a lot of tracks, enlarging the view (zooming) is sensible for editing a single track or object.

Use the horizontal zoom function to set up the visible section of the arrangement on the timeline.

### Move/Zoom with the scroll bar

If you move the mouse to the edge of the scroll bar, the cursor will turn into a double-arrow symbol which can be used to select and compress/stretch the scroll bar. This way, you can zoom in and out quickly. Dragging the middle of the scroll bar moves the visible section.


You can tell which part of the entire arrangement is being played by the size and position of the scroll bar. If the whole arrangement is displayed, then the scroll bar will fill out the bar. Complete view may





be set by double clicking the scroll bar.

A track may not be diminished without any limit, and the number of maximum displayable tracks is also limited, meaning not all tracks may be able to be viewed at once.

### Zoom buttons

 **Zoom menu:** Certain zoom levels may be selected on the horizontal scroll bar or by clicking the zoom menu. You can also jump to certain positions in the arrangement here.

 **Enlarge objects:** Vertical and horizontal zoom stages are enlarged such that all of the selected objects are able to be displayed at maximum size. If the function is switched off, the zoom stage will be restored.

 **Optimize view** (see page 305)

 **Zoom buttons:** These buttons zoom in and out

### Move/Zoom with the mouse wheel

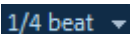
The visible section can be moved, reduced, and increased in size by using the scroll bars. These functions can also be executed without having to click anywhere by using the mouse to move the scroll bars or zoom buttons or by using the mouse wheel.

## Grid

Timestretching in the arrangement is displayed by the vertical progress of the tracks. To structure this progression, a timeline displaying time units has been positioned at the top of the first track.

Two consecutive objects will seamlessly snap together even if they are on different tracks. This avoids undesired gaps or overlaps.

The bar grid makes sure that the objects and the start, end & play markers only snap into place at specific positions so that they can be positioned precisely according to the beat.

 The grid width can be set using the button to the top left.

If, for example, "1/2 beat" has been set, then the objects and markers snap into position at all half beat positions when moved. This way there won't be any gaps between the objects and precisely

beat-matched cuts are possible. The selection ranges from full beats to 1/16 grid sizes. Triplet values are also possible.

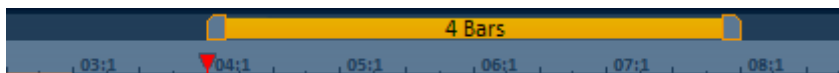
The "Frame" setting allows fine positioning using the time code. The time display in the timeline and transport control automatically changes from bars:beats:ticks to hours:minutes:seconds:frames.

"Objects" deactivates the beat grid and the grid will now only affect the object edges. You can also deactivate the grid entirely by selecting "No grid" or by pressing "F4".

"Select beat type" switches the timeline to irregular bars like  $\frac{3}{4}$  beat.

## Playback area: Start and end markers

In the upper area of the timeline, there are two markers between which playback area is displayed, and this area can be played back as a loop (endless).



The length of the playback area is shown in blue. The number before the point indicates the number of bars, the number following it indicates the number of fragments corresponding to the selected grid, e.g. 3.3 on a 1/16 grid = 3 bars and 3/16. A tilde (~) in the display means that the playback area doesn't have the exact raster length and the loop is therefore "non-circular". Double clicking on the playback area sets it to cover the whole arrangement; double clicking again sets it between the start of the arrangement and the last object.

This area also determines which positions are copied or inserted into the clipboard's memory by the the edit menu commands "Edit range" or the keyboard shortcuts "Ctrl + Alt + C" for "copy", "Ctrl + Alt + V" for "paste" or "Ctrl + Alt + X" for "cut".

The right end marker is always moved together with the start marker so that the length of the looped playback area remains constant as the start marker is moved. So always move the start marker first and then the end marker.

The start and end markers can be moved in different ways with the mouse. You can move them to any position via drag & drop or

directly with a mouse click: a left mouse click in the timeline moves the start marker; right clicking moves the end marker.

It's even easier with the keyboard: The cursor keys move the playback area forward or backward by a whole playback area's length. Press "Ctrl" as well to move the playback area by a quarter of its length. "Shift" + cursor keys halves or doubles the playback area's length.

**"Ctrl + Shift" + cursor keys** enables you to lengthen or shorten the playback area by a bar. Use this function as well to quickly move the playback area onto a smooth bar length.

When you move the playback area while a playback is running, the old area is always played to the end and smoothly changed into the new one after. In this way you can remix your tracks in real-time with the keyboard!

Note: If the starting marker does not move to the right with a left click or via the keyboard, it is because the end marker would then have to be shifted beyond the end of the arrangement. In this case, move the start marker via drag & drop or position the end marker!

## Moving the playback marker

The playback marker can be moved independent of the start marker. To do this, click on the lower part of the timeline. If you hold "Ctrl", the playback marker and start marker are moved simultaneously.

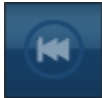
Once the playback marker reaches the end marker, playback is continued at the position of the start marker. If the playback marker was positioned outside of the playback range, the arrangement is played to the end. The selected play area is then played as a loop.

## Transport Bar (playback functions)

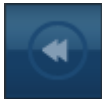
With the playback functions of the transport bar you can control the playback behavior of the arrangement using the mouse.



Tip: You can start and stop playback much more easily by pressing the space bar on your computer's keyboard. You will also find an overview of all keyboard shortcuts at the end of this manual.



**Back to start:** This button quickly moves the start marker to the beginning of the arrangement. By clicking on "Back to start" the start marker and play range are both displayed at the beginning of the arrangement.



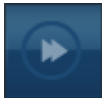
**Rewind:** This function can be used to rewind to the start of the arrangement. This means that the play marker in the timeline is reset.



**Stop:** Stops playback. The playback marker is reset to its initial position.



**Play/pause:** This button starts continuous playback of the arrangement: If the playback marker reaches the end marker, the range between the start and end marker will be played back as a loop. Another click on "Play" stops at the current position of the playback marker (pause).



**Fast-forward:** Use this to move along the arrangement at a faster speed. This means that the start marker in the timeline is moved forward.

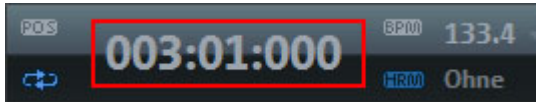


**Record:** You can create a recording with this button. Depending on whether a track in the Trackbox has been activated for MIDI or audio recording, the MIDI editor with a new MIDI object or the audio recording dialog (see page 73) will open.



Looped playback can be deactivated. The playback stops when the end marker is reached.

## Time display



The time display is beside the transport controller.

The current playback position is displayed here. The unit can be switched between beats, hours:minutes:seconds, or frames by right clicking on the time format. Switching to remaining time display (distance to project end) is possible.

## Display harmonies



If this symbol is activated, harmony symbols will be displayed during playback. Harmonies can be detected with the Harmony Agent (see page 89).

## Volume regulation



The volume control is to the left of the transport controller. Use it to quickly control the overall volume of your arrangement. To regulate the volume of individual tracks, use the mixer (see page 240).

## Tempo



The song's tempo is displayed here in BPM (Beats Per Minute). The arrangement tempo is set automatically by the first sample used in the arrangement. One click on the small arrow shows the tempo fader. You can use this to smoothly change the master tempo during playback. The objects in the arrangement are adapted using timestretching.

By clicking "Tap", you can open the **tap tempo dialog** to "tap" in the tempo. Simply click the "Tap" button at the desired tempo or press the "T" key; the tempo is measured and displayed in the dialog. Pressing "OK" accepts the tempo.

### Track position slider



The position slider quickly moves the play cursor within the visible range.

## Arranger, Video Monitor, and Media Pool

If the video screen is re-opened and the Media Pool is closed, the video screen can be freely repositioned.

The "View" menu allows a standard setting to be switched on. If the option "Standard layout" is deactivated, the entire screen can be filled by the arranger in order to simplify positioning and editing objects.

In case of very large arrangements, the video monitor can be used as an overview display ("Menu -> Video monitor -> Arrangement overview (see page 306)").

## Arranger buttons

The arranger buttons for quickly opening and closing all the most important windows can be found underneath the last track in the arranger.

### Mixer



This button opens the real-time mixer.

You can modify the tracks relating to volume and the position in the stereo panorama here, and this is also where both master effects and plug-ins can be integrated.

### Video



Opens/Closes the video monitor in "Peak meter" mode.

### Live Mode



This option opens the Live Performer (see page 155).

Please refer to the "Arranging objects" chapter, section "Live Performer" (see page 155)!

## Media Pool

MAGIX Music Maker 16 Premium's Media Pool lets you access, preview, and load all supported media types, online and offline, e.g. with included sound and video loops, audio CDs, MP3 songs, synthesizers, or effects.

All media types are loaded from a local drive or directly from the Internet into the arranger; just drag & drop them.

The upper edge of the Media Pool contains five buttons which operate the Media Pool in different ways:

The setting **Soundpools** offers a database view of all Soundpools. The **File manager** is very similar to Windows Explorer. It controls and loads media files of all types on the hard drive. The **Synthesizer** setting displays a list of available synthesizers. Under **Templates**, you will find effects presets for all kinds of audio, video, and titling effects. **Catooh** connects directly to Catooh (see page 309).

### Preview function

There is a preview function for all files: By simply clicking an audio object, the pre-listening function starts via the sound card. Video, graphics and text objects are shown on the video screen.

As the arrangement plays on, you can experiment with sounds from the Media Pool (see Smart Preview (see page 70)).

Note: Even while previewing, audio files are adapted to the current tempo using timestretching (you can deactivate this in the "Audio/Video options" menu).

### Positioning the Media Pool

The Media Pool appears after the program is launched for the first time in the left lower third of the screen. It can, however, be positioned freely as a window anywhere on the screen or even switched off. The view menu offers different options. e.g. arranger full view displays as many tracks simultaneously as possible.



## File manager settings

MAGIX Music Maker 16 Premium's file manager works very similarly to Windows Explorer. It can be used to access and load media files of all kinds, e.g. videos, bitmaps, MP3 audio files, audio CD tracks, RTF text files for titles.

The Media Pool consists of a file list to the right (the actual "Media Pool"), in which all loadable media types (and, if required, further subfolders) are listed, and the navigation area on the left-hand side.

In the file list, all supported multimedia files and subdirectories of the currently chosen directory are displayed. All entries can be loaded into the arranger tracks by double clicking or via drag & drop.

In the navigation area, you can find different buttons for directly accessing preset subfolders.

You can right click in the file list to define further buttons ("links"). Switch to the folder which you would like to create a link to and select the option "Link to folder" from the context menu.

### Navigation buttons

**Forwards/Back**



These buttons always return you to the folder where you were previously.

**Up**



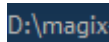
This button brings you to the next highest folder level.

**Drive menu**



You can access all available drives via the drive menu button.

**Browse history list and path details**



The current folder's path is displayed in the top center. Use the arrow button to open the menu to find the folders you previously visited.

**View**

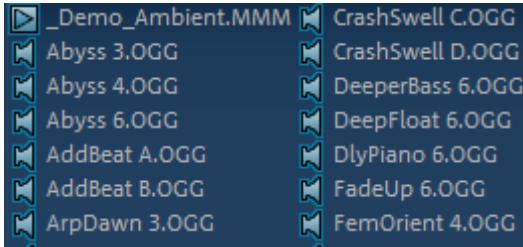


These buttons switch the file view list between icons, lists, or details.

### Various file list view modes

The **file list** displays all supported multimedia files and subfolders of the currently selected folder. Three different views (list, detail, large

symbols) can be set by right clicking on the options or Media Pool's context menu.



**List:** Only file names are listed. This view mode displays the most files simultaneously.

Name	Type
▶ _Demo_Ambient	.MMM
▶ Abyss 3	.OGG
▶ Abyss 4	.OGG
▶ Abyss 6	.OGG
▶ AddBeat A	.OGG
▶ AddBeat B	.OGG
▶ ArpDawn 3	.OGG
▶ ArpDawn 4	.OGG

**Details:** The details section displays the type, size, and date of modification for every media file beside the name. The list can be sorted by clicking on any of these details.



**Large symbols:** These can be quite useful, since they show a preview frame for each movie and picture file. This allows you to sort through the material quicker. The disadvantage is that it takes longer for the file list to be displayed.

### Deleting, copying, and moving files

All files listed in the media window can be selected, deleted, or moved into other folders via drag & drop, just like via Windows Explorer. This way, all objects desired for placement in an arrangement can be collected in a separate folder beforehand.

Additional functions can be accessed via the context menu, i.e. by right clicking an entry.

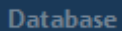
## CD/DVD

Clicking this button once reads the CD that is currently in the CD-ROM drive. In the case of data CDs, all directory and file formats supported by MAGIX Music Maker 16 Premium are displayed in the file manager. In the case of audio CDs, all tracks appear in the file list.

## Own Projects

This button opens the "My Audio/Video" directory, which is automatically created on program installation. By default, arrangements are exported to and saved in this directory unless changed by the user.

## Database

A small rectangular button with the word "Database" written in white text on a dark blue background.

This button displays the media files on your computer in a well-structured database view.

This means the files are no longer displayed according to where they are stored in the different folders but are grouped according to general characteristics. The top "folder level" is the difference in audio, video or image files; subfolders would be, for instance, the date for photos or the artist for MP3 files.

In order to present media data on your PC in a database view, you first have to add them to the MAGIX database. To do this, click on the database button to the right and select the option **Start media manager for photos and music**.

This opens the corresponding MAGIX program and the database scan function of the program.

MAGIX Music Maker 16 Premium comes with the free photo and music management programs MAGIX Photo Manager and MAGIX Music Manager. If you have the corresponding free versions, MAGIX MP3 Maker or MAGIX Digital Photo Maker, they will be used instead.

By right clicking on "Database" and clicking on "Database search", you can open a special search dialog in which you can carry out a targeted search for media.

## Search the database

**Quick search:** Simply enter a keyword and highlight the data type (photo, audio, video). All available Database columns are searched for the keyword.

**Expert search:** Here you can restrict your search by stating search criteria in the following way:

	<b>Database column</b>	<b>Condition</b>	<b>Comparison item</b>
e.g.	dimensions	greater than	800

You can search up to three database columns that are connected via "and" or "or" simultaneously.

"**AND**" means only those files will be listed that match all criteria.

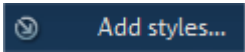
"**OR**" means only those files will be listed that match at least one of the criteria.

## Soundpool settings

This setting can be used to access Soundpool media. Access to the supplied Soundpools is via a new, more clearly laid out database overview that enables the display of loops, multiple styles and instrument categories, e.g. all bass loops of every installed style or every loop of a style.

During installation, if you no longer have the Soundpools on your hard disk, then insert the MAGIX Music Maker 16 Premium installation DVD into the drive. The contents of the Soundpool media will now be imported into the database. Other Soundpool media is automatically recognized and added to the media database.

Note: Under "Program settings -> General (see page 281)", you will find several options for maintaining and displaying the Soundpool database.

 **Add styles...** Soundpools already present on the hard disk can be imported via "Add styles" into the database.

A Soundpool consists of one or more **styles**. Styles are sound libraries that belong together and cover a certain musical style. The sounds (sample or MIDI loops) of one style all have a certain tempo. You can mix loops from different styles, and the tempos will be adjusted accordingly. Within a style, loops are ordered according to instruments, and one instrument folder contains different sounds.

Each sound can have a different pitch (except for drums and sound effects).



The Soundpool display consists of several columns: First, all styles available in the database are shown. The second column lists loaded instruments. The third column, "Name", contains the list of the sounds found. These are displayed according to the length of the beats (1,2, or 4 beats).


 Sample loop

 MIDI loop

The different pitches are also displayed (if available). An entry field for full text search is located under the match list.

The list of samples found is created after entry selection in the first two columns. "Ctrl" + mouse click reduces or expands a selection. No selection ("Ctrl" + click on a single selected element) shows all entries from this category.

If you select an instrument (e.g. "Drums" and "Percussion") and no style, all drums and percussion samples in the whole database will be displayed.

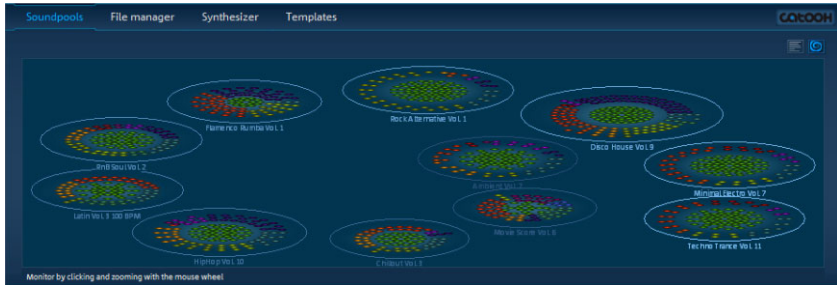
 acid

In the search field, you can search the list of the samples found according to a certain sound file name.



**Sound Vision view:** This button displays all Soundpools as galaxies.

## SoundVision



This alternative display of the Soundpool library shows all available sounds graphically. No matter how large the Soundpool collection is, you can view the entire library using this 2-dimensional display. This "galaxy" can now be accessed via the mouse to collect all of the sounds you want.

The large clusters of "stars" are the styles, and these are arranged from inside to outside with increasing tempo. Eventually they form a center - the styles furthest out have the highest tempo.

Within a style are the individual instruments (e.g. keys, pads, sequence) formed in a circle, and the drums are in the middle. Every instrument group has a certain color assigned to it which is the same in every style. The individual sounds are points encircled by the individual pitches, if available.

You navigate throughout the Sound Vision view by moving the selection displayed with the mouse; the mouse wheel enlarges or diminishes the view. The points (which symbolize the sound loops) can be manipulated exactly as in the Media Pool list view, i.e. select by double clicking and load by double clicking or via drag & drop.

## Synthesizer

This button opens the folder containing your synthesizers. Read more on this in the Software synthesizers (see page 116) chapter.

## Template setting

The folders for installed effects presets will be opened. Even saved audio and video effects presets as well as title templates land in these folders, so that over time a complete library of your own presets will develop. Folder for audio effects ("Audio FX"), presets for the Vintage Effects Suite ("Vintage FX"), video effects ("Video FX", "Video mix FX"), automatic animations ("Visuals"), and title templates ("Title") can be opened using these buttons.

You can also add effects via drag & drop. They can simply be dragged onto the corresponding object using the mouse.

You can also precisely set up the video and audio effects via the realistic effects rack (see page 165) or video controller via the context menu.

## Object inspector settings

The object inspector offers quick access to properties of objects, e.g. audio effects for audio objects. For MIDI objects, the synthesizer controlled by a MIDI object may be played directly via an on-screen keyboard.

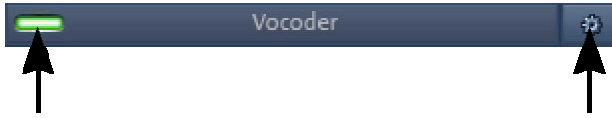
### Audio objects

If an audio object is selected the object inspector will open featuring the audio object view



This displays the available object effects (see page 166) in a clearly  
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laid out list.

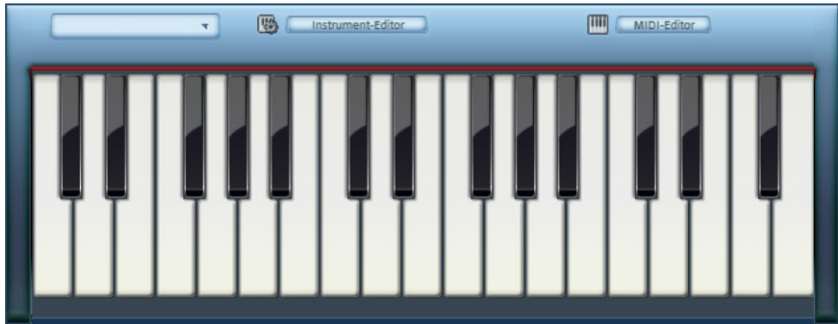


This button switches effects on and off.

The settings dialog for an effect is opened via this button.

## MIDI objects

If a MIDI object (see page 91) is selected the object inspector will feature the MIDI objects view.



The keyboard may be used to play a software synthesizer (see page 146) that is controlled by the selected MIDI object.



A sound program for the synthesizer may be selected from this list.



This button opens the editor window for the synthesizer for fine tuning the sound.



This button opens the MIDI editor (see page 95) for the selected MIDI object.

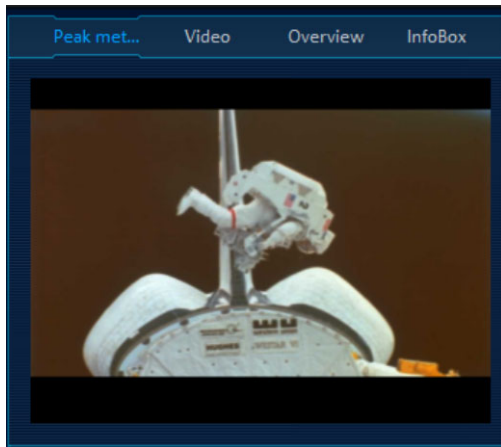
## Setting Catooh

You can preview multimedia files from the Online Content Library Catooh, load them into the arrangement, and edit them further .

Please read the chapter entitled Catooh (see page 309)!



# Videoscreen



The video monitor can be positioned anywhere on the screen. The size is variable. To set the size, right click on the video monitor and select the desired size from the context menu or adjust it yourself ("user-defined"). Please note that larger video screens require more CPU power.

To detach the video monitor from the arranger and Media Pool, deactivate the default layout in the "Window" menu. You can then position the screen anywhere you like.

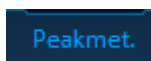
The video monitor can be increased to full size by double clicking on it or pressing "Alt + Enter". Press "Esc" to leave maximized screen mode.

You can also include a large time display in the video monitor. "Display play time" shows the current play marker position in the video monitor. You can choose the screen & background colors and transparency.

The video monitor is transformed into an analyzer which displays the sound as a graphic.

"Overview" mode enables you to view the whole arrangement and access the object you are looking for in a split second - you can zoom in directly to the video monitor or move around the clip displayed in the arranger.

## Peak meter



The video monitor is transformed into an analyzer which displays the sound as a graphic.

## Overview

### Overview

In "Overview" mode, you can view the whole arrangement and you are also able to access any object you want in a split second; zoom in directly to the video monitor or move around the clip displayed in the arranger.

## Infobox

### Infobox

"Infobox" mode shows help text in the preview monitor if you hold the mouse pointer over a button on the screen.

# Mouse modes

MAGIX Music Maker 16 Premium offers special mouse modes for arranging and editing objects.



A small arrow next to the mouse pointer symbol allows different modes to be set.

## Move selection



This is the preset mouse mode in which most changes are made.

Select objects by left clicking them. When the "Shift" or "Control" keys are pressed, multiple objects can be selected.

Hold down the mouse button to move selected objects.

In this mode the objects can be faded in or out or their lengths can be changed using any of the five handles. Please refer to the "Arranging objects" (see page 62) section. Right clicking on an object opens the context menu with the most important effects and settings available for that specific object.

If an effect curve is active, the curve handles can be selected and moved. Double clicking on the curve creates new handles.

Keyboard shortcut:                      Alt + 1

## Move to track



This mouse mode behaves basically like the mouse mode for individual objects, but moving objects

results in all other objects behind the object moving in sync on the track. This is practical if space is needed at the start of a track, since all objects can be moved together without moving them underneath each other.

Keyboard shortcut: Alt + 2

## Move all



This mouse mode behaves in principal just like the "Single object mouse mode",

but during moving, all objects on all tracks will be moved together from the mouse position.

Keyboard shortcut: Alt + 3

## Automation



This mouse mode is used for drawing the volume and effect curves (see page 235).

When active, a new curve can be drawn on an object or track using the left mouse button. The corresponding effects curve can be activated in the dialog "Dynamic effects editor" (see page 236). This can be opened with the command "Object automation" or "Track automation" from the menu "Effects -> Automation" (shortcut: "Ctrl + H" / "Ctrl + J").

Note: You will be able to edit the object curves or the track curves depending on whether you have opened the curve editor for the object or the track. If the editor is closed, then the object curves will always be edited, even if a track curve is displayed.

Clicking on an object without an activated effect curve activates the volume object curve for this object. One click on a track without an active effect curve deactivates this mouse mode again.

Keyboard shortcut: Alt + 4

## Draw



In this mode you can insert further similar objects behind an already loaded object.

Starting from the first object, the following objects are always inserted synchronously so that you can also think of this mode as the insertion of a "Mute" automation from a continuous loop. You can read more about this in the section "Drawing in loops (see page 67)" in the

chapter "Arranging objects".

Keyboard shortcut: Alt + 5

## Split



You can split objects quickly with this mouse mode in order to remove unwanted parts or attach various effects to parts

of objects.

Keyboard shortcut: Alt + 6

## Stretch



This special mode is for customizing the length of objects.

Objects can be stretched and warped using the lower object handles. The duration of the audio material is therefore lengthened via timestretching without changing the pitch. The middle object handles allow the object's pitch to be changed using pitchshifting in the range of -7... +7.

Keyboard shortcut: Alt + 6

## Preview audio



This mode allows you to preview audio objects (as long as the mouse button is held down)

for the entire duration and independent of the start and end markers in the timeline. Other object types are protected against unwanted moving.

Keyboard shortcut: Alt + 8

## Scrubbing



By holding down the mouse button, the arrangement can be previewed at the point where the cursor is positioned.

The playback marker follows the mouse movements. This mode is

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especially suited to searching for specific parts of an arrangement.

Keyboard shortcut:                      Alt + 9

## Replace



This mouse mode simplifies searching for suitable samples: Left mouse click on a MAGIX

Soundpool object to switch the object automatically with another from the same instrument category. "Shift" + left mouse click keeps the object but changes the pitch. Ideal for quick experimentation!

Keyboard shortcut:                      Alt + 0

## Context help



This mouse mode allows you to open the corresponding "Help" section by clicking on any area of the MAGIX Music Maker 16 Premium screen.

# Arranging Objects

In MAGIX Music Maker 16 Premium you can jointly and uniformly load, arrange, edit, and export different multimedia file formats. This chapter describes the basic way of working with multimedia objects. This includes audio objects, video objects, graphics, midi objects, and synth objects. Later chapters will describe the particulars of the respective formats.

All object editing is virtual, non-destructive, and is calculated in real time during play. The multimedia material is thus not destroyed (non-destructive editing) and any change can be cancelled with the multi-stage undo function ("Ctrl + Z"). You can experiment to your heart's content without having to fear that you will change or damage the original material.

## Save and load arrangements

An "arrangement" is what we describe as any object (audio, video, MIDI, graphics, synthesizers) together with their positions, fades, length, volume, and brightness settings, and effects that can be found in the arranger.

Arrangements can be saved and reloaded as MMM files via the "File" menu. When loading arrangements, you should make sure that all objects being used are available in their respective folders. It's often recommended to use the function "Backup arrangement..." ("File -> Backup copy").

Then the whole arrangement, with all its objects and effects, will be saved to a definable folder on the hard disk and can easily be loaded from there.

## Multimedia files and objects

All multimedia files supported by MAGIX Music Maker 16 Premium can be previewed or listened to in the File Manager by clicking and dragging into the arranger via drag & drop. The files are displayed as objects in the tracks after the mouse is released.

Using the "Tab" button, you can switch between two object display

views.

In alternative display modes, the objects are not represented frame by frame, but simplified. This is useful for quicker representations of video objects: RAM is saved and the overall performance improved. Audio objects will be shown using one or two (for stereo) waveform representations.

Right clicking on an object opens the context menu with the most important editing options available for that specific object.

## Select objects

To edit or delete objects using the menus, you must first select them. To do so, simply click on the object you wish to select. When the "Shift" key is pressed, multiple objects are selected. Object modifications like cutting, moving, effects assignment and so on, apply to all selected objects together.

The handles of selected objects light up to show that the accompanying object has been selected and can be edited using the menu functions.

Several objects can be selected quickly by clicking on the first object in the first track with the mouse and dragging out a square for selection. All objects entirely or partially within the square will be selected (rubberband selection).

## Mute objects

Each object can be muted individually. To do so, select the objects you wish to mute and press "F6" (or use the corresponding command from the context menu).

## Build or split object groups

Several objects can be combined to make up a group, to avoid the objects being unintentionally moved out of relation to each other.

Once they are combined, clicking on one object of a group will select the entire group.



To group or separate groups, use the buttons in the toolbar or the corresponding commands in the "edit" menu.

## Split objects

Any object can be split up. Every one of these object parts becomes an independent object in itself. To cut an object, select the object, move the start marker to the edit point, and select the "**Split object**" command from the "**Edit**" menu or press the "**T**" key. It's even easier with the "Split objects (see page 61)" mouse mode.

To rejoin the separate objects afterwards, select each of the objects and choose "**Group**". This command joins all of the selected objects into a single object group.

## Exact object positioning

It is often necessary to position objects very exactly in order to maintain the beat or avoid creating clicking during transitions or small pauses between objects.

In MAGIX Music Maker 16 Premium every object is snapped to the edges of other objects, resulting in cleaner transitions. In addition, objects are placed on defined positions on the grid of the arranger track. You can read more about the grid in the arranger chapter "Grid (see page 41)".

## Duplicate objects

Objects can be duplicated very easily in order to create larger arrangements. First, the objects that need to be duplicated must be selected.

Then select the command "Edit menu -> Duplicate objects"

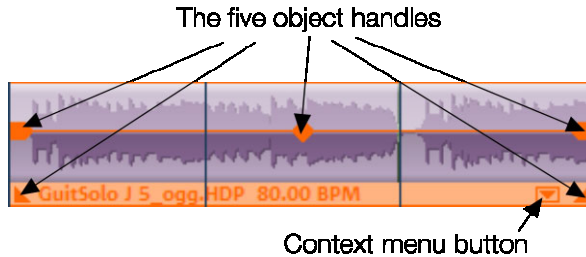
A copy of the object appears right beside the original which can be moved to any position with the mouse.

It's even faster if you click on the object that has to be copied and hold down "Ctrl" at the same time. An object is then created which can be dragged to the desired position. Furthermore, object copies

require virtually no additional memory!

Another way to duplicate is by using the copy/edit commands from the "Edit" menu.

## Object handles



With the help of the object handles, fine positioning, volume and brightness settings, fading in and fading out as well as loops can be carried out directly in the arranger.

All editing is carried out in real time and is already calculated during playing. The multimedia material is not destroyed in the process (non-destructive editing); any change can be cancelled with the multi-stage undo function ("Ctrl + Z").

### Object fades

Use the handles on the top left and right to fade an object in or out. By fading objects in and out onto different tracks, it is possible to produce crossfades between different objects. The length of the crossfading can be directly regulated with the handles.

### Shortening or looping objects

Objects are "cut" virtually by "compressing" them with the mouse. "Pulling" them to the right will stretch them, which results in the object being played as a loop until the play cursor reaches the end of the object representation. In this way it is possible to very quickly create an entire drum track from one single drum loop or to create a long video from a short video sequence.

Guide the mouse to one of the bottom corners of the object until the mouse pointer turns into a stretch symbol. Now you can stretch or compress the object until it has reached the desired length.

Normally an object is always looped over the full length of the underlying data material (audio or video file). To set a clip from a file as a loop, shorten the object at the front and the back with the handles and choose the command "Edit menu -> Insert user-defined loop". This function is very useful for setting your own recording as a loop, as the silence at the beginning of a recording can be cut away.

### Adjusting volume/brightness

With the volume/brightness handle in the top center of the object, you can change the volume of audio and MIDI objects or adjust the brightness of video and bitmap objects.

If several objects are played in parallel, it is possible to individually adjust the volume or brightness ratios between objects in this manner.

The volume and brightness ratios between tracks are adjusted in the mixer.

## "Draw in" loops

Audio loops can be drawn into the arranger tracks with the mouse.



For this you have to set the mouse mode to "Draw objects" by clicking on the corresponding icon in the mouse modes menu. Now an audio sample has to be loaded which will serve as a template and which will then be drawn into the following area of the track as a loop in the track.

This works as follows:

1. Load any loop from the Media Pool into the arranger.
2. Click on an area further back on the same track and hold down the mouse button to draw in the loop.

Starting from the first object, the drawn-in loop area is always synchronous with the beat. This means that the drawn-in loop is not played from the beginning, but rather starts from the position where the original loop would be if you had continued to this position. Or, to put it differently, a running loop can be found on the track and you can draw in at which position you can hear it ("Mute automation").

The synchronous start of the object in this mode has another consequence: If an object is moved, then only object borders are

moved, but the underlying loop, however, always remains intact.

## Takes

Every object can be saved as a "take". Takes save all editing done on an object like object length, fade settings, and all object effects. MIDI takes save the instrument controlled by them (MIDI output or VST instrument).

Takes are saved as "TAK" (\*.tak) files and take up virtually no space on the hard disk. So you can cut a sample, add various effects to it, and save it as various takes in order to use these together with all their editing in other MAGIX Music Maker 16 Premium arrangements.

The original sample will not be changed, only object and effect settings will be saved.

You can also save Synth objects (see page 146) as takes to create your own preset libraries for the synthesizer.

MAGIX Music Maker 16 Premium supplies many takes on content CDs.



Takes can be identified by their symbol in the Media Pool.

**Warning!** On loading the takes, the audio or video file, for which the take was added, must be in the original folder.

## Object properties

This function displays all the information about the currently selected objects, such as file name, position on the hard disk, tempo, etc. The object editor also defines the foreground and background color of every object in the arrangement.

In the "Tempo/Pitch" tab, information on the patched/determined tempo and pitch of the audio object is shown. Furthermore, there is an overview of how the various timestretching/pitchshifting operations affect the entire audio object. The tempo/pitch adjustment when loading the sample, the effect of the master tempo fader, and the time processor as object effect tracks are offset against one another, but they may not mesh properly. For this reason, there are

two buttons which can be used to double/halve the object speed. Try using these buttons if the tempo of some loops is incorrectly interpreted as twice or half the speed.

## Mixdown tracks

If the arranger becomes too full to manage, the system is out of RAM, or you just want to "summarize" your production, use the mix down function to convert the entire audio arrangement into a single audio and/or video file.

To do so, choose the "Mixdown" function from the "Edit" menu. You can choose a name and a destination for storing the mix down object. The default directory is "My Projects". If only audio objects are in the tracks, a wave file will be created. If audio and video objects are combined, you can choose whether an audio or a video file will be created.

The objects of the arranger or the area will be replaced by the new object.

MAGIX Music Maker 16 Premium automatically normalizes the audio file, i.e. the loudest part of the wave audio object is identical with the highest figure of the 16-bit resolution ceiling. This guarantees the same sound quality, even if you repeat the mix down procedure or you combine the mix down file with other wave audio objects again and again.

**Tip:** The mix down function is very helpful if you want to go on using the mix down object. To create the finished end version of the song or video it is recommended to select the "Export arrangement" function in the "File" menu instead of the "Mixdown" function.

# Audio Objects

## Audio formats

MAGIX Music Maker 16 Premium loads and edits audio files in the formats Wave (.wav), OGG Vorbis (.ogg), Windows Media Audio (.wma), MPEG (.mpg), MP3 (.mp3) and CDA (audio CD tracks). The stereo or mono data of a file are displayed as an object in the arranger of the MAGIX Music Maker 16 Premium. The material will be displayed as a waveform, optically representing the sound to make editing easier.

Along with wave files, MP3 files, OGG Vorbis (.ogg), and ringtones can also be exported.

In addition, the Premium version can load and export the Surround formats (after activating the encoder (see page 320)) MP3 Surround, Surround WMA and wave (6-channel interleaved).

## Load and process audio files

All importable audio files can be accessed via the File Manager and previewed (audio) by clicking the file name. Tracks from audio CDs can also be integrated by dragging & dropping them into the arrangement.

Editing, fine positioning, volume adjustment, fading in and out, is all processed using the "Object" tab directly in the arranger.

Please see the chapter "Arranging objects"

## Smart Preview for the incorporated samples

The incorporated samples can be listened to while the arrangement is playing. They always run synchronized to the current song that is playing.

You can load samples while putting together a song in real time and search for appropriate new "building blocks" simultaneously.

You can add the loop to the arrangement by simply clicking with the

mouse or pressing "Enter" or remove it by pressing "Del". The subsequent loop can also be selected quickly by pressing a key (arrow down) or you can switch to the next instrument ("1"..."0") or the next bar ("Num +"), or by clicking on the button.

## Audio recording

Your own sounds like vocals, speech, noises, or instruments can be easily recorded in MAGIX Music Maker 16 Premium using the audio recording function.

### 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 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.

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

### Adjusting the signal level

Adjusting the signal level to the sound card is also recommend to get the best sound quality during digital recording.

Once a recording source is connected to the sound card, the "Record" button opens the recording dialog and starts the recording source.

You can now adjust the recording level with the help of the LED display in the recording dialog. For this, you must first check off "Show levels".

If the adjustment is set too high, distortion occurs and the incoming signal must be reduced. If you have connected the source through either an amplifier or tape deck output to the sound card, you can only reduce the signal level in your sound card's software mixer interface. You can access the mixer directly from within the recording dialog via the "Recording level" button.

If you reduce input sensitivity by using the input fader, the resolution at which the analog signal is digitized is also reduced. Try to set these automatic controllers to the loudest sound level possible!

The maximum setting for an optimal level is the loudest part of the material. The loudest part should be adjusted to be the maximum. The actual recording begins when you press the "Record" button. At the end of the the recording you will be asked if you want to use the recording. Upon confirmation, the newly-recorded material will be placed in the next free track at the position of the start maker in the arrangement.



## "Audio record" dialog



**Audio driver:** Selects the sound card for the recording.

**Save audio file as/ save in the following folder:** Here you can select the title of the audio file you wish to record. You can also select the folder where you wish to store the file.

**Recording quality:** Sets the sound quality of the recording. In the preset menu you can choose between medium wave radio ("AM tuner"), UKW ("FM Radio"), DAT (Digital Audio Tape) and CD quality.

**Peakmeter (Monitor):** Using the peakmeter, you can monitor the level of the incoming signal. Please read more on this in the chapter

"Adjusting levels" (see page 71)

**Recording:** This button starts the actual recording.

**Stop:** Click this button to stop recording

**Normalize after recording:** With this option activated, your material's volume is raised to a proper level after recording is completed. In order to achieve good results, you should try to record the source as loud as possible without overmodulating it. To do so, refer to the peak meter reader in the recording dialog.

**Playback while recording:** This option is particularly important for spoken commentary, etc. If activated, the selected movie (or selected scene if recorded in the "Edit" screen) is played while recording. This acts as orientation for the movie.

**Advanced:** Use this button to open a window where you can select from special features:

### Advanced options

- "Mono" creates a mono recording and requires half of the hard drive space required for stereo.
- "Real-time sample rate adjustment" automatically matches the sample rate of a new file to be recorded with the sample rate of the selected movie sound track.
- "Ducking" (reducing the sound volume): To add narration or other sound material to a video that already has sound volume levels set, activate the option "Automatic reduction of sound volume of remaining audio tracks". This automatically reduces the volume of audio objects in the arranger during the recording session ("ducking"). A volume curve controls the whole process, produces the fading in and out of effects automatically and guarantees consistent overall volume.

## Import audio CD

The steps are similar to transferring wave files into an arrangement:

- Insert an audio CD into the CD/DVD drive of the PC.
- Go to your CD/DVD drive in the Media Pool. The individual CD titles appear in the file list.
- A single mouse click starts the playback of the CD title for prelistening.

- Drag & drop the CD title into a track in the current arrangement and the song will be grabbed and copied to the hard drive. The files will be saved in the "Import" directory ("Program settings -> Folders")
- The audio object appears in the track and can be played back or edited immediately.

A special program is used for digitally importing the audio data from the CD/DVD drive. Some drives do not support this mode (an error message will be displayed) or support will only be of low quality (the audio objects will contain crackling).

If this method does not yield a satisfactory result, you can open the CD manager via the menu command "File -> Read tracks from audio CD". This option opens the CD manager where you can select tracks from audio CDs and import them into the arrangement. You can also select the drive if you have more than one and adjust the import settings.

If this is also unsuccessful, you can also play the CDs using the drive and record them with the sound card. More can be found in the "Recording audio CDs" (see page 78) section.

### CD Manager

This option opens the CD manager to select tracks from audio CDs and partially or fully import them into the arrangement. You can also select and configure the used drive if you have more than one drive.

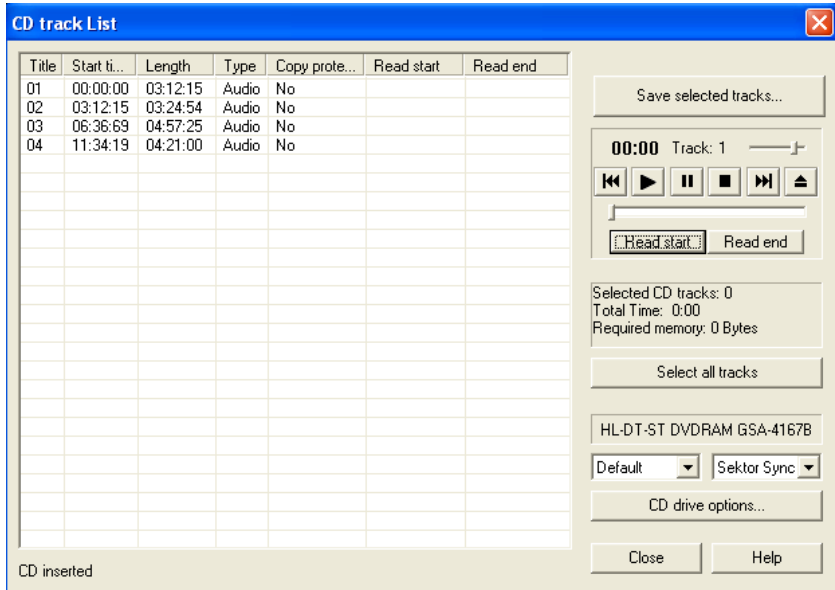
The CD manager lets you import audio data using most CD and DVD drives. You may have to contact your technical support to find out which drive is suitable. The data is imported digitally, thus eliminating loss in sound quality. Audio tracks are imported into the arrangement as Wave files. The files are saved in the import folder ("File -> Properties > Program settings -> System -> Path settings").

To import audio tracks via the CD manager you should proceed as follows:

1. Insert an audio CD into the drive and select "Import audio CD track(s)" from the "File" menu. 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.
6. Once copying is complete, the dialog will be closed and the tracks are inserted into the arrangement as individual objects.

### The track list dialog



On the left-hand side in the list you can choose which track(s)/title(s) you wish to import from the CD. Several subsequent tracks can also be selected by holding "Shift" and left-clicking; "Ctrl" + clicking selects several tracks; "**Copy selected track(s)**" starts the audio copying process. 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.

Use the small faders to control the preview volume. With the faders at the bottom you can go to a specific position in a track. To import just one section of a CD track, choose "**Start selection**" at the beginning of the section and "**End selection**" at the end.

Below the transport control details on the total length and the memory capacity of the selected track/section are displayed.

**Select all tracks:** All tracks are selected, for instance, to copy the entire CD.

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).

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

**"Import project" dialog:** 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 (name -> name\_1.wav, name\_1.wav).

### Copy-protected audio CDs

According to the copyright act, it is forbidden to copy a CD with copy protection. However, an owner of a CD may create a backup copy for himself. The problem is, however, that you cannot create a copy from copy-protected CDs because they cannot be read using a conventional PC drive. 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

**Tracklist:** This button opens the track list dialog for copying one or multiple tracks.

**Configuration:** This button opens the configuration dialog where you can make various special settings, SCSI IDs, etc.

**Reset:** Restores the default settings of the drive.

**Add drive:** Creates a new drive entry in the list, which you may wish to adjust.

**Delete drive:** Deletes a selected drive from the list.

**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".

**SCSI-ID:** Lets you set the ID of your CD-ROM drive. Be sure to set the correct ID; there is no error checking!

**SCSI-LUN:** Select the SCSI-LUN parameter, normally "0".

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

**Normal copy mode:** Copies the audio data without any software correction.

**Sector synchronization copy mode:** Copies the audio data using a 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 corrections made.

**Sectors per cycle:** Defines the number of audio sectors that should be read from the audio CD in a read cycle. The higher the number of sectors, the faster the copying process. Many SCSI systems have problems with more than 27 sectors.

**Sync sectors:** Sets the number of audio sectors that will be used for software correction. A higher number results in a better synchronization but also in a slower copying process.

### Recording Audio CDs

In some cases the CD can be copied during recording. The CD track is simply played on the CD/DVD-ROM drive and recorded by the sound card. You should note that the digital track data from the digital analog converters of the CD-ROM drive have to be converted into analog signals and then into digital data by the analog/digital converters. Depending on the quality of the converter used, this can lead to losses in quality.

Before beginning this, the "Load tracks via record dialog" option under "File -> Properties -> Program settings -> Audio" has to be activated. The audio output of the CD-R drive must also be connected with the input of the sound card. This is already the case with most multimedia PCs (if not, then it can be accomplished with a small cable inside the computer).

When "Load CD tracks via record dialog" is active, song parts can also be added to the arrangement without having to load the entire track.

## Change the playback tempo or pitch

If you want to combine audio material you have recorded yourself from different sources, samples from Soundpools, or songs from CD with each other, then you will often need to adjust the tempo or pitch of audio objects to match each other. There's an automatic function which automatically adjusts the tempo of audio objects when they are loaded to the arrangement's tempo, plus advanced tools like the Remix Agent and the Loop Finder (see page 299).

### Automatic tempo adjustment when loading

In general, MAGIX Music Maker 16 Premium automatically adjusts audio files to the arrangement tempo. In normal cases, you won't need to worry about the different tempo of audio files and Soundpool samples, since these are automatically matched. But since automatic processes can fail too, the following process explains when you may need to "manually" adjust things.

In the new arrangement (empty), the tempo will be determined by the first samples loaded into it. All additional audio files will then be automatically adjusted to this tempo. If you are planning a remix which is composed of different samples with different tempo, then try to add the most important sample first. This minimizes sound distortions compared to the other samples via timestretching.

In order to be able to correctly adjust an audio object to the tempo, its output tempo must first be detected. If the sound is a Soundpool sample, then the tempo saved therein ("patched") will be used, and the tempo adjustment will always work.

For all other (short) samples, an attempt will be made to automatically provide the tempo. If the sample is not cut exactly, i.e. it does not contain an exact number of beats or is incorrectly interpreted by the

automatic detection process, then this may not work. The sample will then be incorrectly stretched or an incorrect arrangement tempo will be set.

In this case, use the Loop Finder to specify the tempo semi-automatically (more about this under the chapter "Menu effects -> Audio -> Loop Finder (see page 299)"). This allows the sample to be cut to an even loop and the arrangement will adjust to the detected tempo or vice versa.

The Remix Agent launches optionally for longer samples (>15 seconds), e.g. entire songs from CD or MP3s. This also gives you the option of either adjusting the sample to match the arrangement or the arrangement to the sample.

MIDI objects for controlling synth objects always have the correct tempo because they are always aligned with the arrangement tempo.

In the dialog "Program settings (see page 283) -> Import" ("Y" key), you can deactivate the automatic tempo adjustment or limit it to patched samples.

### **Change tempo or pitch of individual objects manually**

"Resampling", "timestretching", and "pitchshifting" provide high-quality effects for you to change the pitch and tempo of selected audio objects dependent on or independent from each other. You can access these tools via the "Effects" menu or the object FX effects tracks.

These functions can be used for all audio files, i.e. for the included samples as well as your own recordings, CD tracks, CD tracks, or sounds from the Internet.

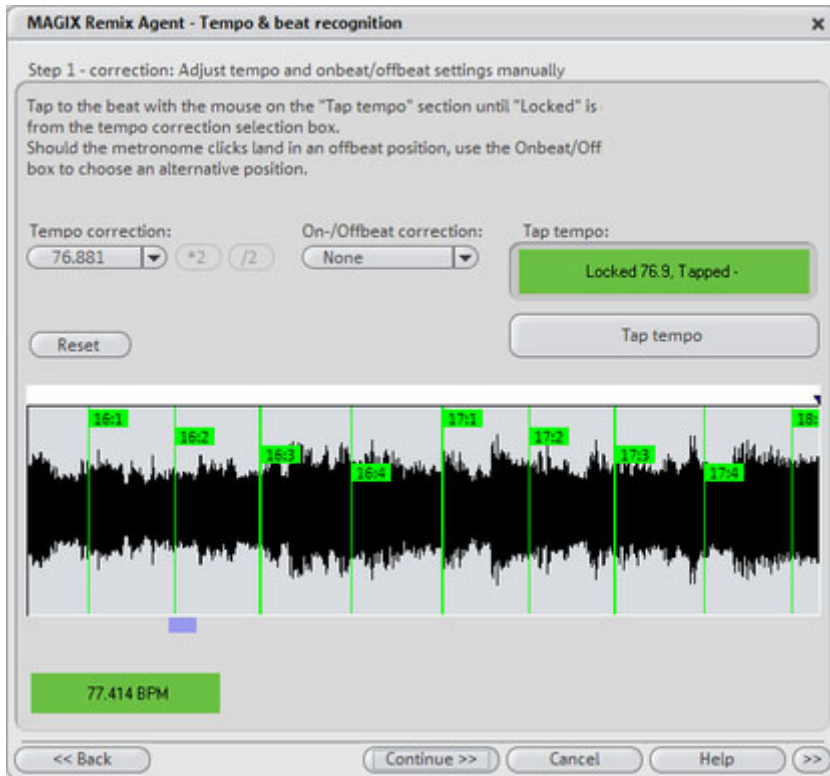
The playback tempo can be quickly changed via "Timestrech" mouse mode, i.e. by compressing/stretching the audio object's lower handles, in which case the tempo will change but the pitch will not be influenced (compare with chapter "Mouse mode"). The middle handles can also be used to change the pitch.

Detailed access can be accessed via the time processor effect (see chapter "Audio effects -> Timestretch/Resample"). This allows you to specify different timestretch algorithms for the corresponding object, since the best results often depend on the respective audio material and the different algorithms.



The tempo setting on the transport controller allow the arrangement's tempo to be changed retroactively. This affects all objects contained in the arrangement, and in some circumstances this can lead to an increased demand on the system and dropping out during playback. If this occurs, use Apply function in the effects rack (see page 169) or the Combine audio (see page 293) function.

## Remix agent: Tempo and beat assignment



The Auto Remix Assistant is a powerful tool that determines the tempo (measured in beats per minute, or BPM) as well as the timing of the beats for a song's quarter notes. This is important if an audio CD title is imported into MAGIX Music Maker 16 Premium, and you want to mix in sounds like drum loops, effects, or synthesizer voices.

### When to use the Auto Remix Assistant:

- When the tempo of the arrangement must be adapted to the tempo of the song.

- When the tempo of the song must be adapted to the tempo of an existing arrangement.
- When the song is to be cut up precisely to create a remix object which can then be rearranged as desired.

### Requirements for using the Remix Agent

- Songs must be longer than 15 seconds
- Songs must be "rhythmic" (i.e. they can be danced to)

Songs must be in stereo format Note: For analysis, it is presumed that the song is recorded in 4/4 time. If one of the above requirements is not fulfilled, the Loop Finder can be used.

If songs longer than 15 seconds are dragged into the arrangement, the Remix Agent is started automatically. When loading short samples (< 15 sec) the tempo is specified automatically and some loops are similarly automatically customized to the tempo of the arrangement. This also applies to previewing in the Media Pool (Smart Preview).

This method can be deactivated individually in the audio/video options ("A" key). You can find out more in the "File -> Properties -> Program settings" section.

### Preparation - Setting the start marker and object end

Before opening the Auto Remix Assistant, you should set the start marker at the position in the song object in the arranger where you want detection to start. If the song contains a long intro without beats, set the start marker after the intro. As a rule of thumb, the Auto Remix Assistant should always be "fed" dance music.

- The start marker should be set before a quarter note beat or, better still, briefly before a beat at the start of a bar.
- If the start marker lies before the song object, the object is examined from the beginning.
- If detection is not performed by the end of the song, the object can be shortened accordingly with the object handle at the end of the object.

### Automatic Tempo Recognition

When the Auto Remix Assistant is launched, the selected song object is analyzed and played back. A metronome begins to click according to the result and lines visualize the positions of the quarter notes

found in the wave-shaped display.

The following cases are differentiated:

- Position of the start of a measure (the one): red line.
- Position of the other quarter notes (the two, three, and four): green lines.
- Reliably recognized positions: thick lines.
- Unreliably recognized positions: thin lines.
- When tapped, blue lines appear.

If the tact and tempo information is already present, points are indicated above the display at the appropriate positions. The metronome volume can be regulated below and to the left of the wave-shaped display. To the right, the BPM value is indicated. If a valid BPM value was found, it is displayed in green.

If the metronome clicks in time with the music, the measure start is correct. If not, you can correct the tempo manually.

### **Setting the manual and Onbeat/Offbeat**

If the result is incorrect, you can help the Auto Remix Assistant with a few mouse clicks on the correction buttons.

There are two possibilities:

On the one hand, the "Tempo correction" list offers alternative BPM numbers which could also fit with the music. The adjustable BPM values are detected automatically – the total BPM can therefore deviate from song to song.

For more difficult audio material, we recommend using the "Tapping input" mode. Either the "T" key must be pressed or the "Tap tempo" button must be clicked with the mouse in time with the music. With repeated tapping of the tempo correction button, one should keep an eye on the color in the BPM display. In the "unlocked" condition (red), the tapping is not in time with the music. One should tap until the "locked" condition is displayed. After a short time, you will hear if the result is correct via the metronome.

Subsequently, offbeat correction takes place as required. If the detected quarter note beats lie around the length of an eighth note (transferred behind the real positions of the quarter note beats), one or more alternatives can be selected from the onbeat/offbeat

correction list.

### **Determining the start of a measure**

Next, the starting point of the measure is corrected. The beat at the start of the measure must always agree with the high tone of the metronome and/or the red line in the wave-shaped display.

Corrections can be made by tapping; If the start of the measure can be heard, tap with the mouse or press the "T" key. Alternatively, you can also select how many quarter notes the "one" is to be pushed to back.

If the starting marker was set briefly before the first beat of a measure, this correction is not necessary.

**Note:** With all corrections, the metronome and visualization react to the lines in the wave-shaped display only after a short delay.

### **Using BPM and beat detection**

Now you may select one of the actions to be adapted to the arrangement song (or vice versa) or cut up the songs at the ends of a measure.

### **Save only Tempo & Beat information**

Only wave file data is stored. This makes sense if some manual post-correction is required for determining beat/tempo.

When the data is stored, tempo & beat regulation can be released for future tempo adjustments or to create object remixes.

### **Tempo adjustment**

#### **Setting the object tempo to the arrangement tempo**

This fits the object length to the existing arrangement. Three different procedures are possible: timestretching, resampling, or audio quantization.

- Timestretching keeps the pitch of the song constant, but sometimes the sound quality can suffer.
- Resampling changes the pitch (similar to changing the speed of a record player), and retains the sound quality of the song as much as is possible.
- During audio quantization, the audio file takes the tempo

adjustments into consideration as if the first remix object (see below) were created and combined immediately into a new audio file. If the recognition is uncertain, extreme tempo fluctuation may result. It is particularly important to set the starting marker so that the tempo is recognized definitely. The advantage of audio quantization is that small tempo fluctuations in the music balance out. The start of the measure always agrees with the start of the arrangement measure and never plays out of time.

### Setting the arrangement tempo to the object tempo

The arrangement adopts the detected BPM value. If you would like to use the cut-up song as the basis for a new composition (e.g. for remixes), then this option should be active.

### Creating remix objects

The song is cut by beat into individual objects. Some applications may include:

- To produce loops from complete songs which can then be used with other material. Most importantly, not all remix objects are suitable as loops. Ideally, less complex material should be used, e.g. drums from an intro.
- To remix songs, thus changing the sequence of the objects, cutting or doubling beats or to enrich the song with other loops or synth objects.
- To mix two songs: If percussion and tempo fit perfectly, can you blend the songs without "side effects"?

This option can be activated later from the "Object" menu, provided that the tempo data is stored.

**The "Audio quantization" option:** Audio quantization fits new objects exactly in time with the arrangement.

With homemade music, tempo fluctuations are common, and therefore different measure lengths may result. Nevertheless, so that the objects fit into the rigid timing pattern of the VIPs, the time processor is activated automatically and object timestretching is used to correct the different lengths.

**Setting resampling for small corrections:** If the necessary corrections are very small, better quality resampling can be used instead of timestretching. Afterwards, you should not change the master tempo any longer, since definite pitch changes may arise.

**Remix objects in "Loop" mode:** New objects are set in "Loop" mode. When extending the object with the right object mouse handle, the original length of the object is played again and again.

**Setting the arrangement tempo to the object tempo:** (see above)

**Note:** Time correction assigned to objects can be subsequently cancelled if the time processor is called up and edited ("Timestretch/Resample object", or double click on the object to open the FX racks associated with the time processor).

**Cancel:** The dialog is closed.

### Problems and Remedies regarding the Auto Remix Assistant

**Problem:** The playback stutters, the metronome is suspended, the computer is overloaded... (on older computers.)

**Remedy:** We recommend changing to wave drivers ("P" key, "Playback parameter" dialog) instead of DirectSound.

**Problem:** The metronome does not work and there are no lines on the the wave-shaped display.

**Probable cause:** The material does not contain beats or the song contains a passage without beats.

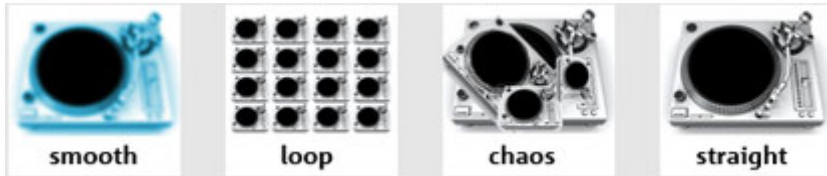
**Remedy:** The song should be limited in such a way that only rhythmic passages are contained.

**Possible 2nd reason:** Inaccurate tapping or a false BPM value has been entered.

**Remedy:** Try the tempo correction buttons or tap until the "locked" condition is attained.

**Problem:** The metronome sounds inaccurately or is jerky, the lines in the wave-shaped display are irregular and thinly drawn.

## Remix Maker



The Remix Maker is connected directly to the Remix Agent.

Use it to automatically generate remixes. The loop objects sliced by the Remix Agent are regrouped according to defined criteria. Simply choose one of the four "virtual DJs", each of which represents a different remix style, and set the remix length and structure.

### Opening the Remix Maker

#### 1. New song

- Load the new song you want to remix. This should contain clearly defined rhythms.
- When the song is loaded, the Remix Agent pops up to give you the option of dividing the song into its structural segments (see "Remix Agent" above).
- Select the option "Open Remix Maker" from the Remix Agent dialog box.
- Once the Remix Agent has sliced your song, the Remix Maker is started automatically.

#### 2. Existing, edited song (in the arranger)

- Load a song arrangement that is made up of loop objects.
- Select one of the loop objects.
- Select "Remix Maker" from the shortcut menu (right mouse click).

#### 3. Long, unedited audio object (in the arranger)

- Load an arrangement containing a long, unedited audio object.
- Select "Remix Maker" from the shortcut menu (right mouse click).
- You are then given the option of generating remix objects.

### Presets

Choose one of four virtual DJs with different remix characteristics. We recommend you try them all out and see which results you like best!

**Remix length**

**Very short:** around 20 seconds

**Short:** half the length of the original song

**Normal:** regular length of the original song

**Double:** twice the length of the original song

**Shuffle mode**

This determines the selection and order of the objects.

**Do not change:** The order of the objects are not changed.

**Change slightly:** A "pattern" (sequence of objects) is either repeated or the next pattern inserted.

**Distant:** Objects that are far apart in the original song are placed close to each other.

**Random:** The objects are ordered randomly.

**Fill mode**

A "fill" or "fill-in" is created when the loop object sliced by the Remix Agent again to produce very short objects that are looped or played in rapid succession. Fills are used to liven up the regular beat.

**None:** No fills are included.

**Use slightly:** A few simple fills are included.

**Strong accentuation:** Many complex fills are included.

**Use randomly:** Different kinds of fills are used in a random order.

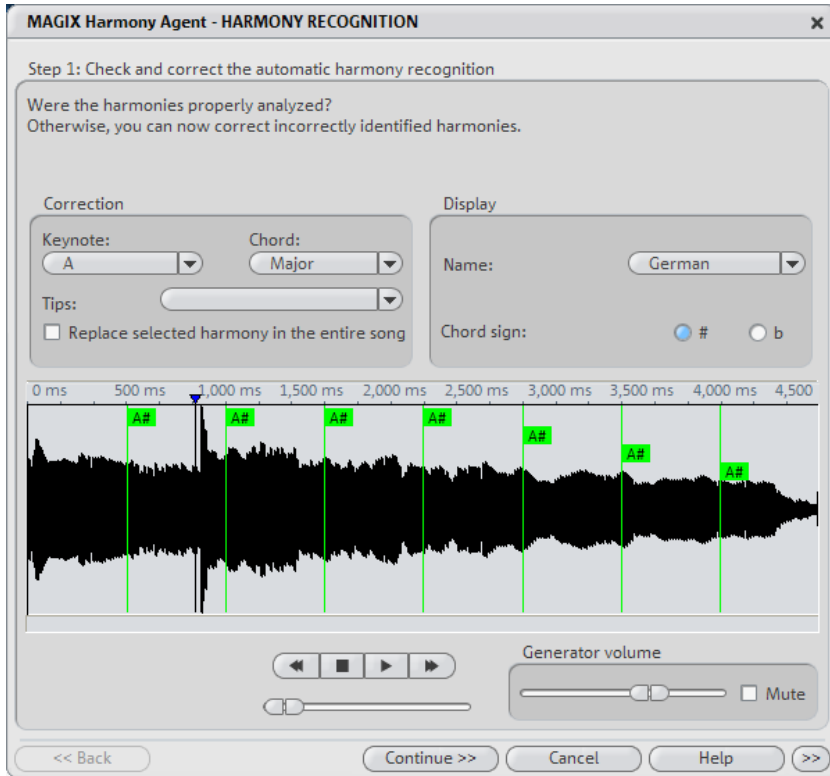
**Loop Finder**

The Loop Finder has been developed to find the BPM in short rhythmic passages, to integrate short loops in an existing arrangement, or to yield drum loops from short rhythmic passages. Otherwise, the BPM Finder helps in this regard.

More information under "Effects" menu.



## Harmony Agent



The Harmony Agent is designed to analyze harmonies.

The music track is analyzed first when you open the Harmony Agent. The Harmony Agent tries to automatically identify the harmonies for each beat of the music. Thus the right beat information is an important prerequisite for a properly-functioning Harmony Agent.

During subsequent playback, the detected harmony is played by an internal generator for verification purposes. You can adjust the volume with "Volume Generator". "Mute" deactivates the generator.

*The transport control controls playback of the music track. The position slider below lets you quickly move to a certain passage.*

### Check and correct the automatic harmony recognition

After the analysis, you can manually correct harmonies which were not correctly identified. Note that major chords are written with

capital letters and minor chords with lower-case letters.

Left click on the respective harmony symbol in the wave display. Hold the key if you want to mark several subsequent harmonies. If you right-click on selected harmony symbols, a menu containing alternatives will be displayed. The initially recognized harmony is marked with an \*.

If there are no alternatives, you can select the correct "**Keytone**" or "**Chord**" from the "**Correction**" section of the menus. Use the option "**Replace selected harmony in the entire song**" if you are sure that the incorrectly recognized harmony is not included in the entire song. A mix-up between major and minor is typical in this case.

Once you are sure that all harmonies are set correctly, click on "**Continue**".

### Use harmony recognition

Here you can use the information from the Harmony Agent. There are different possibilities to output harmonies.

- You can create picture objects in the arrangement that display harmonies graphically in the video monitor and in sync with the music.
- You can save the information in the audio file. This also ensures that the harmonies are available later. For instance, if you want to display the harmony information in the timeline ("Edit -> Display Object Marker -> Harmony Marker").
- You can choose between different displays of the harmony symbols. You can use German, English or Roman symbols to name the tones. Furthermore, you can set the "preceding symbol" to force single harmony interpretation. With #, all notes are shown as "sharps" (C#, D#, F#), with B they are displayed as flats.

## Text to Speech

This allows you to type in a certain text and have the computer "speak" the words. Different types of voices are available and the volume and speed of the speech can be altered. When you are pleased with the result, you can create a WAV file that can be utilized like any other audio object in the arranger.

**Load text:** Here, texts in \*.txt or \*.rtf formats can be loaded.

**Save text:** A text can be saved.

**Test:** You can hear the result of the text that has been entered.

**Voice:** Choose from a variety of voice types.

**Tempo:** This regulates the speed at which the voice “speaks”.

**Volume:** This regulator controls the output volume.

**Format:** The quality of the WAV file generated is controlled with this function.

**File:** Choose the file path for the generated WAV file.

## MAGIX Music Editor

During MAGIX Music Maker 16 Premium installation the audio recording and audio editing program MAGIX Music Editor will also be installed.

The MAGIX Music Editor comes with a professional recording function, lots of additional effects as well as various forms of noise suppression and editing functions for all kinds of audio material.

To edit an object in MAGIX Music Editor, right click on the object and select the option "Edit wave externally" in the context menu (or you can select the object with a left mouse click and select the same option in the "Effects" menu).

Read more about MAGIX Music Editor in the PDF manual. You will find it in the MAGIX program group.

# MIDI Objects

## What is MIDI?

MIDI files do not contain the actual sounds like audio files, but only the note control information played by the synthesizer chip of the sound card. This has several advantages:

1. MIDI files need a lot less memory than wave files.
2. MIDI files can be adapted to any beat (BPM) without affecting the sound; only the playback tempo is changed.
3. Transposition of MIDI files to other pitches is also easy. When doing so, a section in a song does not have to be saved in several different keys. The version in C major is perfectly sufficient. It can then be transposed to any key by simply clicking the right mouse button.
4. In MAGIX Music Maker 16 Premium you can use VST instruments which play the notes contained in the MIDI files.

**The disadvantage of MIDI files:** The actual sound is not yet set. Only during playback by the synthesizer chip of the sound card from external MIDI synthesizers/virtual instruments (VST instruments) will it be produced. High-quality sound cards or external synthesizers will sound completely different and better than standard sound cards.

## Arrange MIDI objects

Integrating MIDI files in an arrangement:

1. Open a directory containing MIDI files using the Media Pool.
2. Click on a MIDI file – it will be played immediately so that you don't have to guess which file you want to load.
3. Now drag the desired file into the arrangement – and that's it!
4. An object will appear in which the MIDI notes are shown by dots – The high notes are dots in the upper section; the lower notes are the dots further down in the lower section. You can even see the velocity of the notes. The louder the note is played, the darker it appears on the screen.

MIDI objects may be arranged, the volume may be modified (middle handle) or fades (in or out) may be added (top right and left handles) in the same way as audio, video, or synthesizer objects. Use the

lower handles to "stretch out" a single MIDI loop to fit it onto a whole track.

If you do not hear anything on the MIDI file, check the MIDI device in the "Playback parameters" window ("P" key or "File -> Settings -> Playback parameters"). Your sound card driver or your MIDI interface should be set here.

## Transpose MIDI

This function in the the context-menu is used to change the pitch of a MIDI object. Simply enter the number of half tone steps by which the playback is to be transposed up or down! The transposition is shown in the MIDI Object in the arranger with "+n" and "-n" (n is the number of halftones).

## MIDI interface and external sound generator

Naturally, MIDI objects can also be played back over a MIDI interface onto external synthesizers, sound modules, etc.

The MIDI drivers can be set in the playback parameter window ("P" key or menu "File -> Settings -> Playback parameters").

## Convert MIDI objects into audio files

If you use VST instruments, then you won't have to convert these MIDI objects into audio data before exporting your entire arrangement, since the sound is created on your computer and can be processed there.

If you still wish to do so (to free up processing power on your PC, for example), then switch the desired MIDI track to "Solo" and export the arrangement. Then add the exported file back into your arrangement and delete the MIDI objects in the exported track.

All MIDI objects which open external synthesizers via a MIDI interface (see page 93) will have to be converted into audio objects if you want them to be exported as well. They only contain control information for sound reproduction.

For this to happen, the output of the MIDI synthesizer (e.g. the sound

card) must be connected to the input of the sound card. The MIDI data can then be played and recorded simultaneously via the record function. The result is an audio file that can be edited and exported together with the multimedia files.

## Connect external equipment

### Interface connection

Please consult your sound card or MIDI interface manual for information about the correct connection. The most common ways to add MIDI functionality to computers are:

- Multi-port MIDI interfaces, including separate devices.
- Sound card with built-in MIDI interface.
- General MIDI module or keyboard-integrated interface, usually labeled "To host".

### MIDI cabling

**MIDI inputs/outputs:** If your computer has an internal or external MIDI port, or has a MIDI-capable sound card installed, connect your MIDI keyboard's "MIDI out" to the computer's "MIDI in" (on the interface, sound card, and so on).

If your MIDI keyboard can generate its own sounds, connect the computer's "MIDI out" to the keyboard's "MIDI in". If your computer (or the MIDI device) offers more than one MIDI output, connect any other sound synthesizers to these. If the computer only has one MIDI output, you need to connect the second sound synthesizer's "MIDI in" to the keyboard's "MIDI thru" port. A third device can be connected to the second's "MIDI thru", and so on. The "MIDI thru" port always delivers a copy of the signals coming into the device's "MIDI in". It is preferable, however, to use a direct connection from a computer's "MIDI out" to a device, rather than chaining too many devices one after the other. Timing problems may occur in the chain if a lot of MIDI commands are sent in a short space of time. This is due to the slight delays introduced by each "MIDI in" to "MIDI thru" transaction. If your computer also features several MIDI inputs, they can be used for the connection of MIDI expanders.

**MIDI local off:** If your keyboard features an internal sound source, it is important that you stop the keyboard from generating sounds directly from its own keyboard. If you buy a new keyboard that is to be used without a sequencer and connect it straight to an amplifier,

you would expect the device to make a sound when you press its keys. In other words, the keyboard is internally connected to the sound synthesizer. This behavior, however, is not what you want to happen when using your keyboard with MAGIX Music Maker 16 Premium. In this scenario, the keyboard is used as the computer's input device, and MAGIX Music Maker 16 Premium is sending (i.e. playing) MIDI information to any connected sound synthesizer, be they the keyboard's own sound generator, a sound card, or any other connected sound module.

If you wanted to control and record another sound module using your keyboard as the input device, its own sounds would play alongside those of the other sound synthesizer, which is why the keyboard must be separated from its own internal synthesizer. This function is known as "Local OFF", and is set directly on your keyboard. Refer to your keyboard's manual for information on how to do this. Don't worry about "breaking" the link between the keyboard and its internal sound generator – MAGIX Music Maker 16 Premium will act as the "missing link" in this scenario.

## MIDI Editor

In the MIDI editor you can edit MIDI objects. The MIDI editor has many sub editors, views, sections and tools.

### Open MIDI Editor

Double clicking on a MIDI file opens the MIDI piano roll editor for MIDI recording/editing MIDI objects.

In the center you'll find the piano roll editor (see page 100) in which the notes are displayed as bars and from which they can be edited using the mouse. There are various buttons located just above the piano roll.



Clicking on this button opens the event list (see page 105). In this list you will find the entire MIDI data of a MIDI object, even data which cannot be edited in the piano roll section or the controller editor. You can use the event list, e.g. if you wish to remove unwanted program switch commands from imported MIDI files.



Use this button to switch to the "Drum editor" mode (see page 112).



You can use this to leave the drum editor and return to the piano roll section.



A simple click on this button opens the controller editor (see page 103) at the bottom. There you can edit the note velocity, pitch wheel, and controller data.



Deletes all MIDI data from the object. Now you can begin from the start again...



Undo/Redo is, of course, also available for all changes you make in the MIDI editor.

At the top border, you will also find the buttons for selecting the editing tools (see page 100), quantization (More Informationen can be found in the section "Quantization settings" on page 107), as well as the output (see page 96) used by the MIDI object (MIDI out or VST instrument).

### Select sounds

The sound is produced by the sound card's synthesizer chip, external MIDI synthesizers, or virtual instruments (VST plug-ins). Each MIDI object can produce as many sounds as the corresponding synthesizer offers. The sounds themselves can be specified via the instrument – regardless of whether it's a virtual VST instrument or a hardware device.

If there is no VST instrument loaded, the MIDI object uses the MIDI output for the external synthesizer or for the Microsoft™ Windows® supplied synthesizer. The MIDI output can be set up in the playback parameters ("File -> Settings/Information -> Playback parameters").



Select the desired VST instrument from the menu. You can test the same MIDI object with various VST synthesizers. You can set the sound of VST instruments in the VST instrument editor (see page 153). You can open the instrument editor at any time by right clicking on the name of the VSTi.

You can set up the MIDI output channel under **MIDI channel**. This is important for VST instruments which can receive MIDI notes on multiple channels and play several different sounds simultaneously (multi-timbral).



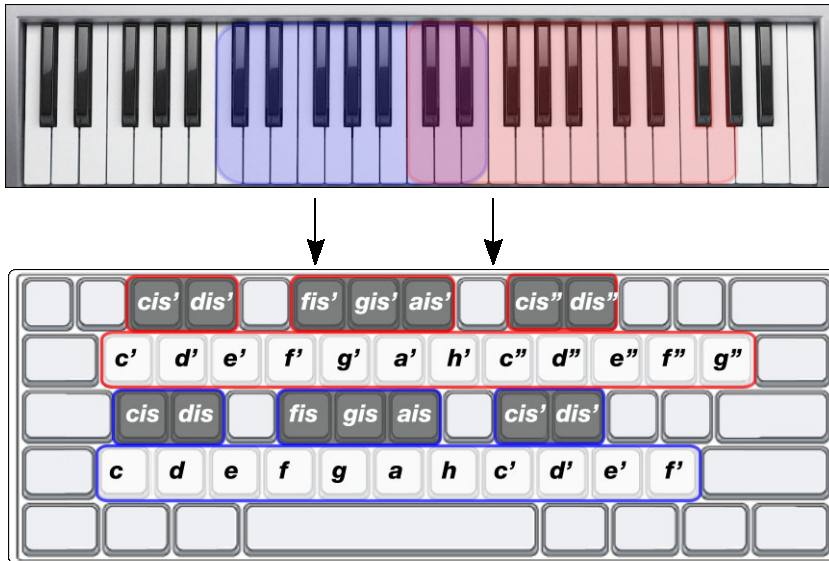
## Play/ PlaySolo

**Play solo** only plays the MIDI object for which the MIDI editor is opened (corresponding with the filter settings of the options menu).

**Play** all plays the entire arrangement.

## Playing instruments with the keyboard

Open the MIDI editor to be able to play software instruments directly via the computer keyboard. The assignment of the notes to the computer keyboard is displayed in the following graphic.



"Page up" and "Page down" move the octave up or down.

## Step recording via keyboard or controller keyboard

In the MIDI editor, you can also enter notes via so-called "Step input" using the computer keyboard or MIDI fingerboard. First, activate the respective button or select the option "Step input" from the MIDI editor's options menu.



The playback marker shows the scope of the current range where the entry takes place. Now you can enter MIDI notes step-by-step via your keyboard. Note length and step length can be specified using the length quantization value, and the steps via the grid quantization

values. The most important keyboard shortcut for entering MIDI notes using step recording:

Tab	One step forwards (set pause)
Shift + Tab	One step backwards
Ctrl + Arrow up/down	Entry range upwards/downwards
Letters and number keys, see	Entering notes in the current entry
Playing instruments with the	range
keyboard (see page 97)	

You can enter different notes simultaneously (polyphonic) without making the playback marker jump. This way you can play chords.

Of course, you can also enter notes in "Step recording" mode using your MIDI keyboard.

### MIDI recording

To record music from a MIDI keyboard, simply activate the "Record" function by pressing the "REC" button, and start playing. All of the recorded notes are displayed in the note field. There are several recording options that you can set using the buttons next to "REC".

#### Overdub

Normally, new recordings simply replace the existing data. In "Overdub" mode, the MIDI notes are merged with the existing MIDI information. You can use the "Overdub" mode to construct a complete MIDI song take by take.

#### Cycle

This function loops the MIDI object during recording. For example, you can listen to the object once or twice before adding your new material.

#### Metronome

A MIDI metronome is available to count you in and guide your timing with metronome clicks. The metronome only serves as a timing reference; it is not recorded.

#### Play the arrangement while recording



When this function is activated, the arrangement is played back during recording.

#### Notation display, movement, zoom

MIDI data can be edited in three main areas in the MIDI editor.

- Piano roll (see page 102)
- Velocity editor (see page 103)
- Lists editor (see page 105)

Here various tools are available, e.g. pencil or eraser.

Fundamentally, changes, e.g. moving or deleting notes, always refer to all selected MIDI events (red) with just a few exceptions. Changes to the selection in a range always apply to every other range as well. For example, you can select a group of notes in the piano roll and then change the velocity of these note groups which modifies all selected notes simultaneously.

### Note display in the piano roll and the controller editor (with velocity curves)

All of the **unselected notes** are highlighted in blue. The intensity of the color indicates the velocity of the note; the darker/stronger the color, the higher the velocity.

**Selected notes** are highlighted in red. Again, higher velocity notes are brighter than lower velocity ones.

Note: You can also customize the velocity color range for selected notes. To do this, open the graphics file "vel\_sel\_map.bmp" from the bitmap directory and modify the color spectrum accordingly.

**Current event:** This is displayed in bright red and with a red outline. The properties of the currently selected event are displayed in the edit fields above the piano roll. An event is "current" when it is selected with the mouse.

### Event display filters

To get a better overview of a MIDI object's events, you can filter specific events for the display.

A MIDI object can contain events in up to 16 channels and up to 16 MIDI tracks (original track from the imported standard MIDI file). For example, it's possible to control a multi-output VST instrument using a single object on several MIDI channels. Notes in the corresponding MIDI editor can be edited simultaneously or only in one selected channel within this object.

There are comfortable viewing options available for this:

- A channel filter ("Options" menu) enables all or only selected channels to be displayed. Notes in the remaining channels are grayed out and cannot be manipulated by the selection tool.

Example: The MIDI object includes notes in the MIDI channels 1, 2, and 5. You can now make all notes in channels 2 and 5 accessible for the selection and editing tools via the selection of the MIDI channels in the channel filter by selecting the two channels from the menu. All unselected, filtered notes in channel 1 are displayed in gray in the piano editor and the list editor.

Events in the filtered channels can be completely hidden using the "Hide filtered MIDI data" in the "Options" menu.

- A track filter (also "Options" menu) enables data to be filtered according to an imported MIDI file in the same way.
- The list editor (see page 105) provides additional display filters that only function within the list. The display filters are activated by the playback filter settings (mute settings), but the filters can be set independently of one another.

#### **Muted events display**

Events that lie ahead of the object start point or behind the object end point (the start and end points are displayed as blue lines in the editor) are also paler than the un-muted events within the object's boundaries. If display transparency is activated, the outside events are grayed out.

#### **Events above or below the currently visible selection**

There are two small red indicators above and below the vertical scroll bar on the right border of the MIDI editor window. These light up correspondingly if there are other notes outside of the currently displayed screen selection.

#### **Piano Roll: Edit events**

There are various editing options for notes within the piano roll, as well as mouse modes. In all modes (except delete) the same functions also apply to notes when editing them, so that these modes only differ in behavior when you click on empty areas.

## Editing tools



Selection  
(Ctrl + 1)

**Lasso:** Press and hold down the mouse button to draw out a rectangular selection frame.

Clicking on a free range highlights an existing selection.



Draw  
(Ctrl + 2)

A note can be drawn by left clicking. The beginning and length are set according to the current quantization settings (above).



Draw pencil  
(Ctrl + 3)

Draws a series of notes. The note length and distances are calculated from the current quantization settings.

<Alt>: The pitch of the first note will be applied to all notes drawn that follow it. Moving the mouse back (to the left) while holding down the mouse button removes already drawn notes.



Pattern pencil  
(Ctrl + 4)

This mode allows you to draw entire drum patterns (or melody patterns). If you want to create a new pattern, you have to select it first in "Selection" mode and press the keys "Ctrl + N" simultaneously (or go to menu "Edit" in the "MIDI/Drum editor -> Create pattern from selection"). If you have created a pattern, you can start drawing at any position. Draw the pattern at the position of the deepest note of the pattern. This makes an original pitch sound, but you can, of course, draw in a different pitch. If <Alt> is pressed when drawing, the pitch of the first note will be applied to all notes drawn that follow it.

Moving the mouse back (to the left) while holding down the mouse button removes the notes which were just drawn.



Velocity mode  
(Ctrl + 5)

This mode allows you to mark events and change the velocity values of all selected events in relation to each other. Absolute values are entered when you hold the "Shift" key, i.e. all changed events receive the same velocity value.



Erase  
(Ctrl + 6)

Dragging the mouse deletes all notes underneath the eraser.  
"Delete" mode can be activated anytime by clicking with the right mouse button. For instance, you can use the pencil to insert new notes when left-clicking and remove already inserted notes with a right click, without having to change tools.



Magnifying glass  
(Ctrl + 7)

Left mouse button: Zoom in  
Right mouse button: Zoom out  
Left mouse button + drag: Zooms in on the range.

### Selecting MIDI events

(Piano roll, velocity editor, list editor, )

Select event	Left click event
Add/delete event from selection	Ctrl + left click event
Select current event and unselect all other events	Double click event
Change or set current event within multiple selection	Left click selected event
Select events from the same line or area	Click while pressing the "Shift" key
Selects all notes of the same pitch	Double click the desired key on the keyboard ruler to the left
Selects all notes	Ctrl + A (if a pitch is selected on the keyboard ruler, only notes with this pitch are selected)
Selects the next or previous note	Arrow keys

As you can see from this list, a simple click is all it takes to choose a specific event for editing – even from selections containing several events such as a pattern.

### Edit notes with the mouse







If you move the mouse over a note, the mouse cursor will change and, depending on the part of the note, the following options will be available:



Change note start time (Grab note bar at the beginning, note end remains the same)



Change note length (Grab note length at end)

-  + Set fixed note length for multi-selection: Hold "Shift" and drag the current reference note longer/shorter – all notes will have the same length
- Shift*
-  + Scale note length for multi-selection: Hold "Ctrl" and drag current reference note longer – all notes will be lengthened by the same factor
- Ctrl*
-  Move note freely, pitch and start time change
-  If in "Move" mode "Alt" is also pressed, the note will only be moved horizontally, retain pitch (in free move mode, hold "Alt")
-  If "Shift" is pressed while in "Free draw" mode, only the pitch can be changed, the position will remain the same.
-  "Ranges for limited moving": If you activate this setting in the "Options" menu, clicking and dragging in the start portion of the note only results in a change to the position, while clicking on the end portion changes the pitch.

### Moving and zooming

The vertical and horizontal view or zoom are adjusted with the scroll bars just like in the project window.

**Mouse wheel:** Scroll horizontally

**Shift + mouse wheel:** Zoom vertically

**Shift + Ctrl + mouse wheel:** Scroll vertically

**Ctrl + mouse wheel:** Zoom horizontally

### Controller editor: Selecting and editing events

The controller editor is located below the piano roll and can be hidden.



It is opened either with a click on the button below the keyboard or via "Alt + V".

The velocity values of existing events are displayed as colored bars in the controller editor, whereby darker and higher bars symbolize larger values. The bars are located directly below the notes.

The values of all other controllers will appear in controller editor as ramps. Here, too the height of the ramps and their color intensity represent the last defined value of each event. The length of the represented ramps reached to the next varying event. Selected event ramps are also represented in red.

## Controller Editor Hints

- In polyphonic events, the bars are layered on top of each other, which can make it difficult to single out specific notes. To edit only notes with a certain pitch (such as all C1 notes in the controller editor), click the corresponding key in the keyboard ruler. The key and the background color of the selected pitch are highlighted, and only the notes with this pitch are displayed in the controller editor.
- Notes with different pitches (such as all C1, D1 and A1 notes) can be displayed simultaneously by pressing "Ctrl" while clicking them (or "Shift" for areas between notes). This is basically a velocity editor view option. Multiple notes can be selected with a double-click.
- Another aspect of working with the controller editor's layered controller bars is that the bar of the currently selected note (mouse selection/editing) is always on top. To change this, click on the note you want to edit in the piano roll, or click directly on the layered bars and switch between the notes with the arrow keys. You can then change the controller value by clicking on the top third of the red (current) part of the top bar.
- After drawing controller values with the pen tool, click on an unselected area and drag the mouse to change several velocity values in sequence. Move the mouse in a curve to create velocity curves. Existing (multiple) selections are ignored. This is a great method for creating crescendos or decrescendos.

## Tools

The controller editor has its own tools for editing curves and values.



**Controller selection:** A click on the menu area of the button opens a selection menu in which the MIDI controller for editing can be selected.



**Selection:** Combi tool also used for value changes as well as freehand and line drawing.

Click in the upper range of a controller bar to modify the controller value immediately using the draw function. Clicking in the lower two thirds of the bar selects the corresponding note which is then highlighted in red in the editors.

Select multiple controller bar by clicking and dragging or single clicking a range in the controller editor; individual values can be selected by clicking within the bar. Selected controller events will be highlighted red.



### Combi-tool editing options:

- **Click on the bar end + drag:** The controller value can now be adjusted by dragging vertically. If you hold the "Shift" key down while dragging, all of the selected events will be set to the same value. If you also hold down "Ctrl", then the values of multiple selected controllers will be changed relative to one another.
- **Alt + Drag:** This activates freehand drawing; the mouse pointer becomes a pencil. By dragging in the corresponding controller area, you can draw in any number of controller curves.
- **Shift + Drag:** This activates line drawing and the mouse pointer becomes a cross hairs. By dragging horizontally, you can draw in linear value curves (ramps).



**Freehand drawing:** Draws new controller value curves or individual values by single clicking without dragging.

By dragging backwards, you can correct your curve during drawing. Shift + Drag with the cross hairs to draw a line.



**Draw lines:** Uses the line function to insert a transition between two different controller values.

Hint: If you edit velocity with the draw tools, no new notes are generated; only existing velocity values are modified.

### Quantize controller events

MIDI controller events can be quantized and thinned out; select the "MIDI functions" menu and the "Quantize/Thin out controller" command to do this. Quantization occurs according to the quantization settings (see page 107).

### List Editor

The MIDI editor contains an integrated list display of all events with additional view and edit options. This list editor is opened either by clicking on the button above the keyboard or using the shortcut "Alt + L".

When the list editor is open and ready to receive input, it will have a narrow red border. This makes it clear that certain functions, for example, select next/previous event (cursor keys) or the "Select all" (Ctrl + A) command, only refer to the list.

In the list editor, not only note events but also the MIDI controller and Sysex messages are displayed. These controllers and messages can be displayed or even filtered out during playback ("Mute").

"Note on" and "Note Off" events belong to each note, which are then selected as pairs and edited ("Note off" events can be displayed and hidden with a tick in the check box below the editor).

To edit specific events only, the list editor provides a view filter for each column. These are small check boxes below the columns of the list editor.

Select a representative event. For example, this could be a note with a certain pitch. Then click on a display filter for a specific column to only display events of this type with the selected pitch. All other events will now be faded out.

Display filters can be combined with one another. This way, when working with the "Select all" command (Ctrl + A), you can select and edit all control change events of type 10 (volume) on MIDI channel 6.

### Quantize to grid

Small irregularities during recorded playing can be smoothed with the quantization function. In contrast to this mechanical sounding sequences can be a little more groovy by applying the "Swing" function.



Clicking on "**Quantize**" button shifts all selected notes to a customizable quantization grid.

All notes are quantized without previous selection.



1/4, 1/8, 1/16, and 1/32 notes and corresponding triplets can be selected as starting points (grid) and lengths.

The **Quantize** button always quantizes as per the default quantization (preset: note start time and the length). In "MIDI functions (see page 109) > Advanced quantization", you can access the quantization modes (e.g. length only or soft Q).

The quantization options enable all types of quantization to be set more precisely.

### Quantization grid ("Snap")



If snap is activated, the notes "snap" to the quantization values when they are created or edited.

The quantization values are also considered. For instance, the notes

snap to the corresponding positions within the quantization window.

The snap positions are displayed within the piano roll as a matrix. A swing quantization is displayed by the different intervals of the vertical partitions in the piano roll. The grid can be hidden with the "Show quantization grid" command in the options menu ("Alt + G").

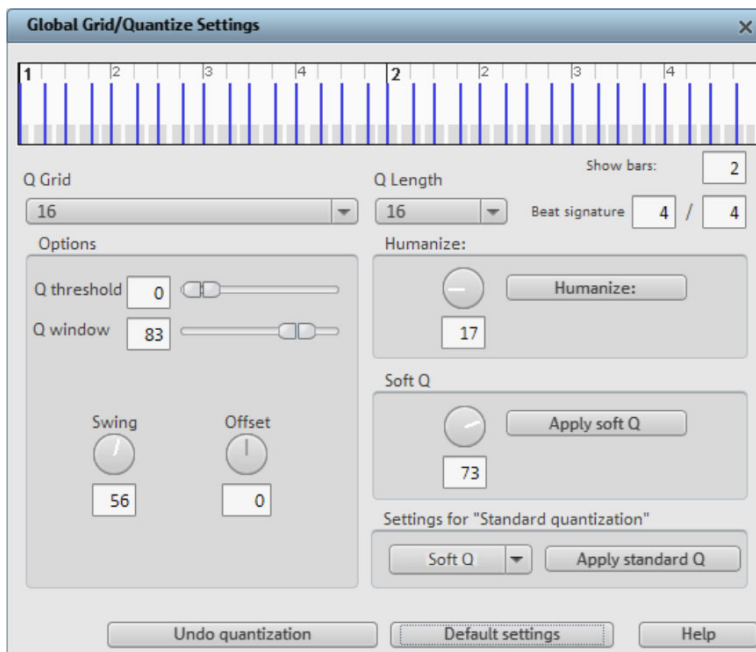
You can deactivate the snap function while creating or editing notes by holding down "Alt" as you draw them.

**Move relatively on grid ("Options" menu):** If this option is active, then notes keep their original intervals relative to the grid and not to the note start when they are moved; the distance moved snaps to the quantization value. Use this option if you want to move unquantized notes a certain distance without disturbing the timing.

Keyboard shortcut:                      Shift + G

## Quantization settings

The quantization settings can be found in the menu "MIDI functions - > Extended quantization" in the MIDI editor. The dialog with the settings is not "modal", i.e. you can open it as required and test certain passages with different settings.



The selected quantization settings may be visualized in the top of the dialog. The blue lines indicate the target positions for the quantized notes, i.e. the snap points. The gray area around this show the quantization window i.e. the target positions that are affected by the quantization.

**Q-grid/length:** The quantization grid and length at which target points within the beat to which the note start points or lengths (see above).

**Q threshold/ Q window:** This parameter may be used to slightly vary quantization by excluding notes from quantization that are very close to the next quantization value. "Q window" refers to the interval to the left and right of a grid point; events will be quantized within this range. Quantization does not take place outside of this window. This means that events with distance less than the "threshold" or more than the "window" from the grid point will not be quantized. The affected target range will be indicated in gray in the dialog graphic.

**Swing:** Starts swinging, groovy playback (for example, triplet). Specifies the division for uneven grid points.

- 50 ... "50-50" division: The odd eighths are exactly half way between the even eighth notes ("even" playing method)
- 67... triplet playing method, 3-2 division

**Offset:** The value range in this parameter stretches from -100 to +100. By changing the offset values, you move the whole quantization grid. Negative values move the quantization to the left, i.e. forward in time; positive values move to the right i.e. further in time. The maximum of 100 corresponds with an offset of half the grid width.

Presentation of blue grid points in the dialog and the grid in the MIDI editor directly reflects changes to these values.

**Humanize:** The "Humanize" parameter creates another variation option, i.e. notes are able to be assigned according to the randomization principle up to a specific interval to positions around the exact quantization value. The setting occurs in % of a 16th note. The value specified therefore determines the possible interval between the quantized notes and the exact quantization value.

**Soft Q:** This value sets the strength or "Soft Q" value of the quantization.

- "100" moves the event precisely to the quantize grid point,
- "50" shifts the event to the middle between the current position and the quantization grid point,
- "0" means no movement -> Quantization off

The command "Soft Q" command considers the current level value in the quantization options. The simple quantization command always occurs at 100%. In this manner, you can always select between approximation (soft) and a harder quantization without having to adjust the quantization options every time.

**Standard quantization settings:** Select from a list of quantization actions (see MIDI functions (see page 109)) that are listed by clicking the "Quantization" button.

**Reset quantization:** All notes are reset to their original positions.

**Standard settings:** Restores the default values.

## MIDI functions

The "MIDI functions" menu contains advanced quantization (More Informationen can be found in the section "Quantization settings" on page 107) and editing functions for MIDI notes.

The commands in the "MIDI functions" menu always affect the selected notes. If no notes have been selected, all functions are applied to all notes.

**Legato:** Notes may be sustained until the next note, i.e. legato.

**Quantize notes (standard):** The standard quantization is applied to the selected notes. If no notes are selected, then all of the notes will be quantized. The standard action may be specified in the Quantization settings dialog (see page 107). The preset is "Quantize notes (start and length)". This function can be accessed via the "Quantization" button in the MIDI editor.

## Advanced quantization

This submenu contains additional quantization commands.

**Start Q:** Selected notes will be quantized corresponding to the set

grid quantization value. Note lengths remain unaffected.

**Start and length Q:** Selected notes will be quantized corresponding to the set grid and length quantization values. Hard quantization always occurs at 100%.

**Soft Q:** This command considers the current level values in the quantization options. The simple quantization command always occurs at 100%. In this manner, you can always select between approximation (soft) and a harder quantization without having to adjust the quantization options every time.

**Length Q:** Selected notes will be quantized according to the set length quantization value. The start time remains unaffected.

**Quantize notes to grid:** The end of selected notes will be quantized according to the set grid quantization value. The start time remains unaffected, but the note lengths will change.

**Reverse quantization:** With this command, you can reverse all completed quantization steps. This functions even after the arrangement has been saved.

**Quantization settings:** Opens the selection dialog for the Quantization settings (see page 107).

**Quantize controller events:** Allows you to quantize controller events (see page 105) to reduce their number.

**Mute notes (Mute):** Mutes and unmutes notes or selected note groups with a click.

**Remove overlaps (polyphonic):** Notes may be shortened so that there no longer are any overlaps. Chords (simultaneously played notes) are recognized and not corrected, i. e. chords are not split up.

**Remove overlaps (monophonic):** Notes may be shortened so that there no longer are any overlaps. Forces monophonic voice leading.

**Convert sustain pedal to note lengths:** This function converts sustain pedal controller events (controller 64) into note lengths. All notes which were started after a "Pedal pressed" event (CC64 > 64) will be extended to the "Release pedal" event (CC64 < 64), and the pedal events removed.

## MIDI editor techniques

You can cut-and-paste MIDI notes within the editor and between MIDI objects. The notes are always inserted at the play cursor's position.

**Duplicate:** The selected notes are copied and inserted after the next grid point if the quantization grid is active (menu "Options -> Quantization grid on"), or immediately after the selection if the grid is inactive.

**Create pattern from selection ("Ctrl + P"):** The length of the pattern is quantized if the grid is active. The pattern can be "painted" into the MIDI object using the mouse mode "Pattern painting".

To directly select notes with a specific pitch, double click on an empty area in the piano roll editor or in the keyboard ruler.

## MIDI Editor shortcuts

Space bar	Play/Stop
0 (numeric keypad)	Stop on position

### Tools

Ctrl + 1	Selection mode
Ctrl + 2	Drawing mode
Ctrl + 3	Drum painting mode
Ctrl + 4	Pattern painting mode
Ctrl + 6	Delete mode
Ctrl + 7	Magnifying glass

### Edit

Ctrl + A	Select all non-view-filtered notes (piano roll) or events (list)
Ctrl + Z	Undo
Ctrl + Y	Redo
Ctrl + I	Import standard MIDI File
Ctrl + E	Export standard MIDI File
Ctrl + Q	Quantize
Alt + Q	Quantization options
Arrow top/left	Select previous note/event
Arrow right/bottom	Select next note/event
Delete, Backspace	Delete all selected events

## View / Scroll / Zoom

Alt + L	Show/hide list editor
Alt + V	Show/hide velocity editor
Alt + G	Show quantization grid
Ctrl+ G	Grid on/off
Ctrl + F	Automatic scrolling during playback
Ctrl + Up arrow	Zoom in (vertical)
Ctrl + Down arrow	Zoom out (vertical)
Ctrl + Left arrow	Zoom in (horizontal)
Ctrl + Right arrow	Zoom out (horizontal)
Mouse wheel	Horizontal scrolling
Shift + mouse wheel	Vertical scrolling
Ctrl + mouse wheel	Zoom

## Drum Editor

The drum editor is a special display and editing mode for MIDI objects which control drum instruments. The display is simplified ("**Cell**" mode) because the note length usually doesn't have any influence for drum instruments.

Since all pitches control different individual instruments (e.g. C1 for the kick drum and D1 for the snare drum), specific settings like quantization grid, volume, or mute and solo can be set up individually for each pitch. The piano roll's keyboard in the drum editor is replaced by a row of track boxes like in the arranger, but individually for each pitch.

If you have to make lots of specific customization to a certain synthesizer, all settings of each instrument can be saved together in a so-called "**drum map**" so that they can be used in other projects with this synthesizer.

### Switch to Drum Editor Mode and back.

After opening the MIDI editor (double click the MIDI object), switch to "Drum editor" mode by pressing the drum editor button.



Instead of the piano keys to the left, you now see a list of drum instruments.

When you switch from "Drum editor" mode back to the normal piano



roll, you will be asked if you wish to apply mapping or not. If you add mapping, all mapping settings (which makes a note sound different to how it is displayed) will be applied to the MIDI object. If notes, for example, are routed through channel 10 (GM drum channel) via mapping, the notes will be replaced by corresponding "real" note events on channel 10.

### Cell mode

"Cell" mode serves to improve the overview as it limits the display to only the most important information, note starting points, and velocity.

Each time position of a bar is displayed as a row of cells in on/off states. The note length is not displayed, but rather a unified display width is used. This way, it all looks similar to the step sequencer of a drum computer (see Robota (see page 142)).

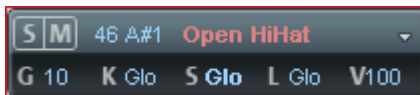
The set quantization grid can be read from the width of cells. "Swing" and "Offset" settings of the quantization options are also made clearer thanks to cells of various widths and by repositioning.

The height of cells displays the velocity of the note. When drawing new drum notes the velocity can be specified via the vertical drawing position within the cells. In connection with the "Drum draw" mode, increasingly loud drum rolls can be drawn in easily.

By clicking on the upper edge of a cell and dragging it vertically with the mouse, the velocity can be adjusted directly without having to use the controller editor. In "Velocity" mouse mode ("Ctrl + 5") it's even easier; all you need to do is click anywhere on the cell.

### Drum Editor trackbox

In the drum editor, each individual note has its own trackbox, and individual settings can be specified for each instrument. When zoomed out, each trackbox can be increased in size with a simple mouse click.




**S/M:** Each individual instrument can be played solo (**S**) or muted (**M**).

**Note number:** The output note from the instrument can be set here. This can be different to the note currently displayed in the MIDI object

so that individual drum instruments can be substituted. To put the display of notes back into the usual order (deep notes at the bottom, highs at the top), click on "Map" at the top and use the "Sort drum map" command.

**Instrument name:** Double clicking on this field lets you rename your drum instrument.


 **Quantization options/colors:** Use this menu to assign any one of the eight different colors to the cells of a drum instrument. The dialog for the instrument's quantization options is also opened here.

The dialog is the same as for global quantization options (see page 107), but the settings only apply to the individual quantization options if an individual grid value is set for the note as well.

**K** Output channel

**#** Quantization grid, "Glo" refers to the global value (More Informationen can be found in the section "Quantization settings" on page 107)

**L** Note length, # corresponds to the grid value, "Glo" to the global value

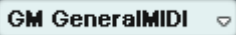
 Length of the notation, # corresponds to the grid value (i. e. the entire cell width), "Glo" refers to the global value of the note length

**V** Velocity scaling: The velocity value of each note is multiplied by the value set here in %.

Scaling is audible, but is not visualized further. The purpose of this setting is the customization of the volume ratio between the individual drum instruments. Software instruments usually provide their own mixers.

### Drum Maps

Drum maps specify individual instruments, e.g. bass, drum, hi hat, snare, etc. An individual output note, MIDI channel, and velocity scaling can be set for each of these instruments.

 **GM GeneralMIDI** ▾

The drum map can be set in the drum editor by clicking the "Map" field.

To split the drum names a "General MIDI" map is used by default. It may be the case that your synthesizer (regardless if real or virtual) uses a different mapping setup.

This means that when you play the drum event, the sound you wish to hear may not be heard (for example, instead of a bass drum, you

get a high tom). In this case you will have to re-sort your mapping setup. The settings for individual instruments can be specified in the trackbox. For more extensive changes we recommend using the drum map editor. There you can save your drum map as a file.

A project may contain various different drum maps. All drum maps saved in the project can be selected via the menu. If you require a drum map from a \*.map file, you will have to load it into the drum map editor first so that it can be shown in the menu. You can edit the individual drum maps in the drum map editor.

## Drum Map Editor

The drum map editor can be used to create and edit drum maps.

The "Drum maps" list on the left-hand side displays all drum maps which are available to the project. The drum map **GM General MIDI** is always available to start off with.

**New:** Creates a new, empty drum map.

**Copy:** Creates a copy of the existing map. This way you can quickly create variations of a drum map with various note allocations which can then be toggled via the drum editor.

**Load/Save:** Use this to save a drum map (\*.map file). This way you can use a drum map you created for a synthesizer in other projects as well. All loaded maps will be displayed in the "Map" menu of the drum editor.

**Delete:** Removes the selected drum map from the project.

Use the **name** field to rename the selected drum map. The settings (mapping) of the individual notes for each drum map will be displayed below this in tabular format.

**Pitch:** This is the incoming MIDI note.

**Instrument:** Displays the name of the drum instrument, e.g. "Bassdrum 1".

**Grid:** If desired, you can set up a grid for the starting point of the drum events.

**Length:** In this field you can set the grid for the note length.

**Output note:** This is the note value to which the drum instrument (the incoming MIDI note in the "Pitch" field) should be routed or mapped.

**Channel:** You can set up an individual channel for each instrument here.

**Quantization options:** This opens the dialog for the each instrument's quantization options (see page 107).

**Instrument, grid, length... apply to all:** This applies the corresponding setting of the selected instrument to all other instruments.

# Synthesizer objects

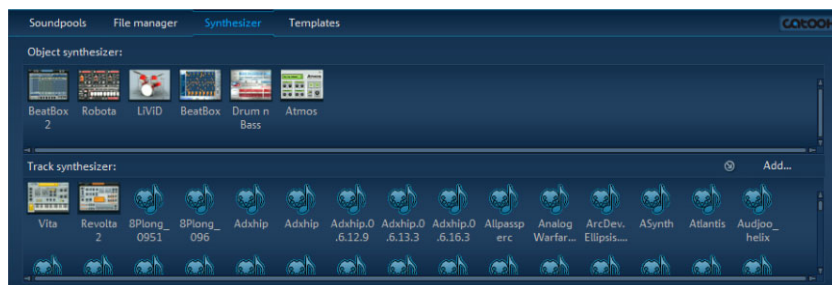
MAGIX Music Maker 16 Premium delivers many software synthesizers and synthesizer plug-ins (VST instruments) for creating your own sound material. The synthesizers are represented either by internal synth objects that can be arranged together with other objects on the tracks, or as in the case of VST plug-in instruments, by MIDI objects.

Here is an overview:

Synthesizer	Type	Use scenario
Atmos	Synth object	Background noise
Beatbox	Synth object	Nature and electronic beats
Drum&Base	Synth object	Breakbeats, bass lines
Machine		
Livid	Synth object	acoustic drums (complete song parts)
Robota	Synth object	electronic drums
Revolta 2	VSTplug-in	Synthesizer leads, pads, sequence figures
Vita	VSTplug-in	Nature instruments, guitar, bass, acoustic drums, piano, strings, horns
VST plug-ins	VSTplug-in	depends on plug-ins installed

## Opening the synthesizers

The software synthesizers can be loaded just like any other objects in MAGIX Music Maker 16 Premium via the Media Pool. To do this, open the Media Pool's **synthesizer** setting.



You will find icons for all available software synthesizers in the Media Pool. The upper section contains all synth objects; the lower section displays the synthesizer plug-ins.

## Note for users of older Music Maker versions

This version of MAGIX Music Maker has replaced older technically outmoded synthesizers with newer, significantly improved solutions. Other synths were replaced by newer, non downward-compatible versions.

Arrangements created using older versions of MAGIX Music Maker may not function properly MAGIX Music Maker 16 Premium for this reason. MAGIX provides the removed synthesizers as an extra download.

To download... <http://rdir.magix.net/?page=DEPBUN8R5E2>

## Synth objects

MAGIX Music Maker 16 Premium contains many internal synthesizers for creating your own drum patterns, break beats, bass lines, or ambient noise. The synthesizers are represented either by internal synth objects that can be arranged together with other objects on the tracks.

Every software synthesizer can be loaded into the arrangement via drag & drop. A synth object appears in the appropriate track and the synthesizer interface opens, and synth objects can be programmed via this interface. You should also read the sections about the individual synthesizers.

You can start or stop the playback with the space bar. If the synth object has a play button of its own (e.g. BeatBox), the plug-in can start it solo without playing the other arrangement tracks.

If the synth objects melodies or rhythms are programmed, you can close the the control console and arrange the synth object in the track. Synth objects are handled like normal objects and can be edited with all available effects (see page 165), drawn longer or made shorter using handles, or have their volume adjusted.

The interface of any synth object can be opened for further editing by double clicking it. In addition, any number of synth-objects from the same software synthesizer be dragged onto the track and programmed separately. You can also split up synth objects.

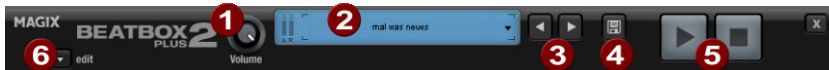
## BeatBox 2 plus

Note: BeatBox 2 replaces the older BeatBox from previous versions and is not compatible with them. Please read the notes for users of older MAGIX Music Maker 16 Premium versions (see page 118).

BeatBox 2 is a 16-voice drum computer with hybrid sound synthesis and a step sequencer. The proven handling concepts of the "old" BeatBox like matrix programming with auto copy have been expanded with comfortable editing of velocities and significantly improved sound synthesis, including a multi-effects section (one effect per drum instrument).

A drum sound is created in BeatBox 2 using a sample (analogously to the old BeatBox) which is combined with a synthetic sound that can be created using up to three different synthesis models (hybrid sound synthesis). BeatBox 2 plus enables detailed editing and automation of all sound parameters.

There are two styles of interface in BeatBox 2. While closed, you can listen to included sounds or those you've made in BeatBox 2 without using too much window space.



*Only the most important control elements are displayed when the program window is minimized.*

- 1 Volume controller:** Controls the volume.
- 2 Peakmeter and preset name:** The peakmeter lets you visually control BeatBox 2. Click on the triangle beside the preset name to open the preset list.
- 3 Next/Previous preset**
- 4 Save preset:** The preset includes the drum kit in use, the pattern, and any possible automations (see page 124).
- 5 Play/Stop:** The playback controller in BeatBox 2 starts BeatBox without playing the arrangement, too.
- 6 Edit button:** The edit button opens BeatBox 2 for you to program your own beats and sounds.



Maximized BeatBox 2 plus window

- ❶ **Drum kit:** This section loads drum kits (collections of different drum instruments) and the individual drum instruments.
- ❷ **Selected drum instrument:** The settings in the synthesis section (6) and velocity/automation (5) always affect the selected drum instrument.
- ❸ **Pattern editor:** Programs the beat sequence. In the top part, different patterns (sequences) can be loaded and saved as well as different settings for the view and function of the pattern editor. The matrix is where the beat is programmed: One line corresponds to a drum instrument, and a column matches a specific time position within 1-4 beats. If a cell is clicked on, then the respective drum instrument will be triggered at this position.
- ❹ **Velocity/Control:** This section has two modes: **Velocity** and **Automation**. The setting **Velocity** displays the velocity levels for the selected instrument's beats as a column. The **Automation** set up allows automation to be set for sound parameters in the synthesis section (6).
- ❺ **Synthesis:** The selected sound parameters and effects settings for the selected drum instrument can be edited here.

In the following, the sections of BeatBox 2 will be discussed individually:



## Drum kit



This section loads drum kits (collections of different drum instruments) and the individual drum instruments. You can also try out an already programmed pattern with different kits or exchange individual drum instruments.

- 1 Select drum kit:** Use the <> buttons to switch through the different drum kits. A drum kit is a collection of percussion instruments with matching sounds, e.g. rock kit or electronic drums à la TR 808. By changing the drum kit, you can add an entirely different sound to the rhythm you have already created.
- 2 Save drum kit:** Use this button to save the current collection of drum instruments as a kit.
- 3 Drum kit list:** Click on the arrow right of the name to open a complete list of available drum kits.
- 4 Select drum kit:** The arrow buttons function analogously to those of the drum kit. The sequence of drum instruments in the kit can be resorted via drag & drop.
- 5 Mute/Solo:** The "solo" button switches a drum instrument solo, i.e. all other instruments which are not "solo" will be muted. The "mute" button mutes a drum instrument.

New drum or effect sounds can be added to the current drum kit by **drag & drop** from Windows Explorer. Drag a wave file to a drum instrument to create a new drum sound based on this sample. BeatBox 2 copies the sample into the sample folder to make sure that the instrument or kit created can be used again later. You can drag a complete folder with wave files to the drum kit to create a kit based on those samples.

## Context menu

Right clicking a drum instrument always opens a context menu:

- **Copy/Paste:** Copy an instrument from a track and paste it to another one.
- **Empty instrument:** An empty instrument is added. No sound is played, it has no name, and is used to clean up an unused track.
- **Default instrument:** The standard instrument is added. It has the standard parameter for all synthesis shapes and serves as the starting point for your own sounds.

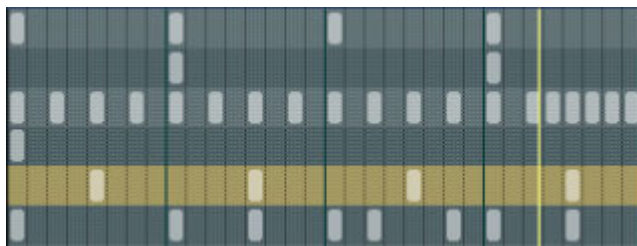
- **Reset automation:** BeatBox 2's own presets contain automations. These are dynamic sound parameters like filter curves or pitch changes. This command allows you to completely remove these for the selected instruments.

### Pattern editor buttons



- 1 Pattern:** Use the <> buttons to switch through the different patterns. The arrow to the right opens a list of all available patterns, and the save button stores the current pattern.
- 2 Clear track/all:** All events for the selected instrument (**track**) or all events for the pattern (**all**) are removed by clicking this button.
- 3 Bar selection:** The bar you wish to edit can be selected via the corresponding number button. Use the "Follow" button to select follow mode, i.e. the step display follows the steps of the currently played beat. **All** shows all bars of the pattern.
- 4 "1>2-4" Auto copy:** If more than one bar is set as the pattern length, "Auto copy" mode makes sure that the drum notes set in the first bar are automatically placed into the next bars. This also makes it easy to create a continuous beat, even with a loop length of four bars. Notes set in the bars further back are not affected by the "Auto draw" function, which, for example, makes faint variations detectable only in the fourth bar.
- 5 Bars:** The maximum length of a drum pattern is four beats. The length can be selected via the small scroll bar.
- 6 Shuffle:** This controller changes BeatBox 2's timing. If the fader is turned to the right, the eighth of a rhythm is played more and more like a triplet. If that sounds a bit too abstract – simply try it out, ideally with a pure 1/16 hi hat figure; you'll soon see what the shuffle fader is capable of.
- 7 Grid:** Here you can set the time resolution of the BeatBox. You can choose from 1/8 notes (only for very simple rhythms), 1/16 (default), 1/32 (for more refined constructions).

## Pattern editor - matrix



This is the heart of BeatBox. A click on any position in the drum matrix creates or deletes drum notes (events). Clicking and dragging draws in a series of notes. Together with the velocity editing options (see page 125) (velocity), you can easily create drum rolls.

If "Shift" is held when you click on notes in the range, a rectangle can be drawn out which selects the notes contained within this rectangle (lasso selection). Selected notes can be copied by dragging them to a new position. If "Ctrl" is also held down, then existing notes will remain at the target position. Delete all selected notes by right clicking.

Two special commands are available for selection:

Shift + double click	Select everything in the bar clicked on.
Shift + Ctrl + double click	Select all

A simple mouse click cancels the selection. The selection is automatically canceled after copying. If you want to keep your selection, hold down "Ctrl" while copying.

## Keyboard shortcuts

Many functions in BeatBox 2 can be controlled with the keyboard, for example a beat can be triggered with the "Enter" key live in a running pattern. Here's a complete list of the keyboard commands:

General	Key command
Open/Close editor	e

## Pattern editor - options

"1>2-4" Auto copy	a
Follow	f
Display bar 1... 4	1... 4
Show all bars	0

Grid finer/rougher +/-

### Selected drum instrument

Previous/Next	Cursor up/down
Preview	p
Live input	Enter
Mute on/off	m
Solo on/off	sec

### Velocity

The velocity mode serves for editing the velocity/automation of the individual drum notes for the selected drum instrument.



- 1 Reset:** Sets all velocity levels to 100%
- 2 Mode switcher:** Switches the section between velocity control and Automation (see page 124).
- 3 Random:** The random parameter adds random variations to the set velocities. This helps make your beats sound more natural.
- 4 Amount:** No function in velocity mode.
- 5 Velocity level:** Every set note for the selected instrument is displayed as a column and can be edited. Multiple columns can be edited at once; see Editing velocity values and automations (see page 125).

### Automation

Every parameter for a drum sound, including effects, can be automated, i.e. can change during a pattern. For example, you can make your snare drums more lively by adding higher voices to loud hits or by setting accents on individual hits with reverb effects.



The synthesizer section below enables the selection of a parameter for automation via the small blue LEDs above a parameter controller.

More about the parameter controllers in the Synthesizer section.



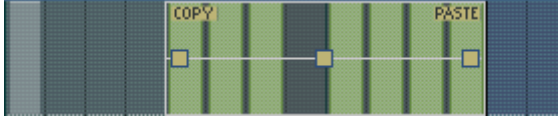
- 1 Reset:** Sets all automation values for the selected parameter. 0.
- 2 Mode switcher:** Switches the section between velocity control (see page 124) and automation switched. This happens automatically during selection of parameters.
- 3 Random:** The random parameter adds random variations to the set automation. This helps make your beats sound more natural because each programmed hit will sound slightly different. The level of the random parameter is also influenced by the amount controller (see below), i.e. if the amount is at "0", then the randomness will have no effect.
- 4 Amount:** The amount parameter regulates the complete influence of the automation values and of the random factor on the selected parameter. An amount of "0" does not have any effect at all on the automation; maximum level has the greatest effect. The effects of the amount controller on the automation values is made visible by a slightly lighter line in the value columns.
- 5 Automation values:** The selected parameters can be drawn in as a column with the mouse. Automation values can also be drawn between the set notes; the sound of the drum instrument changes during playback.

Automation values are added to the original value of the parameters.

### Editing velocities and automation values

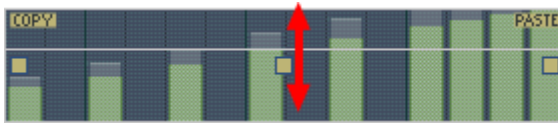
Hold down "Shift" and select any number of columns for velocity or automation with the mouse. Two special commands are available for selection:

Shift + double click	Select everything in the bar clicked on.
Shift + Ctrl + double click	Select all

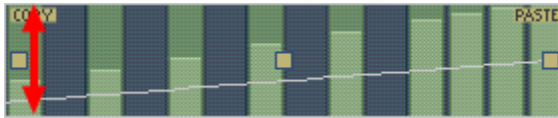


The "Copy" button copies the selection to the clipboard. If you select this or that track in another editor, then you can paste the notes there now from the clipboard. If the target selection is larger than the contents of the clipboard, then it will be inserted again. This lets you quickly add a short section throughout the complete length of the pattern.

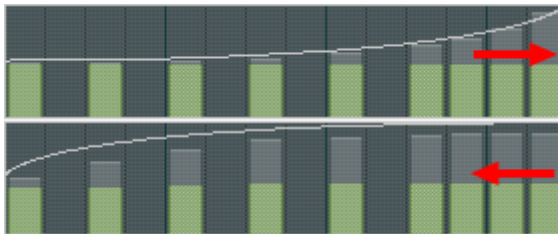
The three handles allow the velocity or automation values to be edited together.



The middle handle increases or lowers the values together.



An object can be faded in or out with the handles to the left and right upper corners of the object.



If you move the handles horizontally you can change the curve shape of the transition.

A single click in the automation section cancels the selection again.

Note: A selection of velocity values matches the selection of corresponding notes in the matrix editor.

## Synthesizer

In the lower section of BeatBox, you can set the sound for the selected drum instrument.

The synthesis in BeatBox 2 consists of a combination of a simple drum sampler and a synthesizer. There are three different synthesis models possible for the synthesizer: "Phase Distortion Synth" (FM synthesis), "Filtered Noise", and "Physical Modeling". The mixed signal of both components is then processed by a multi-mode filter. An envelope curve ("envelope generator") time-dependently controls modulations of in all components. The details of the synthesis models can be read in the section Synthesis models (see page 131).



- 1 Preview drum instrument**
- 2 Save drum instrument**
- 3 Select sample:** A click on the arrow selects samples from the categories like kick, snare, etc.
- 4 Select synthesis mode:** Switches between the three synthesis models.
- 5 Mix:** Mix relationship between drum sampler and synthesizer.
- 6 Parameter controllers:** All six sound parameters for a drum sound can be directly set and automated via the parameter controller. The parameters in question depend on the drum sound currently loaded. By clicking the name of a sound parameter, a menu opens for you to add parameter controllers to each drum sound's synthesis parameters.
- 7 Automation:** This selects the controller's parameter for the automation (see page 124).

## Effects section

Each of BeatBox 2's drum instruments includes an effects unit which

is fed in after the actual sound synthesis and editing. Each of these effects units includes a series of high-quality algorithms to add "audio polish" or to place the sound in a production-typical context.



- 1 FX on/off**
- 2 Parameter controller:** An effects module includes four adjustable parameters. The fourth, "Mix", is always available and the remainder possess a function dependent upon the selected algorithm.
- 3 Automation:** This selects the controller's parameter for the automation (see page 124).
- 4 Effects algorithm:** Click the arrow to select an effects algorithm.

The available effects algorithms per unit are described in the following.

### Mono delay (tempo sync / millisec.)

Simple, monophonic delay effect

#### Parameters

- **Time:** Delay time controlled by musical measure (sync) or free running
- **Feedback:** Repetition
- **Damping:** High damping of the repetition

### Stereo delay (tempo sync / millisec.)

Stereophonic repetition, adjustable separately per side

#### Parameters

- **Left / Right:** Delay times, synced or free running
- **Feedback:** In contrast to mono delay, no repetition takes place in the middle position of the **feedback** controller. When turned to the



left the type of delay is that of the so-called "ping-pong" variety, i.e. the signal is alternately sent so that it jumps from one channel to the other. When turned to the right the delay effect is "dual mono", in which case left and right sides act as two independent time-delay units.

## Chorus

Produces a typical "floating/shimmering sound" by modulated detuning of a signal to "thicken up" its sound or spread it across the stereo field. Detuning is achieved by a short delay, the length of which can be varied by the modulation. This produces the so-called "Doppler" effect.

Parameters

- **Time:** Delay time in milliseconds. This can be understood as the "base" modulation which is stretched or compressed by the modulator.
- **Rate:** Modulation speed
- **Depth:** Modulation amplitude. Low values modulate only a little, higher values lead to a clear vibrato.

## Flanger

Algorithmically similar to chorus, but different in that the delay time is significantly lower and delay works with repetitions (feedback). A flanger sounds more "cutting" and up-front than a chorus.

Parameters

- **Rate:** Modulation speed
- **Feedback:** Delay feedback
- **Depth:** Modulation amplitude

## Phaser

A modulation effect just like chorus & flanger, but in this case no detuning takes place. Filter components periodically alter the signal's "phase response" (principle of the "phase shifter"). Characteristic notches are produced in the frequency spectrum response to create so-called "comb filter effects". The phaser effect is suitable for pads and "psychedelic" sounds.

Parameters

- **Rate:** Modulation speed

- **Feedback:** Feedback of filter steps
- **Depth:** Modulation amplitude

### Room reverb / Hall reverb

In the case of reverb there are two realistic simulations of natural reverberation. Sounds receive "atmosphere" and thereby appear lively and "authentic". Room reverb simulates a small space with high echo density. Hall reverb mimics the typical reverb of large concert halls.

Since natural spaces never sound "static" because air molecules are constantly moving and due to the complexity of reflection processes, both algorithms include a modulation parameter which varies the delay time of individual echoes and thereby affects the liveliness of the reverb impression depending on strength.

Parameters

- **Decay:** Reverberation length
- **Damp:** Damping of highs, simulates absorption via air, wall materials, and objects
- **Mod:** Modulation strength.

### Lo-fi

This algorithm gives the sound a little bit of "grit", or a certain measure of signal destruction depending on its setting. An ideal partner for creative sound design. The simulation of early digital synthesizers or samplers is equally possible since their AD/DA converters were anything but "true" in the character of their sound. The sample rate from the output of the lo-fi effect can be continuously reduced and a generous measure of "aliasing" distortion can be produced alongside the unavoidable loss of highs which results from "down sampling". Bit resolution is clearly changeable, too.

Parameters

- **Rate:** Sample rate
- **Crush:** Number of bits
- **Low-pass:** Low-pass filter at the output to smooth out induced noise

### Distortion

This overdrive effect works similarly to common guitarist effect

pedals. Everything is possible, from light, bluesy signal saturation to hard "metal shred boards". Here a dual-band EQ works on the in and output signals and therefore provides a rich palette of sounds.

### Parameters

- **Drive:** Controls the internal level and thereby the overdrive
- **Low:** Bass portion.
- **High:**High portion.

### Analog filter 12/24db

### Vintage compressor

### Synthesis models

The sound synthesis in BeatBox 2 consists of a simple sampler and a synthesizer which includes three different synthesis modules.

### Sampler

The sampler plays short sound recordings ("samples") in different pitches. The sampler is intended for creating all kinds of drum sounds; the sounds are static and unnatural if the pitch is not altered. This is why the sampler is combined with one of the three synthesis models.

### Filtered noise

White noise is filtered by two band-pass filters with separately setup frequencies and resonance. This algorithm is suitable for creating synthetic snares and high hat sounds.

### Phase distortion synth

Two oscillators with regulated phase distortion and thoroughly variable frequency modulate each other (FM/cross-modulation/ring-modulation). Depending on the setting, this algorithm can be used to create kick, tom, or metallic percussion sounds; higher values for frequency and modulation level produce noisier sounds for high hats or shaker sounds. Since the oscillator frequency can be set exactly according to the musical pitch, this model can be used to produce mass lines or melodies.

### Physical modeling

This is a simple physical model of an "abstract" percussion instrument. A fed-back network of delays is caused to oscillate by an impulse of filtered white noise (exciter). Depending on the setting of the exciter, the size of the model (surface), and the damping, a wide spectrum of natural sounding percussion instruments like cymbals,

claves, gongs, or triangles can be created.

### Multimode filter/Envelope generator

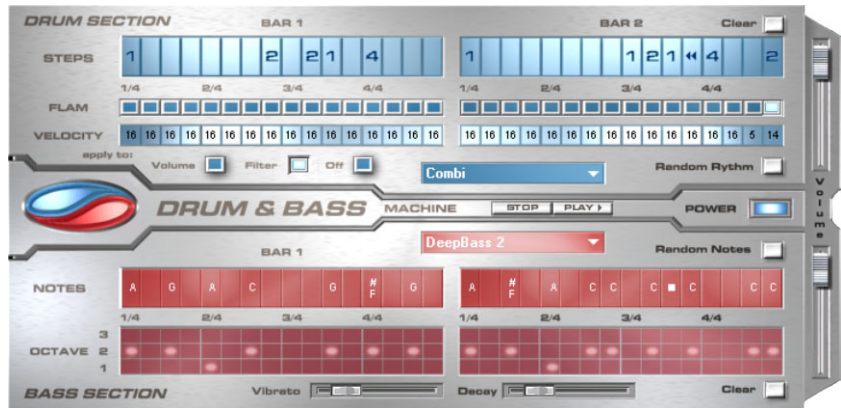
Following the samplers and synthesizers, an inverse filter (multi-mode filter) is added to add the last bit of polish to the drum sound. The envelope generator controls all time-dependent processes in the synthesizer and sampler.

## Drum & Bass machine 2.0

The Drum & Bass machine is a dual synthesizer, uniting both distinct styles of drum'n'bass in one piece of equipment to produce fast beat crashes and rumbling bass lines. With the Drum & Bass machine you need no special skills to create authentic sounds for your drum'n'bass songs.

A tip: The typical speed for Drum'n'Bass is usually around 160-180 BPM. The Drum & Bass machine also fits in perfectly with other music styles, e.g. bigbeat (120 BPM) or trip hop (80-90 BPM).

### Setup



The top half of the synthesizer controls the rhythm section, the bottom half controls the bass section. Between the two, on the left side you will see a symbol where both sections can be turned on and off individually. You can turn off the bass section, for example, so that you take only the drum section break beat into the arrangement. The MAGIX Music Maker 16 Premium arrangement mix will then only include the drum section in the mix file.

The volume control is on the right border, controlling the volume for both sections. The play and stop buttons allow you to listen to your drum'n'bass creations up front in MAGIX Music Maker 16 Premium.

The "Drum'n'Bass" label covers a menu containing functions to load and save drum'n'bass patterns (Load machine state/Save machine state), and functions to delete or generate patterns (Clear all/Random all). The submenu "Velocity presets" contains some help functions for programming of the velocity row.

### **The rhythm section (top half)**

You can easily create complex and authentic jungle break beat sounds. In a professional recording studio, jungle break beats are created by dividing any given drum loop into several small "bits" and putting them back together in a different order. This lengthy process is significantly simplified by the Drum & Bass machine. You just have to design your own new play sequence.

You set up the new sequence in the top ("steps") row. The blue cells indicate the individual sections ("notes") for the subdivision of the loop.

A left mouse click on one of the blue cells allows you to select one of six possible symbols. Each symbol represents a different note or other way of playing the note. Every time you click on one of the blue cells, the next symbol is chosen.

Rely on your own intuition and creativity when programming your beats. It is not absolutely necessary to know the exact meaning of each individual symbol in order to create cool and authentic beats.

Summary symbol description:

- 1:** Play drum loop from beginning
- 2:** Play drum loop from the second note
- 3:** Play drum loop from the third note
- 4:** Play drum loop from the fourth note

**Backward symbol:** Play backwards from this point

**Stop symbol:** Stops play

The right mouse button allows you to delete the step cells individually. The "Clear" button on the right deletes all step cells; the drum loop is played in its original sequence. The "Random rhythm" button generates a random sequence. You can then alter the rhythm as you wish.

By clicking on the blue field in the bottom part of the rhythm section you open a pop-up menu where you can select the drum loop sound. If you select a different drum loop, it will be loaded and played as programmed by you.

In the "Flame" row you can set the note to be played twice quickly in succession instead of only once, allowing you to program rolls and fill-ins.

The "Velocity" row allows you to set intensity values between 0 and 16 with the mouse (left mouse click increases value, right mouse click decreases value). Use the three buttons under the "Velocity" row to determine how these values will affect the sound of your loop. If you select "Volume", the velocity value alters the volume for this cell (16 = loud, 0 = quiet). If you select "Filter", the velocity value alters the filter strength for this cell (16 = sharp, 0 = muffled). The "None" button blocks use of the velocity values.

### **The bass section (bottom half)**

The bass section allows you to create the right bass lines for your rhythm quickly. As in the rhythm row, there are two-step rows.

- With the first "Notes" row, you determine the sequence of the notes, i.e. the sound sequence.
- By clicking on a cell with the left mouse button, you open a pop-up window, where you can select the notes.
- By clicking with the right mouse button, you delete a cell.
- If you click on an empty cell with the right mouse button, you will see a "Stop" symbol. This function is similar to that in the rhythm section, i.e. it stops the bass sound at this point.
- In the "Octave" row you can determine the bass octave sound. Octave 1 creates a deep tone, Octave 3 a high tone. You can only set the octave values if there is a note in the row above.
- As in the rhythm section, there are also buttons for "Clear", "Random notes", and a red selection field at the top border of the bass section. The red selection field allows you to set the bass sound.
- Underneath the step rows, you will also find two sliding controls for sound adjustment. You can use the "Vibrato" control to make the bass tone "swing" at its pitch. If the control is pushed all the way to

the right, the swing will be stronger; all the way to the left will have no effect on the pitch.

- With the "Delay" controller you can set a time for the sound to completely fade out. All the way to the right makes the sound fade out quickly (after approx. ¼ second); all the way to the left means ongoing sound.

## LiViD - Little Virtual Drummer

MAGIX LiViD helps you to turn your ideas into songs. Enter a few basic details and LiViD will play a full drum track, complete with intro, verses, choruses, fills, bridges etc.; the entire song structure is laid out for your convenience. Brilliant stereo drum samples recorded by professional studio musicians and a freely adjustable "Humanize" function will create an authentic drum feel with perfect sound quality.

LiViD features four styles (pop, rock, funk, latin), each of which is subdivided into four further substyles, as well as six song sections for each substyle (intro, verse, bridge, chorus, outro, fill-in).

**Scramble:** A random sequence of four one-bar patterns is generated internally for each style/substyle/song section. "Scramble" generates a new pattern order.

**Shuffle:** Shifts the second and fourth 16th note of a beat back by a freely definable amount (100% = triplet rhythm).

**Humanize:** Randomly shifts all events backwards or forwards, or leaves them unaffected. Note: these shifts are very subtle and not always immediately perceptible!

**Snare:** Sets the snare stick style to "normal", "side stick" (stick hits the rim while resting on the skin) or "rim shot" (sticks hits the rim and skin simultaneously). Exception: the snare's quietest velocity level (the "ghost notes") is always "normal".

**Hi-hat:** Sets the hi-hat sound to "soft" (fully closed) or to "hard" (half-open). Exception: completely opened hi-hat (pop, type1, verse).

**Ride:** Sets the ride cymbal sound to "ride" (cymbal is hit on the rim) or "ride bell" (cymbal is hit on the bell at the center).

## Robota

The Robota is a four-part drum computer with virtual analog and sample-based sound production. Virtual analog sound production means that the sounds are synthesized in real-time, i.e. produced with a synthesizer to recreate the typical analog sounds of classical drum computers, such as the Roland Tr-808 and Tr-909, or more recent devices such as the Korg Electribe or the Jomox x-cousin. Sample sound production uses drum sound recordings (or even other recordings) as the basis for sound production.

After selecting the elementary sound production technique, the sounds of each of the 4 parts (or instruments) can be edited using modulators.

The step sequencer programmed with incident lighting helps Robota to play. 4 beats in sixteenths (or 2 beats in thirty-seconds) are processed as a loop. At each beat position, the playing positions can be set by clicking a button. In "Event" mode, the instruments are distributed within the beat pattern. In "Snapshot" mode you can adjust additional instrument sound settings.

### Sound synthesis

The four instruments of the Robota are built identically. Each instrument can create all kinds of drum sounds – from hissing hi-hats to phat bass drums.

During elementary sound production, you can choose between an oscillator with selectable wave shapes (sine, triangle or saw tooth) or a sample. In addition, you can add a noise generator can be added. The oscillator has a pitch envelope (pitch env.) and a volume envelope (attack/decay). It can also be frequency and ring-modulated. The depth of the modulation can be controlled via an envelope parameter (Fm/rng dcy). There's also a "Lo-fi" section consisting of distortion (Rectify), bit rate reduction (Crush) and sampling rate reduction (down sample).

Temporal control via an envelope (lofi dcy) will get the best out of the lo-fi effects. A multi-mode filter (low-pass/band-pass filter/high-pass) with 12/24 dB steep-side. A comb filter can be inserted. The filter frequency can be likewise modulated via an envelope. For extra pressure, an adjustable compressor (compressor, comp resp) is included, as well as tube amplifier simulation (tube).







**Parameter (1)** To simplify matters, not all parameters can be changed on a sound - only those that are meaningful for the selected drum sound may be changed (snare, kick, high etc.). There are four selected variable parameters coordinated exactly with the selected preset sound.

**Oscillator waveform (2):** The fundamental waveform of the Oscillators is selected here. You can choose from sinus/triangle/sawtooth/sample. If you have selected "Smpl" you can use the rotary knob to select a sample, i.e. a previously recorded drum sound. These samples are saved in the folder /synth/robota/samples/. If select custom samples, they will appear in the selection list.

**(3):**For each part you can regulate: Filter Cutoff, Resonance, Tube, Volume and Panorama (see page 138).

 With **select** choose the instrument for editing in the step sequencer.

 "M" mutes the instrument, "S" makes it solo

 The **loudspeaker** button allows you to hear a preview.

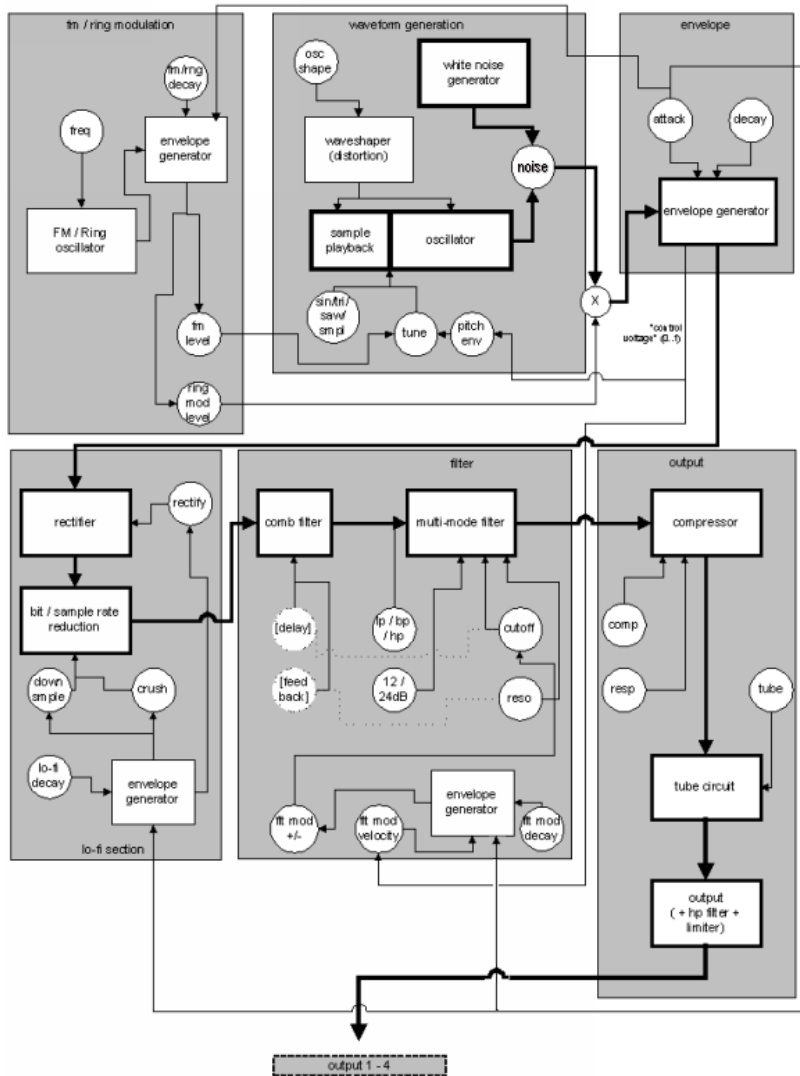
## Master Section

**Volume** regulates the total volume of the Robota. **Distortion** adds an adjustable tube distortion to make the sound "dirtier" and more powerful. The peak meter helps control the output level – when it enters the red area, reduce the total volume.

## Schematic illustration of the Robota synthesis



instrument 1 - 4 signal flow



Here is a detailed circuit diagram of a Robota voice with a description of all control parameters.

**Pitch envelope (pitch env)**

Controls the pitch envelope level.

**Tune**

Tunes the instrument.

**Oscillator shape (osc shape)**

The shaper adds additional frequency shares to the basic sound of the oscillator by artificially reshaping the wave shape. A sine wave (shape = 0) can be reshaped up to a square curve (shape = max).

**Oscillator waveform**

The fundamental waveform of the oscillators is selected here. You can choose from sine/triangle/sawtooth/sample. If "Sample" is selected, you can use the controller to select a sample, i.e. a previously recorded drum sound. These samples are saved in the folder /Synth/robota/samples/. If you select custom samples, they will appear in the selection list. If you are playing your own samples, they will appear in the selection list.

**Noise**

Adjust the ratio between the oscillator sound and the noise generator.

**Attack**

Adjusts the attack time. The greater the set value, the softer the attack of the sound. The attack rate is also applied to the lo-fi and filter envelope curves.

**Decay**

Adjusts the decay curve. The greater the value, the slower the instrument will decay.

**FM/Ring modulation frequency (Fm/rng frq)**

The fundamental frequency of the frequency or ring modulation.

**FM level (fm lvl)**

At a low frequency FM first adds vibration to the sound, at high frequencies and low levels it creates bell-like sounds, as the level increases metal sounds, and finally noise.

**Ring modulation level (rng lvl)**

Ring modulation creates typical auxiliary frequencies.

**FM/Ring modulation decay (Fm/rng dcy)**

Time constant of FM/ring modulation by-product. Only the beginning of the drum sound is affected by the modulation.

**Rectify**

Distorts the audio signal.

**Crush**

Bit rate reduction. Digital artifacts become audible with higher settings.

**Down sample (dwnsmple)**

Sample rate reduction. Ideal for creating the "old school sound" of older digital drum machines. As it is increased, the result becomes darker.

**Lo-fi decay (lofi dcy)**

Time constant of the by-product of the three lo-fi effects which makes the sound "dirty". Only the beginning of the drum sound of the lo-fi effects is affected if the decay is low. For instance, this makes the kick of a kick drum sound more interesting.

**Filter modes (flt mode)**

Filter mode: High cut – sound portions above the cut-off frequency are filtered out. Band pass (BP) – Sound portions above and below the cut-off frequency are filtered out. Low cut - All sound portions below the cut-off frequency are filtered out. This mode is set as a preset and can not be changed.

**Filter frequency (flt freq)**

The cut-off frequency of the filter.

**Filter resonance (flt reso)**

Filter resonance which increases the sound portions at the cut-off frequency of the filter. If the resonance is high, the filter itself can also be used as an oscillator.

**Filter modulation -/+ (flt mod -+)**

Regulates how much and in which direction the filter envelope curve moves the filter frequency in which direction.

**Filter-Modulation decay (flt mod dcy)**

Decay time of the filter curve. Smaller values with high resonance create a "zapping" sound of the filter, greater values create the typical sweep sound.

**Filter modulation velocity (flt mod vel)**

Specifies how much the filter modulation depth depends on the velocity. If this value is increased, louder beats will generate higher filter curves than quieter ones.

**24 dB**

The filter can operate with a slope of 12 dB or 24 dB. This mode is set as a preset and cannot be changed.

**Comb filter (comb filt on)**

You can activate a comb filter, a feedback delay that creates resonance-like sounds comparable to a plucked string. The delay time and feedback levels are permanently linked to the filter parameters (frequency and resonance). This comb filter is set as a preset and can not be changed.

**Compressor**

Controls the compressor strength. This lets you increase the "power" of the drum sound.

### Compressor response (comp resp)

Controls the compressor time. The lower the value, the faster the compressor follows the volume.

### Tube

Controls the level of the tube amp simulation. It "saturates" the output signal of the voice and adds warmth to the sound if the settings are moderate. Increasing the settings makes the sound "dirtier".

### Volume/Pan

Controls the volume and panorama position of the drum instruments.

### Sequencer



Incident lighting is used to control the drum patterns just like in all classical drum computers and groove boxes. The step sequencer consists of 16 individual step buttons with LEDs corresponding to the appropriate partitioning of a beat:

16ths or 32nds (a half beat is in each case displayed). A button lights up to indicate the releasing of the instrument at this point in the beat (= step).

A left click turns on the step, a further left click deletes the step again.



A pattern can be a maximum of 4 beats long. The length can be modified using the fader on the button bar.



The beat to be edited can be selected with the applicable "edit" button. The "Follow" button specifies whether the step of a beat is in time.

**"1 > 2-4" auto draw:** If more than 1 beat is activated as the loop length, the "Auto draw" mode ensures that the drum note set in the

first beat is set automatically for the following beats. This makes it very simple to produce a continuous beat from a loop length of 4 beats. Notes set in the rear beats are not affected by auto draw.

### How to program a drum pattern:

- Select the pattern length with the fader.

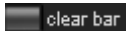


- Select "Event" mode.

- If you edit during playback, turn off "**Follow**". Select the beat with the "**Edit**" buttons.



- Use "**Select**" to choose an instrument to edit.



- Use the "**Clear bar**" button to delete all steps in the selected instrument.



- Turn on the appropriate **step** buttons, and use the "**Velocity**" controller to adjust the beat velocity.

- Repeat the procedure with the other instruments

### Snapshots

In addition, you can automate programming of the editable sound parameter of a drum sound via so-called "snapshots". You can thereby save the sound parameters of a drum instrument on the step buttons of the sequencers.

Automating the drum instrument with snapshots.:



- Set the edit mode to "Snap".
- If you edit during playback, turn off "Follow". Select the beat with the "Edit" buttons.
- Select an instrument and edit the sound. You can control the sound of an instrument even when playback has stopped by using the loudspeaker button.
- Save the sound as a snapshot to one of the step buttons.

- Change the sound of an instrument and save the settings to other step button

**Warning:** The parameters are not changed abruptly but are faded internally instead, in order to avoid crackling. If two snapshots with extreme parameter differences are too close together, the drum sounds will sound differently when the pattern is played.



- Using the arrow keys, you can jump between the individual snapshots during stopped playback.

- Press “on” to activate snapshot automation.

### Groove Control

The secret behind “groove” beats lies in delay. That is, individual beats are either anticipated or delayed according to patterns. For example house beats use the “shuffle” whereby straight 1/16s are delayed at certain times.

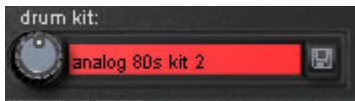


In the Robota there are **groove velocity** and **groove swing** presets. Groove velocity presets contain for each step of a beat a certain offset to increase or reduce the original beat velocity. Groove swing presets contain for each step a time alignment that is either anticipated or delayed. The result is a livelier-sounding sequence. The strength of the effect can be adjusted with the % regulator.

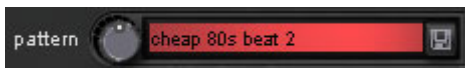
### Setups, drum kits, presets, and patterns



A single instrument sound is saved as a preset.

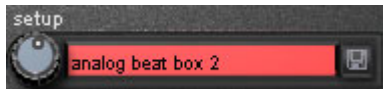


Presets containing all four instruments are saved as drum kits.




All note information plus the snapshots are saved as a pattern.





Together (drum kit + pattern)  
they are know as a setup.

## Load/Save

Presets, drum kits, patterns and setups can be selected with the continuous rotary regulators next to the display area. For storing, click on the  “Save” button. Then specify a new name in the input field. To store, press “Enter”.

Note: A drum kit stores only the names of the presets, not the actual parameters. If you want to store your own drum sounds that were created by changing existing presets, you must first store them as new presets and then as a new drum kit! The same applies to the setups, which contain only the pattern and drum kit names.

**If necessary, always store in this order:** preset -> drum kit -> pattern -> setup. This applies only when creating your own “templates”. If you store your arrangement normally, the complete current status (synthesizer + sequencer) of the Robota is always stored and correctly loaded later with the arrangement.

## Atmos

Atmos is a synthesizer which can be used to easily create realistic nature sounds in no time. From thunder and lightning to animal sounds and traffic noise, Atmos helps you design natural-sounding atmospheric noises for your projects.



- In the upper border window, select the top category "Scenario". You can select a desired nature sounds category (for example, "Thunder and Lightning").
- In the middle of the window, a collection of control elements appears for designing the desired "Ambience". Each element has its own description (e.g. "Thunder") and two faders, i.e. "Volume" and "Intensity". The "volume" control adjusts the loudness portion of the element. The "Intensity" fader controls the behavior of the sound, depending on controller element. For example, with "Thunder", you can set how often thunder and lightning should sound; with "Rain", the strength of the rain can be regulated (if moved to the far left, light rain can be heard, while if moved to the far right, a downpour with loud splashing noises is audible).
- At the bottom right border you will find a master volume fader with which the master volume of the synthesizer can be set. Furthermore, the "Randomize" setting is also located here. This way you can change the settings of the control elements by yourself.

## Synthesizer plug-ins

MAGIX Music Maker 16 Premium offers two VST plug-in-based software synthesizers along with the Vita and the Revolta 2. There are several differences compared to the other -synthesizers, which are controlled by synth objects:

- VST instrument plug-ins (see page 152)(VSTi) in general have to sequencers of their own and are controlled through MIDI objects.
- VST instruments are always loaded onto a certain track, and all MIDI objects control this VST instrument. The MIDI objects cannot be moved between tracks freely like synth objects.
- Effects can be applied only on the track level.

But for all this they are much more easier to manipulate in MAGIX Music Maker 16 Premium due to MIDI control, and sequences can also be recorded (see page 98) using MIDI keyboard.

The Vita and Revolta 2 VST instruments can be loaded via their symbol in Media Pool, and all other VST instruments via their according VSTi symbol. A pre-set MIDI object appears in the appropriate track with a menu, where you can load different working sounds of the included plug-ins or access all other installed plug-ins.

You can adjust the sounds of Vita Revolta directly by selecting a preset sound in the instrument menu of the trackbox.



To learn how to use MIDI objects and the MIDI Editor, read the MIDI Objects (see page 91) chapter. To learn more about VST instruments and the VST plug-in editor, please read the VST and DirectX plug-ins (see page 152) chapter.

## Revolta 2


Revolta 2 is a further development of Revolta. It is polyphonic and playable with up to 12 tones, including an additional noise generator, a step sequencer, and an extra-flexible modulations matrix. An effects section with 9 different effects and presets (created by a professional designer) make it a full-fledged synthesizer for all kinds of lead, sequence, and pad sounds.

REVOLTA 2 has a whole array of presets. The sounds have been created by professional sound engineers and demonstrate the huge

potential of this instrument from the word start. First off, however, we would like to encourage you to try out the various control functions and to experiment as much as you like. The sky's the limit to your creativity.


## Revolta 2 interface

*Note: The following is only a short description of the Revolta 2 interface.*

 For a comprehensive documentation of this complex synthesizer please click the help button on the Revolta 2 interface!

The Revolta 2 interface can be displayed in two sizes. In "Rack" mode only the elements necessary for preset loading are visible:



 By clicking the edit button you can open the complete interface.



**1. Main parameter:** Sets the volume, panorama position, pitch characteristics ("Transpose"), and play modes ("Poly", "Mono", "Legato"). "Glide" regulates the portamento time.

**2. Oscillator section:** Two oscillators are available with smoothly adjustable curve forms and a noise generator. Both oscillators can be tuned to each other and used to modulate frequencies.

**3. Amp:** This is the volume envelope. Here you can influence the temporal progression of a track's volume. **A**(ttack) stands for the volume increase at the start, **D**(ecay) for the length of time the decrease in volume takes on a section set with **S**(ustain) at the maximum volume. **R**(elease) is the length of time it takes for the sound to ring out. "**Vel**" specifies how much the envelope curve depends on the velocity.

**4. Filter:** Here you can switch on different filters to influence the sound. "Filter type" selects a filter type. "Cut-off" regulates the filter frequency, "Resonance" controls the strength of the amplification of the filter frequency. **VEL** indicates how much the velocity influences filter frequency, and "Key" changes the filter frequency depending on the note pitch ("Key tracking"). The filter envelope (ADSR slider) influences the filter frequency depending on the time. "Env mod" controls the strength of the filter envelope curve, and with "drive" the filter can be overmodulated.

**5. FX1/FX2:** Here you can mix in 2 different effects out of a total of 9 available effects.

**6. LFO1/LFO2/Step sequencer:** Two LFOS and the step sequencer can be used to modulate single parameters of Revolta 2.

**7. Options and modulations matrix:** The two buttons open the Revolta options page for general and preset-specific settings and modulation matrix. In the modulation matrix modulation sources are connected with modulation targets. Simple modulations like the oscillator (the pitch will be modulated via an LFO) can be set quicker directly on the interface. Much more complex modulations are possible in the matrix because the matrix offers more modulation sources (e.g. MIDI controller, oscillators) and the modulation source can influence more targets.

**8. Value display:** The value display shows the exact value of the parameter which was just modified. In addition, you can find out the load of the twelve voices.

**9. Preset section:** Here you can select Revolta presets. Every sound can be listened to, and an A-B comparison between two sounds is also possible (for example, an edited and an unedited sound).

## MAGIX Vita

MAGIX Vita Synthesizer specializes on realistic playback of "real" instruments for which it uses sampling technology. This means that short samples of real instruments in different pitches, playing techniques and volumes are used, combined, and played again at the correct pitch.

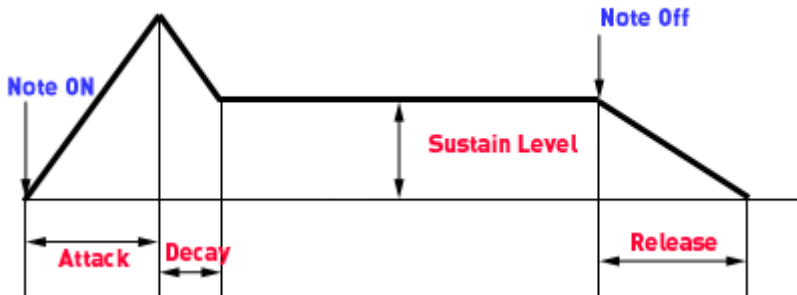
### The Vita interface



**1. Layer selection/Peak meter:** The Vita sounds, also known as layers, can be selected here using the arrows. Right clicking on the display opens the layer menu.

**2. Main parameter:** Sets the volume, panorama position, pitch characteristics ("transpose") and the fundamental frequency ("master tune").

**3. Amp:** This is the volume envelope. Here you can influence the temporal progression of a track's volume. **A**(ttack) stands for the volume increase at the start, **D**(ecay) for the length of time the decrease in volume takes on a section set with **S**(ustain) at the maximum volume. **R**(elease) is the length of time it takes for the sound to ring out.



**4. Filter:** Switches on a filter which influences the sound. "Filter type" allows you to select a filter type. "Cut-off" regulates the filter frequency, "Resonance" controls the strength of the amplification of the filter frequency. "Velocity" specifies how strongly beat should influence the filter frequency, and the volume can be balanced using the "Gain" controller. The filter envelope (ADSR slider) influences the filter frequency depending on the time.

**5. Delay:** Switches on an echo effect, "Time" controls the delay time, "Level" controls the strength of the echo sound.

**6. Reverb:** Switches on a reverb effect, "Time" controls the delay time, "Level" controls the strength of the echo sound.

**7. Value display:** The value display shows the exact value of the parameter which was just modified.

**8. Dynamic range:** Usually, the relationship between the created volume and MIDI velocity is proportional. Since some MIDI keyboards produce a velocity which is too hard for loud sounds or the other way around, this behavior can be balanced out with the "MIDI input curve". The dynamics of the sound can be influenced with "dynamic" and "dynamic curve", i.e. the relationship between the quietest and loudest sounds.

**9. Voices:** Here you can control the amount of voices played simultaneously. If notes are no longer played during fast passages, you can increase the amount of voices here (performance will not be as good).

**10. Keyboard:** Here you can preview the Vita sounds. This only works during playback or recording.

## VST and DirectX plug-ins

### What are VST and DirectX plug-ins?

A plug-in is an independent program section which can be added to another program, to broaden its range of functions. Various standards were developed for including plug-ins. "VST" and "DirectX" have become the most widely used.

"VST" stands for "Virtual Studio Technology". VST plug-ins offer an elegant way of copying and making virtual devices that are normally used in recording studios.

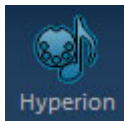
"DirectX" is a Microsoft standard for plug-ins similar to VST plug-ins.

The advantages:

- Purchasing expensive synthesizers or effect devices is no longer necessary.
- An expensive sound card is no longer necessary for high-quality recordings from external devices.
- VST instruments and VST/DirectX effects provided by lots of third party providers are better value or are even made available as freeware.

The disadvantages: Each of these plug-ins uses up processor power. The more a plug-in is used, the faster your computer should be. The required processing power is, of course, also dependent on the size, state, and complexity of the plug-in.

### Use VST instruments



To start using VST instruments, switch to the synthesizer folder and drag the VSTi Synth into a free track in the Arranger.

MAGIX Music Maker 16 Premium now shows a list of available VST instruments. When you do this for the first time, this list is still empty because you have to enter the path (VST plug-in path... at the end of the list), in which MAGIX Music Maker 16 Premium should search for the VST plug-ins and instruments. If you use other programs with VST plug-ins or if you have already created a folder for your VST



plug-ins, you can enter the folder here. Once MAGIX Music Maker 16 Premium has created the list, you can select an instrument from it. You can change the plug-in path at any time. If you have installed additional plug-ins in other folders, once "identified" plug-ins will be found independent of the specified path.

Using these instruments can vary considerably. Please read the corresponding notes of the manufacturer.

VST instruments are controlled via MIDI objects. When loading a VSTi synthesizer, this MIDI object will be added automatically – it will appear as a perfectly normal object, like the soundpools. If you double-click now, the MIDI Editor will open.

For help using the MIDI Editor, please read the "MIDI Editor (see page 95)" chapter.

## 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.

## Deploying VST/DirectX Effects

### Track effects

Track effects can be selected and specified in the Mixer. They refer to all objects in the corresponding track.

Tip: An effect set in the Mixer uses up processing power at every playback position in the arrangement. Consider whether or not it would be enough simply to use an effect as an object effect.

 Two slots for track effects are located in the channel strip of the mixer for the corresponding track as well as in the FX tracks (see page 243).

If you click on the small triangle here, MAGIX Music Maker 16 Premium compiles a list of available effects. Now you can select any effect from the list.

The list consists of multiple subfolders: Direct X plug-ins, VST plug-ins, and the MAGIX plug-ins folder for the included plug-ins Vintage Effects Suite (see page 203), Essential FX Suite, and Vandal SE (see page 217).

Select "No effect" to remove a plug-in from the slot. Left clicking temporarily disables the plug-in. Active plug-ins are displayed in light blue. Right clicking on the slot opens the settings dialog of the plug-in.

### Object Effects

The AudioFX rack for objects has a module in which 2 Plug-In effects can be employed. It works in the same way as the mixer:

1. Click on the box
2. Wait until the list of available effects is compiled
3. Select effect and configure

Contrary to track effects, object effects refer to the selected object and require only the requisite computing performance for when the object is played.

## Master Effects

In the master channel you can find two slots for selecting a master effect. Often, for example, compressors are used in the master so as to give the whole signal a more booming and louder sound. Effects selection here is the same as by the track effects:

1. Click on the box
2. Wait until the list of available effects is compiled
3. Select effect and configure

## Live Performer

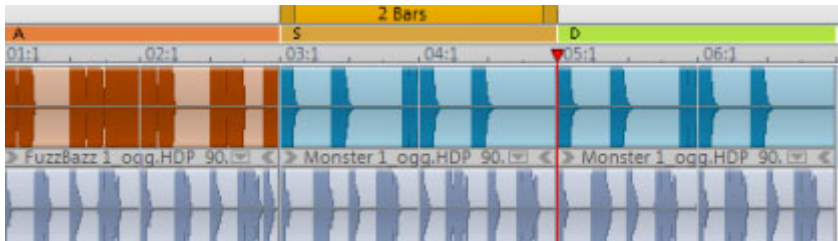
The Live Performer (open via the "Window" menu) helps you create and remix your arrangement. Many sections in the arrangement can be defined precisely according to the beat and played by pressing a key on the computer keyboard or MIDI keyboard. With the Live Pads (see page 160), sound loops or MIDI takes are positioned on the arranger tracks during playback. This way, MAGIX Music Maker 16 Premium can be transformed into a musical instrument that can be played directly and intuitively.

### Define ranges

To play your arrangement with Live Performer, you must frame individual area in the arrangement and define them as a range in Live Performer.

Open Live Performer, define a playback range (see page 42) and then press the corresponding key on the keyboard (a-k or y) or click on the corresponding button.

Repeat the process with all desired playback ranges.



The playback ranges will be displayed directly below the timeline.

The ranges can be renamed for better orientation. To do so, please right click on a range button or the range marker along the timeline and select "Rename". To delete an assignment, right click and select "Delete".

To reassign buttons already assigned to other ranges, right click on a button and select "Assign to current range".

## Play with Live Performer



If this symbol is active, the Live Performer is in playback mode.

If you click the appropriate key on the keyboard or click a button, the assigned range will be played back.

If you activate a different range, playback will switch to the other range. The time point of the switch can be determined using the quantization buttons.



Immediate switch. Warning, this can throw the arrangement out of rhythm!



Switch after one beat (1/4 bar). Interesting rhythmic displacements can result.



Switch after one bar.



Switch after two bars.



Switch after four bars.



Switch at the end of the range. The range will be played out to its end, irrespective of its length.

If the range just played back is shorter as the quantization length, for example if "switch after 4 bars" is selected for a 2-bar range, the switch will always be made at the end of the range.



**Stop button:** The "Stop" button discontinues playback. As opposed to the normal stop using the transport control of the space bar, the playback will not be stopped immediately, but the quantization settings will be taken into account. If "Switch after one bar" is selected, the current bar of the range will be played to the end and then the playback will be stopped. Stop is then also a "range" and can be also programmed in Sequencer (see page 158), for example for temporary undefined breaks.

You can also switch between ranges using MIDI command. For this, see MIDI assignments Live Performer (see page 163).

## Sequencer



By clicking on this symbol you switch the Live Performer into the Sequencer mode.

### Sequencer programming

Above the range buttons the text line will appear for function control (Sequencer). Enter ranges in the order in which they should be played back. Corresponding letters will be inserted in the Sequencer. This text line can be handled as any other text line: Letters will be added at the position of the cursor (small, blinking vertical stroke), the arrows move the cursor, and with Del or Back keys entries can be deleted.

**Warning:** In playback mode a range will be played as a loop until a different range is selected, and one letter corresponds exactly to a one-time playback of the range. If, for example, range D with a length of 2 bars should be played for 8 bars, DDDD should be entered.

### Playback sequence



This starts the sequence. The range play back always begins at the cursor position (the Sequencer cursor).

A progress bar in the Sequencer shows the position in the progression where the sequence control is found at the moment. Currently playing or played ranges are displayed in gray, and the cursor always moves in front of the next playing range. When the end of the programmed sequence is reached, this will be repeated from the start.

You can also enter the sequence during playback. The ranges are then entered at the end of the sequence.

You can also program the stop button (.). When playback reaches **stop** it will be stopped. A repeated sequencer playback start occurs from the cursor position, or behind the stop. You can thus program a progression, which stops after each played range (cue list for theater or a radio play).

### Transform sequence in arrangement



Using this button the programmed or recorded Live Performer sequence transformed into an arrangement.

A new project is created, which corresponds exactly to the sequence. This means that the defined ranges of the output project will be copied one after the other according to the succession and length defined in the sequencer.

Your current arrangement will be erased, but the Live Performer ranges will be applied to the new arrangement. This means that you can continue using the Live Performer unchanged, or you can close it and further edit the finished arrangement.

### Load and save Live Performer ranges



With the load and save buttons next to the Sequencer you can save and later load recorded or programmed Live Performer sequences.

A user scenario: Assumed, that you have various performer ranges in one arrangement and created a sequence. Before putting the piece together by creating a new arrangement with the "Transform sequence into arrangement" button, first save the raw material – the arrangement and the sequence.

If you would like to change a certain sample or transition later in your "put together" song, you don't have to do it on each spot the sample is used. Simply load your arrangement, change the respective places, load the sequence and create your song anew. In this fashion you can quickly create variations on a piece.

### Live Performer recording



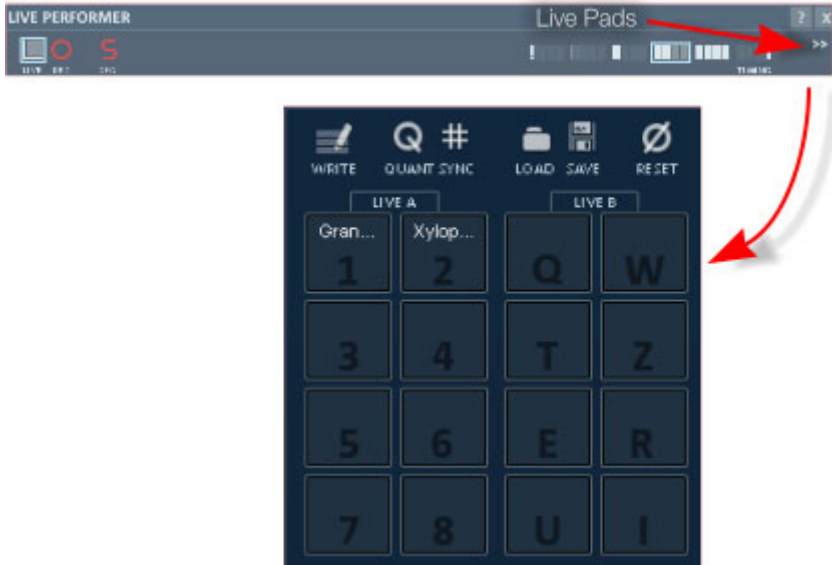
Use this button to start the Live Performer recording.

This will record all range switches in your time line made through the Live Performer. As opposed to programmed sequences, ranges can be played back only partially, the recording corresponding fully to your performance.

The precise length of such "partial" ranges can not be changed later in the sequencer. You can remove them from the sequencer, but you cannot enter them and can only create them with a Live Performer recording.

If, for instance, the button for playing the sequence is activated when the Live Performer is active, the Live Performer will automatically switch to Sequencer Mode and the recording will be stopped.

## Live Pads



*Clicking on the >> button opens Live Pads*

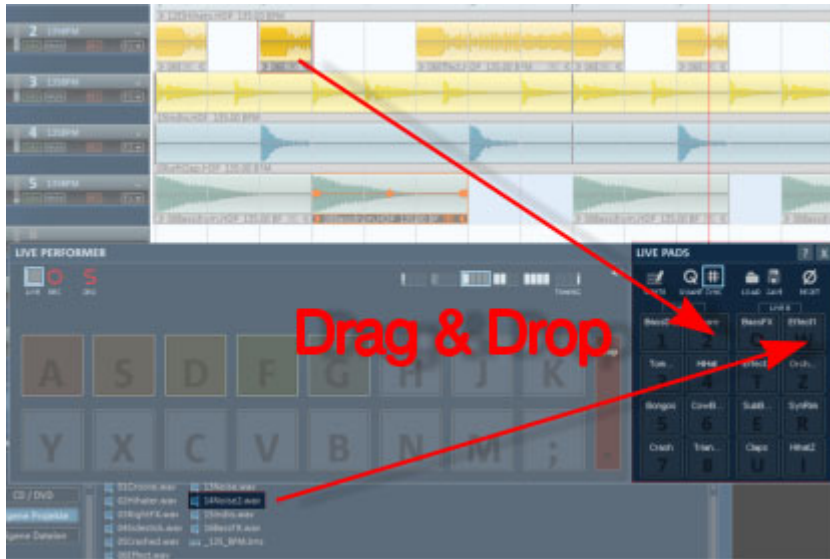
Live Pads are a component of the Live Performer. While individual sections of a previously created arrangement can be rearranged in realtime in the Performer, using Live Pads you can create your arrangement live. During playback you can place the samples using the computer keyboard or a MIDI keyboard inside the arrangement. This way, MAGIX Music Maker 16 Premium can be transformed into a musical instrument that can be played directly and intuitively.

### Load loops

You can distribute any samples or MIDI takes on two virtual play consoles (tables) that each have 8 storage slots. The Live Pads can be filled with audio samples (wav, mp3 or ogg files) or takes (.tak). To do so, place a file from the Media Pool using drag & drop onto a Live Pad. With the "Live A" or "Live B" buttons in the Media Pool you can load several files to one table.



You can also take an object directly from the arrangement and place it onto one of the Live Pads. The object will disappear from the arrangement.



### Load Live Pads with takes

Sometimes it is of advantage to load Live Pads with Take files (see page 68):

- About VSTi software instrument control: Live Pads can also play back MIDI loops, but for this a VST instrument must be assigned to the MIDI object (or track, in which this MIDI object is located). This assignment can be saved together with the MIDI object as a take. The loops in the included styles that use the Vita or Revolta 2 synthesizers have also been created in this fashion. For this reason they can be used with Live Pads right away.
- Also the internal software synthesizer (beatbox, drum&base machine...) can be used with the Live Pads.
- You can add object effects to audio samples. Because during a Live Pad recording objects can end up on different tracks, using track effects can be hard.

Takes are created by saving objects as takes (.tak file) (Edit menu command or right click on object > "Save objects as takes", shortcut Ctrl + F).

## Play Live Pads

Loops can be played back by clicking on the corresponding Live Pads using the computer or MIDI keyboard.

	Keyboard shortcuts	MIDI keyboard
Table A (left)	1..8 (using letter keys)	F3 - C4 (Note number 65-72)
Table B (right)	qwertzui	C#4 - G#4 (Note number 73-80)

The MIDI driver can be selected via Program settings > Audio > MIDI input.

As soon as a Live Pad is selected, playback begins.

During playback the corresponding object will appear, and then disappear again when the Pad is released (during a recording it will remain visible).



Sync Mode

By default, loops are played in **Sync Mode**, as if they were all started at the arrangement start and switched with the pads to "audible" (Mute Automation). This means that all loops always play in synch. Use this mode to create a basic structure for your arrangement.

If the sync mode is turned off, loops will always be played back from the start, as soon as they "pop up". Use this mode if you would like to add soli or effect sounds or take apart beats to make break beats.

## Record Live Pads.



By pressing the "Write" button you activate the recording of Live Pads.

During recording objects will be created in the arrangement if the corresponding Live Pad is activated.

The recording takes place in overdub mode, and once created objects will not be overwritten.



Here recording quantization is set. This means, that the start of an object can be inserted in the arrangement according to the selected bear grid during recording.

### Additional Live Pads buttons



The complete assignment of the Live Pads can be saved with this button as a "Live Set" (.lms file) to be used later. The current Live Pad assignment will be saved together with the arrangement.

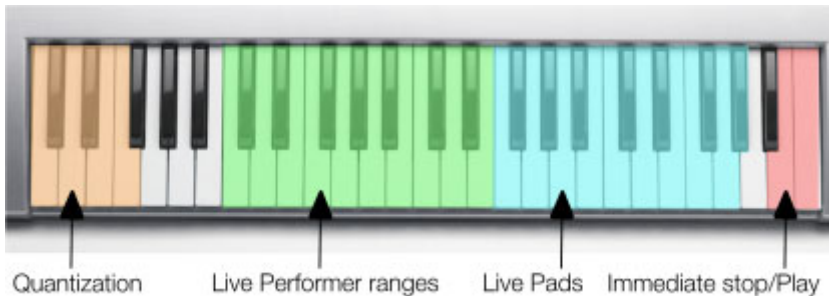


With this button you can load your own or ready-made Live Sets.



Reset: Sets the options back to working settings and deletes all samples.

## MIDI assignment Live Performer



Range	Function	Note	Note number
Live Performer quantization	Now	C1	36
	Beat	C#1	37
	Bar	D1	38
	2 bars	D#1	39
	4 bars	E1	40
	To end	F1	41
Live Performer ranges	asdfghj	C2-G2	48-55
	yxvbnm,	G#2-D#3	56-63
	Stop	E3	64
Live Pads	1-8	F3 - C4	65-72
	qwertzui	C#4 - G#4	73-80

Playback control	Immediate	<b>H4</b>	<b>83</b>
	stop		
	Play back	<b>C5</b>	<b>84</b>
	Continue		

## Arranging with Live Performer

With the Live Performer and the Live Pads you can create and remix your arrangement in MAGIX Music Maker 16 Premium.

1. Open the Live Performer and open the Live Pads
2. Fill the Live Pads with samples and takes, which you would like to use in the arrangement. You can, of course, load more samples during arranging.
3. Define a range with the length of a song part (for example, 4 bars) in the arrangement and define a Live Performer range with one of the range keys. The range will be played back (empty at first).
4. Then, play the Live Pads, until you are sure what should musically "happen" in this song part. Then start the Live Pad recording and record the Live Pads for this range.
5. Click into the arrangement, and using the arrow keys you can now move the current range by the length of a whole range, and double it or cut it in half with Shift and arrow keys. In this way you can define additional ranges as song parts for the Live Performer and fill them with objects via the Live Pads.
6. Now you can switch your song parts with the Live Performer keys.
7. After you have you've figured out all your song parts, switch the Live Performer into the sequence mode and program your song. Or start recording of the Live Performer and play your song.
8. Finally, you can change the Live Performer sequence into a proper arrangement using the "Transform into arrangement" button.

## Record audio output

You can record the complete audio output of MAGIX Music Maker 16 Premium directly into a WAV file. The option "Write real-time audio in WAV file" can be found for this in the "Playback parameter" dialog (Menu "File > Settings > Playback parameters" or button "p").

If this option is activated, with the next start the complete playback of the arrangement will be recorded live. With the next stop you can save your recording and load it for immediate editing in the arrangement. Use different names to save your single sessions, ensuring that no recording will be mistakenly erased.

# Audio effects

MAGIX Music Maker 16 Premium offers you a multitude of infinitely variable and intuitively adjustable audio effects.

## Effects

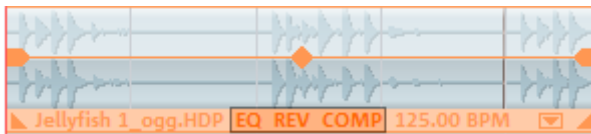
The effects in MAGIX Music Maker 16 Premium allow the sound spectrum of all of the audio objects and synthesizers to be thoroughly manipulated. Since most effects operate in real time, the effects offer ideal room for experimenting with creative sound design.

### Real-time effects

Real-time effects are calculated the first time the object is played back. The audio file (original material) itself remains unaffected. The effect is recalculated in real time each time it is played back. The object always retains its original status when real-time effects are applied.

To change a real-time effect, open the effects rack or the effect's settings dialog and drag the respective control elements; the changes will be audible immediately.

The lower edge of an audio object in the arranger lists all currently active object effects with abbreviations.



### Control Effect devices

The effects are controlled in the conventional way by the use of slider controls, turning knobs, buttons or using graphic sensor fields.

Sensor fields: Sensor fields can be intuitively used with mouse movements, the sound of the audio and the respective effect settings change according to the mouse movement. For every effect, two settings are simultaneously affected within the sensor fields (such as echo delay and feedback).

**Power:** Every effects device in the rack can be separately switched on or off.

**Reset:** Every effect has a reset button that restores the effect device's initial default (off). The effect is not calculated into the sound, and the effect is not rendered.

**Preset:** Each effects device is equipped with a selection of presets are selected through the dropdown menu.

**Bypass:** Some effects are equipped with a bypass button which bypasses the effects device. The bypass button allows you to directly compare the neutral, unedited sound of the audio object with the effects setting you have chosen.

**A/B:** Similar to the bypass button, the A/B button also compares two settings with each other. If you have selected a preset for the effect and make manual changes to it later, you can compare the original preset sound with the new settings by using the A/B button.

### **Non real-time effects**

A few audio effects are not calculated in real time; instead, after the settings dialog is closed, copies of the audio material are added for calculating the effect. This way, no additional calculations will be required during playback.

To change these effects, use the undo function.

The following effects don't work in real time: Freely-drawn filters, gater, reverse, invert phase.

## **Using audio effects**

Audio effects can be added at different positions in the arrangement, at object level, in a complete track, or in the master (i.e. everything you can hear).

### **Audio object effects**

Object effects do not affect the entire arranger track, but rather individual objects. The advantage to this is that effects which are only required at a specific point in the arrangement only use up processing power at that particular point.

There are several ways to apply audio effects to individual audio objects:

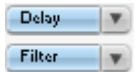
1. **Drag & drop:** In the Media Pool setting "templates", the following folders are visible "Audio FX", "Vintage FX". These contain presets for the most important effects. These presets have a preview function and can be dragged & dropped on an audio object in the arranger.
2. **Right clicking** on an audio object or via the "Effects -> Audio" menu opens individual audio effects via a menu command.
3. **Double clicking** on an audio object opens the audio effects rack (see page 168). The most important effects are compiled into one dialog and some special functions are still available, as is the option of saving all of the effects settings.

### Track effects

Besides the object audio effects, a separate track effects rack with equalizer, reverb/echo, compressor as well as the Vintage Effects Suite plug-ins can be used.



There is also a separate 4-channel parametric equalizer (see page 194) that may be opened via the small EQ button beside the panorama controller.



The plug-ins are loaded via the plug-in slot.



You can open the track audio effects rack with the FX button.

A bright blue track effects button signifies that effects are active in the track.

The track effects can also be applied without having to open the mixer.



The arranger's trackbox also features the track FX menu. In it, you will find presets for track effects (see page 167) sorted according to the instrument type.

Track effects always apply to all audio objects of a track. In comparison to applying an effect to each object individually, this saves storage space. The effect itself works the same way as object

effects.

### Master effects

Master effects influence the mixed sum of all audio tracks. For this purpose a Master Audio Effects Rack and further plug-ins are installed in the Mixer window. Also included: the special MAGIX Mastering Suite (see page 193) for perfect sound.

### Effects curves

Many effects may be manipulated using the effect curves for a more dynamic application of the effect. This means that certain effect settings can be changed during playback. The effect curves are available as object curves and track curves. Object curves are always object-related, i.e. they only apply to one object and are moved or copied together with the object. The track curves are saved on the track and influence all objects of the track.

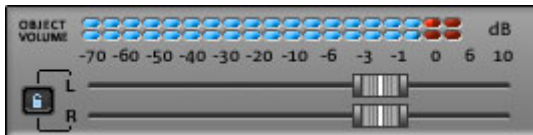
To edit the effects curves you can use the "Control effects via curves (see page 235)" dialog.

## Object and master effects rack

The audio effects rack for objects can be opened by double clicking the audio object. The audio effects rack for the individual tracks or for the entire sound ("master effect") can be opened via the FX buttons in the mixer window ("M" key).

Besides the most important effects devices like the 10-band equalizer, compressor, timestretch/resample (objects only), reverb/echo, sound warper, and amp simulation, the following functions are available:

### Object Volume



Here you can set the master level for the selected object. With some effect combinations undesired distortion may appear as many effects increase frequency ranges. In this case, you can reduce the master volume.





The faders for each stereo channel are usually moved together.

If you deactivate the left button, the object can be made into stereo panorama by separate volume controlling for left and right.

### Load/Save

The current settings for each applied effects device in the rack can be saved as an effect preset, e.g. so that it can be used for other objects. Only the rack effects that were used will be saved and loaded during this process. This means that effects presets can also be combined.

This function is not yet available for the track effects rack.

### FX plug-ins



If external plug-ins are installed on your computer, you can activate them via the button to the bottom right. These buttons also open the effects from the Vintage Effects Suite (see page 203).

For more information on plug-ins, please read the VST and DirectX plug-ins (see page 152) section.

### Apply (destructive editing)

With "**Apply**" the current setting of an effect or of an entire effect rack can be "calculated into" the audio object.

This has the advantage that no more processing power will be required for the effect. The object will be replaced by a new audio file which contains the sound of the object with the effect. This will then only be played – processor-heavy "realtime" effect calculation is no longer required.

The disadvantage: Changing the effect settings is not a simple any more. You can undo these "destructive" changes straight after using the Undo function in the Edit menu (like every editing operation in MAGIX Music Maker 16 Premium). After saving the project this is no longer possible.

In the master effects rack there are no Apply buttons. Instead, the function can be found in the Edit menu (Mixdown audio (see page 293))

### Play object/Play arrangement



To the bottom right of the Audio FX Rack you will find two playback buttons which either play the selected object or the entire range. This lets you preview all effect settings in realtime.

## Equalizer



The 10-band equalizer subdivides the frequency spectrum into ten areas ('bands') and equips them with separate volume controls. This way it is possible to create many impressive effects, from a simple boosting of the bass to complete elimination of a certain range of frequencies. Note: If low frequencies are boosted too much, the overall sound level is heavily increased which may lead to distortion. In this event, adjust the overall volume downward by using the 'master volume' control situated at the bottom center of the effect rack.

**Slider control:** Each of the ten frequency ranges can be separately boosted or turned down with the ten volume controls.

**Link bands:** Using this button randomly combines the frequency ranges with each other in to avoid artificial-sounding overemphasis of an individual frequency range.

**Touch screen (right EQ section):** This is the 'sensor field' of the EQ. Here you can draw any type of curve with the mouse. This will be immediately translated into a corresponding control setting on the left side of the EQ.

## Sketchable filter

This allows you to draw the craziest effects simply with your mouse. The left side of the graphic represents low tones, the right side high tones. You can switch on real-time playback by clicking on the "Test" button.

From now, all changes of the red line can be heard immediately. A "slope" in the left graphic causes a strong increase of the bass, a "slope" in the right side strongly increases the highs. An interesting effect is to delete a filter curve over an entire area, i.e. setting all the values in the display to low values). This practically cancels the sound.

From now on, you will be able to hear all changes in the red line. A "hill" in the left part of the graphic results in a strong increase in the bass, a "hill" on the right side considerably increases the treble.

Great effects are frequently achieved if a filter curve is initially deleted over the entire area (if everything in the display is set to low values). This removes almost all the sound.

Now, only individual frequency ranges can be made audible in the upper section of the display with a few clicks of the mouse. This rapidly turns a normal drum loop into Science Fiction noises!

The filter curve can quickly be reset to its original condition with the Reset button.

The option "Prevent clipping" attempts to automatically prevent an over-addressing of the audio material.

The "volume" control controls the volume of the material.

### Filter-Sweeps/Morphing

The creation of so-called "Filter-Sweeps" or "Morphing" is also possible:

1. Activate the "Start curve" button on the far right.
2. A red filter curve for the beginning of the audio material can now be drawn, e.g. a 'hill' in the left half of the display (increase bass).
3. Activate the "End Curve" button.
4. A blue curve for the end of the audio material can now be drawn, e.g. a 'hill' in the lower part of the display (increase treble).

5. Real-time replay can be started with "Test" – A soft filter sweep bursts out from the red to the blue curve. Really cool morphing sounds can be created in this way!

## Compressor



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 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 amount of compression.

**Threshold:** Set the volume threshold, below and above which compression is applied.

**Attack:** Sets the algorithm's reaction speed 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 speed to falling sound levels.

## Invert phase

This function moves the object to the rear loudspeakers of a dolby surround system.

Quite an impressive effect for the audio tracks of video productions.

## Reverb



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.

### Fundamentals

Our everyday experience shows that not every room matches every instrument. Thus we have designed “virtual” rooms. However, it still remains important to find the correct parameters. Here are some examples of parameters that are decisive for the sound impression in real and virtual rooms:

- **Size of room:** The larger a room, the longer the sound travels between walls or objects. Our brain “calculates” the size from the time difference. The size impression is mainly determined from so-called first reflections and the discreet echo. We don’t notice a (diffused) reverb.
- The **reverberation time** is mainly influenced by the composition of the walls, ceilings and floors. This reverb time is highly frequency-dependent. For instance, the highs and mids are dampened more in rooms with curtains, carpets, furniture and some corners than in an empty and tiled room.
- **The density of the reflection:** The sequence of the first reflection is particularly important. A room with many individually recognizable echoes feels alive, especially if they are quite far apart.
- **The Diffusion:** Simple reverb machines do not take into account that reflections become more and more complex as they develop. They blur the first echoes at the beginning, which sounds artificial and “two-dimensional” for many signals. Our reverb effect works like a real room instead where individual echoes can still be heard at the beginning of the reverb but then reflect amongst each other more and more until they disappear in the signal sustain as a so-called “diffused hiss”.

The 24 presets include many rooms that were designed for certain

instruments and applications and whose internal parameters have been optimized for these applications. However, you can influence most of the characteristics of the room using the provided sliders.

In addition to the rooms we have modeled two device types in the reverb effect that allow you to create an artificial reverb for a longer time: Plate Reverb and Spring Reverb.

**Plate Reverb:** A plate reverb consists of a large metal plate (often 0.5 to 1m<sup>2</sup> thick or more), that is put into motion by a magnet and coil system (similar to a loudspeaker). On the reverb plate so-called “taps” are positioned at different locations. These are pick-ups comparable to those on a guitar. Reverb plates have a very dense sound (high diffusion); no direct echo can be heard. They are therefore ideal for percussive metal. With vocals a plate reverb generates a smooth “wellness effect”.

**Spring Reverb:** You probably remember Spring Reverb from guitar and keyboard amps, particularly older ones. At the bottom of these amps a unit consisting of two to four spirals is mounted on a vibration-free carriage. As with the reverb plate it uses systems for transforming the electric signal into a mechanical one. There are different designs and sizes of spring reverb; however, they all have the same quite peculiar sound: the typical “bloing” sound when the springs are moved, similar to splashing. When the reverb dies away the basic pitch of the spring(s) can usually be heard quite clearly. Furthermore, the frequency range is considerably limited due to the losses in the spirals and in the used pick-up/transmitter. Despite this, the sound is special and some of the latest music styles (e.g. dub & reggae) would hardly be possible without spring reverb.

### Parameters

The reverb effect has the following parameters:

**Size:** defines the size of the room (or the system for the plate and spring). 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. The proper size for each instrument can be gauged by taking into account the interplay between the room and the resonance.

**Time:** reverberation time. With this controller you can define how far the echo will be absorbed, i.e. the time for the reverb to die away. Turning this knob to the left minimizes the time. You will then only

hear the first reflection. Turning the knob to the right minimizes the absorption and thus results in a long sustained reverberation.

**Color:** within certain limits you can influence the sound characteristic of the effect. 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. The controllers for plate and spring presets also determine the dampening of the basses.

**Mix:** this controller sets the mix ratio between the original and the edited signal. For rooms you can therefore quite easily 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 are primarily sorted by instruments; however, you can (and should) choose which preset you want to use for which instrument. The rooms in particular have completely different characteristics which are noticeable for some and more subtle for others. Generally we recommend reverb with many individually audible reflections and slight diffusions for dense arrangements. On the other hand you can use Plate Reverb for minimally arranged songs in order to create a dense atmosphere.

However, you should avoid adding reverb to too many instruments. Sometimes some extra mixing is sufficient to move an instrument slightly away from the total sound. It is often recommendable to adjust the sustain to the song tempo, i.e. the faster the track, the shorter the reverb. Otherwise the sound easily sounds washed-out and indifferent.

Here is a list of the presets and their characteristics:

### Drums and percussion

**Drums: Studio A:** small room, high diffusion, e.g. for percussion instruments

**Drums: Studio B:** slightly larger & more lively than A, medium diffusion, distinct first reflections, signals seem closer than A

**Drums: Medium-sized room:** medium-sized room, moderate reverb, medium diffusion, relatively few first reflections

**Drums: empty hall:** medium-sized empty hall, medium diffusion

**Drums: Snare reverb plate A:** plate reverb, high diffusion, relatively bright sound character, typical hissing of a reverb plate.

**Drums: Snare reverb plate B:** reverb plate, high diffusion, slight dampening of highs & basses, sound moves more to mids with time, stereo panorama narrower than for A

### Vocals

**Voice: main hall A:** standard hall, e.g. for monitoring/recording, medium-sized room, medium diffusion, minimum sustain time

**Voice: main hall B:** like A, but as a small hall (longer delay times than A), distinct reflection pattern, longer reverb time

**Voice: early reflections:** medium-sized room, low reverberation share, very distinct early reflection pattern, e.g. for spreading vocals

**Voice: warmer room:** small, intimate room, dark character

**Voice: studio reverb plate A:** reverb plate with medium diffusion, slight dark adjustment, comprehensive sound characteristics

**Voice: studio reverb plate B:** Like A, but more diffusion and bright to medium sound adjustment, slight vintage character

**Voice: large hall:** large hall, medium diffusion, relatively long reverb time

**Voice: cathedral:** delayed attack, slight diffusion, complex echo pattern, some hard reflections, dark voice adjustment, long reverb sustain

### Guitar

**Guitar: Spring reverb mono A:** spring reverb simulation, typical oscillating sound of the springs, limited frequency range

**Guitar: Spring reverb mono B:** Like A, slightly broader frequency range, greater diffusion

**Guitar: Spring hall stereo A:** similar to spring hall mono A, but one spring/transmission system per channel (L/R)As a result of the mechanical interlinking of the systems, the reverberations meet at the middle of the stereo field

**Guitar: Spring reverb stereo B:** Like stereo A, slightly broader frequency range, greater diffusion

### Keys (Piano, Synthesizer)

**Keys: Stage reverb:** Larger room with stage, high amount of complex first reflections, slightly delayed attack, medium reverberation

**Keys: piano reverb:** concert hall, long reverberation, medium diffusion, minimum dark adjustment

**Aux** (to be used as a send effect in a mixer FX track)

**Aux: Room:** Standard room for the aux path, mix 100%, medium-sized, medium diffusion, some distinct first reflections, low reverberation

**Aux: Hall:** Medium-sized hall (100% wet), medium diffusion, short reverberation



**Aux: Reverb plate:** Reverb plate (100% wet), high diffusion, light bright adjustment

**Aux: Spring reverb:** Reverb spring (100% wet), stereo, high diffusion, slightly medium sound characteristics

### Delay (echo)

The echo effect is defined more closely with 'delay' and 'feedback' and calculated into the original sound by means of 'mix'.

**Delay:** Here the period of time between the individual echo's can be determined; the more you turn the control to the left, the faster the echo's will follow each other.

**Feedback:** Here the number of echo's can be adjusted. Turned completely to the left, there is no echo at all; turned completely to the right there are virtually endless repetitions.

## Sound Warper



### Distortion

This is a distorter, which over-modulates the audio object.

**Gain:** With these controls you adjust the degree of distortion. 'Gain' designates the prestage to an amplifier.

**Cut off:** Here you adjust the frequency ranges that are to be distorted.

**Volume:** Here you can adjust the volume of the distorter. The higher you set the 'gain' control, the louder the distortion when compared to the overall volume.

### Filter

Similar to an equalizer, the filter controls the volume of certain frequency ranges. It is however also possible to completely suppress frequencies so that very impressive distortions are possible.

**Frequency:** Here you set the frequency that is to be filtered.

**Level:** Here the filtering intensity is adjusted.

**Resonance:** Here you set the range (band width) around the frequency which is to be boosted together with the frequency.

**Volume:** Here the filter volume can be adjusted separately.

## Elastic Audio easy

### General information on the Elastic Audio editor

Elastic Audio is a specialized editor for changing the pitch of audio material. Resampling and pitchshifting algorithms can be automated, and a basic frequency recognition enables the user to change around considerably the pitches of monophonic audio material.

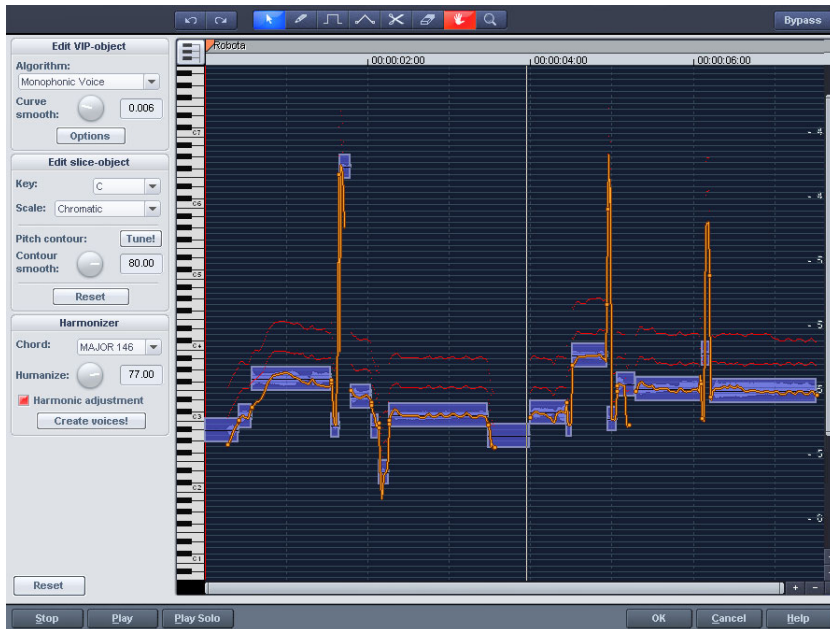
Pitch-shifting algorithms are able to change a melody in the pitch without influencing the tempo. MAGIX Music Maker 16 Premium provides various pitchshifting algorithms that can be used based on existing material.

Elastic Audio has the following capabilities

- Recognition of the basic frequency in monophonic audio material.
- Automatic and manual correction of the basic frequency process in monophonic audio material.
- Manual correction of the pitch of notes from monophonic audio material.
- Changing melodies in monophonic audio material.
- Harmonizer for creating additional voices

**Note on timestretching:** Timestretching cannot be automated, but can continue to be used statically when using Elastic Audio.

## Edit window



The pitch characteristic is shown in the editing window. To customize the pitch correspondingly, the original pitch of the audio material must, of course, be known. Fundamental to the functionality is therefore a preliminary pitch analysis of the material. This is basically only for tonal, monophonic material like solo vocals, solo instruments, and speech.

The analysis function starts automatically when the editor is opened. The analysis requires more time with longer objects. After the analysis is complete, the objects are split up into individual "slices" according to the recognized pitches. The medium pitches of a slice determine its position in the graphic, independent of the set progression of the pitch curve inside the slice. On the borders of the slice objects, two handles are created on the pitch curve. These handles can be moved in order to produce an increasing or decreasing pitch characteristic, but still keep the small changes in the basic frequency (vibrato).

The "Tune" function for automatic pitch correction can be found beside the "Draw pitch" function.

### Axes labelling and legends

**Y axis:** Pitches in notes. The notes can be deselected on the keyboard. They won't be used in the automatic pitch correction or in

quantized drawing. The corresponding guidelines for scales can be used by selecting the basic tone and scales in the box "Edit slice object".

**Orange line:** New pitch characteristic (editable)

**Grey line:** Original pitch characteristic (result of the analysis)

**Red line:** Harmonizer voices.

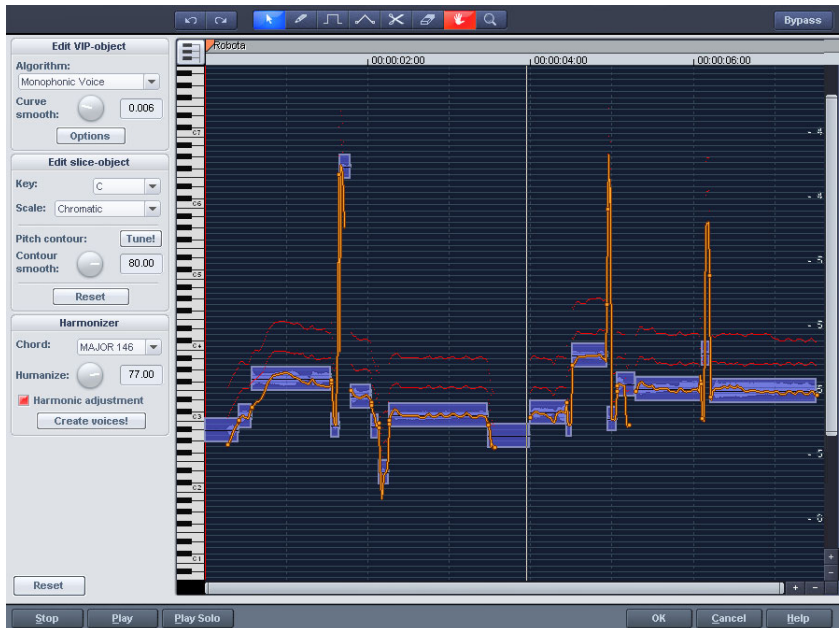
## Fundamentals of the Elastic Audio editor

### Opening the Elastic Audio editor

Select the object that should be edited in the editor. The Elastic Audio editor for a selected object is opened via "Menu effects -> Audio".

### Interaction between Elastic Audio editor and objects

Temporal corrections to notes are not run in the editor itself, but rather by splitting and moving the objects in the VIP.



## Description of all control elements



Edit PROJECT OBJECT box

These options and parameters always effect the whole object loaded into the editor, and therefore all of the slices.

**Algorithm:** You can choose between the modes: monophonic voice (preset), standard, smooth, and beat marker slicing.

For more information on the algorithms, read the corresponding paragraph on the time processor!

**Curve smoothing:** This parameter brings about the smoothing of the given pitch curve using a time constant (in ms). When smoothing to a large extent, jumpy pitch-shifts change from a “kick” to a glissando.

**Formant control:** Selecting the "Monophonic voice" algorithm may result in so-called formants. Formants are sound components typical for the character of instruments or the human voice. With instruments they mainly result from the geometry of the resonance body. Human formants are created by the anatomy of the vocal tract.

With most algorithms the formants are also influenced by changing the pitch. Using the monophonic voice algorithm you can change the position of the formants independent of the pitch. Acoustically, this corresponds with stretching or compressing the above mentioned geometry, and this can lead to interesting effects...



HARMONIZER box

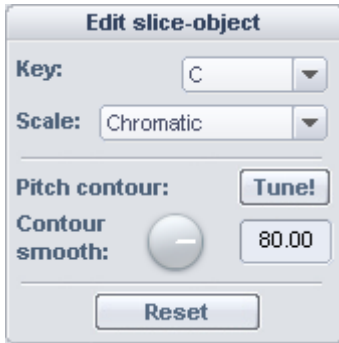
**Chord:** Here you can set the chord that makes up the parallel voices  
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of the harmonizer, and a distinction is made between major and minor. The settings of the keyboard are taken into account, unless the option "Lead voice" has been activated.

**Humanize:** At a low setting this causes high quantization of the parallel voices and makes the effect sound very artificial. If you select a very high humanize value, the pitches of the individual voices will vary and the cue will be shifted so that you get the impression of an amateur ensemble.

**Create voices:** This button generates voices.

**Harmonic adjustment:** Parallel voices are usually generated by taking the keyboard and humanize settings into account. However, if this option is deactivated, then the voices are always kept exactly parallel to the orange curve.



Edit SLICE OBJECT box

### Options for automatic pitch correction

**Basic tone:** Basic tone of the scale. In the chromatic scale this setting is still not taken into account.

**Scale:** Type of scale. Major/minor or modes

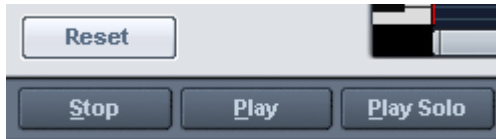
**Pitch characteristic tune!:** This button quantizes ("levels out") the pitch characteristic of selected slices.

With **quantization smoothing** you can determine the "Strength" of quantization, and lower values are quantized the most. Consequently, small pitch fluctuations always occur in natural sound sources, e.g. vibrato, disappear ("Cher effect").

**Reset:** Resetting the selected slices. The orange curve is superimposed over the grey curve, and the slice is reset to the

original medium pitch.

### Playback control



**Reset all:** Recalculates and resets the pitch curves of the loaded material.

**Stop/Play:** Stops/Starts the playback of the arrangement.

**Play solo:** Only the object loaded into the editor is played.

**Bypass:** Switches the effect on or off.

### Tools in the Elastic Audio easy editor

You can use various tools to edit slices and the pitch curve. The two tools can be freely assigned to each mouse button. The tool assigned to the left mouse button is displayed in blue and the right mouse button in red. Click with the corresponding mouse button on the desired console button. An exception is the zoom tool with which can be assigned to both mouse keys.



#### Selection tool (arrow)



You can now move the slice objects up and down.

This modifies the pitch of slice objects as a whole, and slice objects and curve handles can also be selected. Multiple selection is possible with "Ctrl" or "Shift".

#### Freehand draw function



You can freely draw the pitch curve using the draw tool.

If you press "Shift" as well, a straight line will be drawn between the start position on drawing and the current mouse position. When "Ctrl" is pressed, the slice objects are combined when drawing.

#### Drawing with quantization



This is the tool used for quantized drawing.

Quantized means that the line is horizontally free but the curve snaps onto the grid of the tones of the selected scale under "Tune".

Drawing a straight line using "Shift" and compiling slice objects with "Ctrl" is also possible in quantized draw mode.

### Rubber-band tool



Use the rubber band tool to bend the pitch curves between two neighboring handles.

Here the middle of the curve is moved while the curve handles remain the same. In combination with moving the curve handles at the slice object edges, you can also move the pitch characteristic and attain micro-tone structures (vibrato).

### Cut tool



This can be used to split audio material manually into slice objects (according to the notes).

If automatic recognition is not sufficient, then slice objects can be connected to one another using "Ctrl" + the drawing pens.

### Eraser



Use the eraser to reset the output value of the orange curve.

The pitch characteristic then corresponds to the original again and the curve corresponds to the recognized curve.

### Magnifying glass zoom tool



Zoom tool: Left mouse button "**Zoom**" zooms in and the right mouse button zooms out.

Left-clicking and dragging can stretch out a range which can then be zoomed entirely.

### Navigation tool



With the navigation tool, the visible clip can be moved vertically and horizontally.

## Applications of the Elastic Audio easy editor

### Pitch correction (intonation correction) with monophonic audio material



**Getting started (for all subsequent editing):**

- Load objects into the Elastic Audio easy editor.
- Set the desired selection state. All slices are selected directly after the analysis.
- Select suitable algorithms – you should test here to see if "monophonic voice" (see above) is the suitable algorithm.
- Now the pitch can be edited with the mouse tools by editing the orange curve or the pitch of the slice objects.

**Manual correction of the whole pitch of a pitch slice**

- Select the slice with the selection tool (arrow).
- Move vertically with the mouse.

**Automatic correction of the pitch characteristic**

- Select the slice objects with the selection tool (arrow).
- Select the scale in the Edit slice objects group and, if required, deselect the tones which are not to be quantized in the keyboard by clicking on them.
- Press the "Tone pitch characteristics" button
- With the parameter "Quantization smoothing" you can reduce the "strength" of the quantization.

In principle, this editing process more or less levels off pitch characteristics inside a slice.

**Correction of the increase or decrease in the pitch.**

- Select the slice objects with the selection tool (arrow).
- Click and drag the pitch curve by moving the two handles at each end of the slice objects or on the orange lines.

**Free redefinition of the pitch / Creation of frequency modulations like warblers and vibrato.**

- Select the slices with the Selection tool (arrow).
- Select the drawing tool (quantized or not).
- Draw in the pitch modulations.

**Creating "Plastic voices" (Removing vibrato by strong quantization of the micro pitch characteristic)**

- Set the parameter Quantization smoothing to 0.
- Press the "Tone pitch characteristics" button
- If required, switch off format correction when using the "Monophonic voice" algorithm.

**Creating "Robot voices" – quantizing to a pitch**

- Select the slice(s) with the selection tool (arrow).

- Select the draw tool for quantized drawing.
- With artifacts: Increase the "Quantization smoothing" parameter.

### **Creation of parallel voices**

- Set desired chord.
- If necessary, change the "Humanize" parameter and press "Create voices" to generate the voices again.

### **Pitch-sliced-objects and VIP objects**

The basic frequency analysis reduces the pitch slices to pieces which ideally correspond to one note in the music's melody or one syllable in speech. For speech the pitches correspond to the level of the vowels.

After the analysis, all of the slices are shown selected (blue).

The subdivision into slices can be corrected manually. The slices are cut apart with the scissors tool, and then merged together with the rubber band gripper tool ("Ctrl" held down).

The blue line represents the mid-range pitch for each object and results approximately from the average value of the pitches in the slice.

In selected pitch-sliced objects the functions found in the "Editing sliced-object" group can be applied, i.e. the correction of the pitch sequence and the mid-range pitch.

The option to reset the corrections for selected slices is also available.

### **Selecting sliced objects**

Sliced objects can be selected and deselected. "Ctrl + A" selects all slices; clicking on the "empty space" deselects them.

### **Fundamental frequency analysis correction**

#### **General options**

The fundamental frequency analysis and the related fundamental frequency-dependent pitch-slice-analysis may fail or cause errors for the following reasons:

- Reverberated material,

- Runtime stereophonics,
- False analysis,
- Voiceless vocals (sibilants...),
- Noisy sounds.

In the last two cases, analysis cannot return a result as the fundamental frequency is not available.

MAGIX Elastic Audio provides the user with the opportunity to achieve good results using many manual options, whereby the fundamental frequency analysis does not or cannot deliver any results.

### Error in the fundamental frequency analysis

#### Symptoms:

**Sound:** The pitch varies strongly for a short period and does not correspond to the set value or characteristic.

When using the **monophonic voice** algorithm, additional strongly distorted noises arise. The algorithm, which depends on the fundamental frequency recognition itself, fails.

**Graphics in the editor:** The curve exhibits a short strong jump and behaves in a very jerky manner.

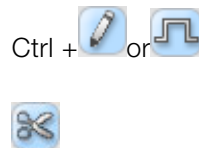
#### Solutions:

- With the help of the eraser you can try superimposing the original curve at these points.
- If you set high values for the **curve smoothing** parameter, then short "hiccups" can be reduced in severity or prevented completely.

### Correction of slice borders

So that the automatic or manual correction of the mid pitches of slices provides correct results, the slice borders have to match well with the note borders.

The slice borders can be manually changed by connecting two slices to one another with the pen and using the cutting tool to cut through at the correct position.



## Keyboard commands and mouse-wheel assignments

### Navigation using the mouse wheel

Horizontal scrolling:	mouse wheel
Vertical scrolling:	Alt + mouse wheel
Vertical zooming:	Shift+ mouse wheel
Zoom horizontal:	Ctrl + mouse wheel
Zoom hor. + vert.	Ctrl + Shift + mouse wheel
Ctrl + space bar	Play solo/Stop
Space bar	Play/Stop
Ctrl + A	Select all
A	Update view
Ctrl + Z	Undo
Ctrl + 1-8	Select tool for left-hand mouse button
Ctrl + Shift + 1-8	Select tool for right-hand mouse button
Shift + Alt +P	Show/hide pitch curve
Ctrl + Cursor up	Enlarge waveform
Ctrl + Cursor	Enlarge waveform
Cursor left	Play cursor to the left
Cursor right	Play cursor to the right
Home	Jump to object start
End	Jump to object end
Ctrl + Cursor	Zoom in
Ctrl + Cursor	Zoom out
Shift + R	Alter scaling mood (Frequency for chamber note a).
Ctrl + NUMPAD 4,5,6	Saves zoom snapshots 1,2,3
Alt + NUMPAD 4,5,6	Loads zoom snapshots 1,2,3
NUMPAD 4,5,6	without any vertical zoom
	Zoom snapshots 1,2,3 with vertical zoom

## Vocoder

The vocoder principle: Carrier material (e.g. a surface sound or a synth chord) is affected by a modulator (e.g. language or singing) so that one gets the impression that it is speaking or singing. Rhythmic surface sounds can also be developed if modulated with a drum loop.

This is done via the transmission of the frequency characteristics of the modulator (speech) on the carrier (chord).



## Carrier input

Here you have to select the desired carrier sample. Some special carrier samples that have been loaded automatically from the "Vocoder" directory are listed.



Use the "Carrier sample" check box to load any number of samples of the current project or predefined carrier sample.



Here you can play the carrier on its own for test purposes.

**Noise:** This controller lets you add noise to the carrier sample. This makes sense if the carrier material can not be modulated sufficiently or is irregular. It's good for "filling" drum loops which have too many pauses between the beats.

Material containing all frequencies in equal amounts are particularly suitable, such as strings, orchestra chords, broad synthesizer pads, hissing, or wind noise.

## Filter

**Dynam:** Influences the dynamics of the modulator signal to reduce the modulation depth of the vocoder.

This prevents two often undesired side effects of modulation. On the one hand, the volume change of the modulator signal is added to the output signal in a slightly more moderate form which may improve the power of the vocoder voice. On the other, the low-level share of the modulator signal is ignored in order to prevent modulation of the carrier by breathing or noise.

**Smooth:** Affects the speed at which the vocoder adjusts to the modulator spectrum. The greater the value, the "lazier" the vocoder follows the modulator and the "smoother" the sound changes in the carrier sound.

## Filter graphic

Any frequency characteristic can be drawn in to optimize the results of the vocoder. For example, simple disturbing bass frequencies can

be eliminated as the curve is corrected downwards to the left. Similarly, weak highs can be strengthened as the curve is raised to the right.

### **Mixer**

In the mixer you can also mix parts of the carrier and modulator signal to the vocoder output signal ("Out").

If the output signal of a track is used as a carrier in the vocoder, this track will be muted first, and then you can make it audible again in the vocoder mixer.

### **Presets**

You can select predefined vocoder settings in the "Preset" list window. The presets all contain vocoder settings, except the selected carrier signal. "Reset" restores the vocoder default settings.

## **Gater**

This special effect "chops" a sample in a freely selectable number of pieces (2 - 16). You must first enter the number of steps that are to be distributed over the sample length. The volume for every individual step can then be set with the sliding regulator (faders) so that both hard breaks as well as soft amplitude changes can be created.

The Gater function can also affect filters so that interesting sounding distortions can be created, especially for the techno sector!

This function is highly suitable for creating a groovy sample for a drum loop from a sound surface without its own rhythm!

By the way, more than 16 steps can be entered for the "Fader number", to obtain an even finer division of the samples. The regulator settings are then repeated. Step 17 therefore has the same value as Step 1.

The real-time screening function allows you to musically check every fader modification.

Generally, two combinable operating modes are available:

### **Volume or filter progressions**

The objective of this function is to change the volume or the sound

character of the audio material in 16 or more steps with the aid of the 16 faders. The default setting of every fader corresponds with one sixteenth of the audio material – i.e. a sixteenth note in a 1 bar loop or an eighth note for a two bar loop, etc.

This leads to interesting rhythmic results, e.g. by lowering the volume of individual faders or through stepped volume increases. Various progressions can also be quickly created with the help of the random function. The real-time screening function permits constant acoustic control while this is being done!

Gate progressions make it very simple to create rhythmic sounds from a simple strings or synthesizer section or to emphasize or tone down certain beats in a drum loop.

### **Reordering**

The playback sequence of the 16 steps can be changed with the colored key fields located below the faders. This makes it possible to repeat a beat from the first sixteenth in the fourth sixteenth. To do this, the number under Fader No. 1 must be the figure 4. The fact that item 4 will now play back the material in item 1 is shown in color.

Does this sound complicated?

If so, simply try the Random function. It instantly produces numerous variations. If you have the Real-time screening function running, you can then quickly decide for yourself, which groove you like better!

You can use the Re-order function to derive totally different variations from a drum loop quickly and impressively.

### **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...

## Timestretch and pitchshift



This effect device changes the object's speed and/or pitch.

**Pitch:** This control changes the pitch independent of the object's speed ('pitch-shifting').

**Tempo:** This control changes the tempo independent of the pitch ("time-stretching"). The object acts as if it were compressed or stretched on the track.

**Tones/BPM:** These fields are used to numerically enter the pitch or speed change. Only MAGIX Soundpool files are suitable for numerical entries as they contain information on pitch and speed.

**Setup:** This button opens a setup dialog where you can select various pitchshifting and timestretching procedures.

- **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. Here a considerably more complex algorithm is used which requires more processing time. The material can now also be used on very large factors (0.2...50) without bringing about strong artifacts. The material is "smoothed", which makes the sound softer and emits it at an adjusted phase level. This smoothing is hardly audible, for example, with speech, singing or solo instrumentation. Problems in the shape of distortions may arise with more complex spectra (sound mixes from various instruments or finished mixes).
- **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 Premium 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.
- **Beat marker stretching (smoothed):** Beat-synchronized timestretching and pitchshifting in high audio quality even with extreme time extension. Beat markers are used at the beats or transients. The markers can be generated in real time (automatically) or read from the WAV 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. This method requires a lot of processing time which is why it should be used sparingly on less powerful systems.
- **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 so much processing time, that a realtime application is recommended only in exceptional situations. Using the `apply` function is recommended instead.
- **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. In addition, the formants remain when pitchshifting.
- **Resampling:** Pitch shift and tempo cannot be changed individually. This method requires considerably little CPU time.

## MAGIX Mastering Suite

The MAGIX Mastering Suite is a special effects rack for use with the mixer master channel. Its effects provide audio mastering functions to give the finished mixed music file a final polish.

The **On/Off switches** switch the effects on and off individually. Each effect has a range of presets that can all be picked from a list along the lower border of the effect.

CD-Mastering

The settings of all effects can also be saved together as one **preset** so that you can use your ideal mastering setting again for other arrangements.

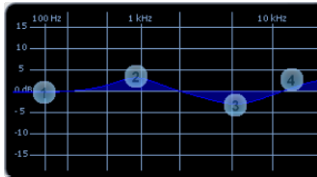
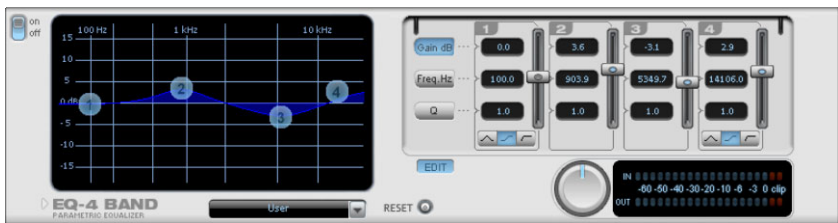
RESET

Each effect can be reset by pressing the **"Reset"** button. You can press the **"Bypass"** button to temporarily deactivate the effects.

## Parametric Equalizer

The parametric equalizer consists of four filter bands for adjusting the overall sound of the music track. Each band is a filter with a typical "bell shape". Within a certain frequency range and 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 to give it more "depth" (lower center = 200-600 Hz) or more "air" (highs = 10Khz). You can also decrease the narrow bandwidth (high Q value) in the frequency response, e.g. to remove disruptive frequencies.



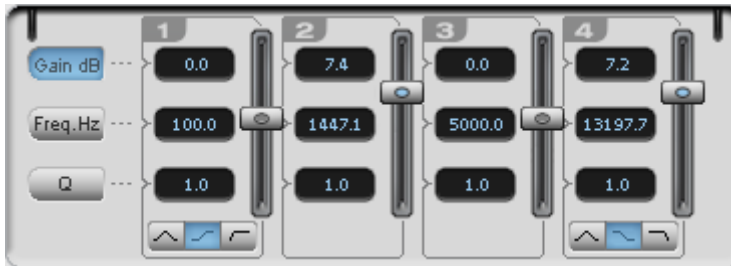
**Graphic:** The resulting frequency path of the equalizer is displayed in the graphic. The frequency is spread out horizontally, the increase or decrease of the respective frequency, vertically.

The blue bullets 1-4 symbolize the four wave bands. You can move them around with the mouse until you find your desired frequency response.



**Peak meter:** The peak meter gives you control over the output level of the equalizer. The adjacent master gain controller can be used to balance the level with the EQ.

**EDIT** **Edit:** The "Edit" button opens the fine tuning for the four bands:



**Parameter selection:** With the buttons on the right you can select the parameter that can be adjusted with four faders of each band. Furthermore, there are number keys to enter every parameter of the bands.

**Gain dB:** These controllers allow you to raise or lower the filter. Setting the controller to 0 deactivates the filter and doesn't use CPU power.

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

**Q (bandwidth):** Set the bandwidth of the individual filters between 10 Hz and 10 kHz.

There is still a peculiarity among bands 1 and 4; The filter curve for these bands can be changed from a normal "peaking" EQ filter (📈) to "shelving" (📉) (this is the basic setting) and high (band 1) or high-cut (band 4) (📉). When using the "shelving" filter, a soft increase or  
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decrease in all frequencies happens above or below the filter frequency, and the Q parameter does not have a function here. With a low-cut or high-cut filter, all frequencies below (low-cut) or above (high-cut) the set frequency are filtered out.

## MultiMax



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

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

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

**Link bands:** When this function is activated and one fader is adjusted, all faders are changed in the same ratio. The type of dynamic editing is not influenced.

**High quality:** When the "high quality" setting is activated, an even more precise algorithm is used, but this requires more processing power. We recommend that you switch on this setting before you export the project.

**Setting the frequency band:** 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 further special functions.

**Dynamic expander:** Compression that is too high will result in audible

noise (usually defined as a pumping sound). Particularly radio recordings 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.

**Cassette NR-B decoder:** MAGIX Music Maker 16 Premium simulates decoding of Dolby B + C noise suppression if no Dolby player is available. Cassettes recorded with Dolby B or C sound more muffled and slurry if played back without corresponding Dolby.

**Noise gate:** This cleaning function suppresses noise entirely below a certain noise level. 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" from the "Effects" menu.

**DeEsser:** These special presets are for removing overstressed hiss sounds from speech recordings.

## Stereo FX

With the Stereo FX Enhancer you can determine the positioning of the audio material in the stereo balance. 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, for example, into the foreground, thereby improving the stereo picture.



**Volume control:** Adjusts the volume of every single channel, thereby adjusting the entire balance. The reduction of left and right levels is displayed under the control buttons. This way you can balance out and thus improve an imbalanced recording in which, for example,

one channel was recorded at a lower level than the other.

**Pan-Direction:** *With this controller you can move the sound source that comes from the middle into stereo panorama. The signals at the outer edges of the sound picture remain unchanged.*

**Bandwidth control:** Adjusts the bandwidth between mono (on the extreme left), unchanged bandwidth ("normal stereo"), and maximum bandwidth ("wide", on the extreme right). The individual sound sources of a recording are squeezed together or pulled apart in the stereo picture.

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:** Use this controller to strengthen the room sound which also increases the stereo transparency without influencing mono compatibility.

**Multiband:** This can be used to switch Stereo FX to Multiband mode. Stereo editing only applies to the middle frequency, the bass and highs remain unchanged.

**Stereo meter:** 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 keep mono-compatibility the "cloud" shown should always be higher than broad. Otherwise some frequency ranges may cancel each other out if the stereo signal is played on a mono device.

### Limiters



**Limiters:** MultiMax includes a limiter that prevents clipping by automatically lowering the level. Quiet parts remain untouched. Unlike the Compressor, it does not try to change the basic sound.

## Digital Audio Meter



On the lower border of the MAGIX Mastering Suite there is a digital audio meter which provides separate control method displays for 10 wave bands on each channel. This device is used for orientation purposes, e.g. selective equalizer editing.

## Essential FX

MAGIX Essential FX is a collection of "bread and butter effects" for the most important applications. They are embedded as VST plug-ins (MAGIX plug-ins directory) and may be used in the object or in the track. For object application, see "FX plug-ins (see page 169)" in the "Audio effects" chapter or "Track effects (see page 167)" in the "Mixer" chapter.

These are simple but solid tools with clear feature sets for daily application. They include fewer controllers and require less resources.

The following essential FX are available in MAGIX Music Maker 16 Premium:

- Chorus/Flanger
- Phaser
- Stereo delay parameters

### Chorus/Flanger

This plug-in offers a simple way to make signals sound more interesting, "spacier", thicker, etc. by modulating or delaying the pitch. The classical domain of application is for guitars, Hammond organs, electric pianos, or synths.

Chorus and flanger are two closely related effects, which is why we have included them in a single plug-in. They normally differentiate in terms of delay time, type of modulation, and degree of internal feedback.



### Chorus flanger parameters

- **Mode:**

- **Mono chorus:** In this mode, the signal is fed through a delay unit and the pitch is modulated. Original and delay copy are mixed into a monophonic output signal.

- **Stereo chorus:** Compared to mono chorus, two copies of the original are created, modulated against each other, and then fed accordingly to the set mix ratio to the left and right output channel.

- **Mono flanger & stereo flanger:** Similar to the other modes. In this case, lower delay periods and a slightly changed modulation are processed.

- **Rate:** This specifies the speed of the modulation. Lower rates provide slight hovering effects, and high speeds produce a wobbling, typically distorted "underwater" sound.
- **Depth:** This parameter specifies the depth of the modulation, i.e. the maximum deviation of the modulation and the resulting pitch bending.
- **Feedback:** This parameter defines the portion of the delay that is sent back to the input. Feedback causes the effects of modulation to be more drastic and cutting.

Nullification of the feedback is set at the middle of the fader. Set to the right, the feedback is fed to the input equi-phasal; to the left, the feedback occurs. Both variants may sound very different depending on the signal, since they prefer different frequency ranges for



dissonance.

- **Mix:** Regulates the mix ratio of the original signal and the delayed portion.

## Phaser

The phaser is often mistaken for a flanger due to its typically sharper and cutting effect. In any case, the pitch is not modulated. Instead, the modulation process burrows multiple notches into the frequency response, somewhat like a comb filter. Just like an airplane taking off, the phaser functions with a similar jet effect. It is suitable for enduring signals like synth surfaces or for producing sound designs like atmosphere or distortion effects.



### Phaser parameters

- **Mode:** The selection includes a number of filter stages. At 4 stages/8 stages, a more plastic effect is achieved, and more complex patterns are reached at 16 stages. Please note that the more stages are involved, the more computing time will be needed.
- **Rate:** Speed of filter modulation. The essential effect is the same for both chorus and flanger.
- **Depth:** Similar to chorus/flanger, whereby it's the filter notches that are addressed, and not the pitch modulation.
- **Feedback:** The feedback portion produces a more drastic effect in this case. Similarly to the chorus/flanger, co-phasal or opposite-phase feedback is possible.
- **Mix:** Regulates the mix ratio of the original signal and the delayed portion.

## Stereo delay

The stereo delay is a simple tool for typical bread and butter delay effects. The "analog algorithm" qualifies as a special feature that produces the sound of echo devices from the old days.



### Stereo delay parameters

- **Mode:** This selects between the essential algorithms.
- **Digital:** Normal, transparent delay
- **Analog:** Simulation of a bucket brigade delay (BBD). These devices, which originate from the pre-digital era, used analog building blocks for storage. The signal was held for a short time in a relatively simple circuit and then moved on to the next. This "bucket brigade" principle created a longer signal delay. But since each element of the chain led to a loss of the signal and would increase the system noise with longer delays, the devices would use a compander: At the input, the signal's dynamics are compressed, and then they are expanded again at the output end. The simulation in the eFX delay mimics the loss and compander behavior to produce these typical audio characteristics, especially at longer delay periods and higher repetition rates (feedback).
- **Delay L/Delay R:** Specify the delay period for the left and right channels here.
- **Tempo sync:** If this button is active, the plug-in is directed at the host/sequencer tempo. In this mode, changes are made to the delay period via the L/R delay using the musical snap grid (e.g. 1/4 note).
- **Damping:** This specifies the cut-off frequency at which the highs are dampened during the delay. This useful for making the delays reverberate more naturally or for creating special effects (reggae/dub-style effects).
- **Feedback:** This parameter regulates the internal amplitude of the delayed signal that is fed back to the input. In "Digital" mode, this process is completely transparent; in "Analog", on the other hand, higher values, a very loud input signal, or the sum of these will make the use of dynamics compression audible. In both modes, the nullification of the feedback parameter is in the center of the fader.

To the right, the plug-in works in "Dual delay" mode (both sides work independently), and to the left, "Ping pong" mode will be activated (the delayed signal alternates between the left and right sides).

- **Mix:** Regulates the mix ratio of the original signal and the delayed portion.

## Vintage Effects Suite

If you're a guitar, bass or keyboard player, you'll probably recognize the look of our new "vintage effects" suite. They are accurate digital models of analog "standard effects" used by live musicians. Although we have adopted the appearance of stomp boxes and have given these effect a typical analog sound they are ideal for studio use.

All effects of the Vintage Effects Suite are subject to a soft rule behavior – internally, parameters are softly faded from the old to the new value. This is particularly noticeable when presets change and is of a particular benefit when playing in live mode.

In the following we will present the effects of this suite and explain how and where to use them.

Analog Delay (on page 204)

Flanger (on page 206)

Filter (on page 208)

Chorus (on page 210)

Distortion (on page 212)

BitMachine (on page 213)

## Analog delay



This delay offers creative playing along with common delay effects. "Analog" in this case means, for instance, that you can change the delay times while playing without the risk of typical scratching artifacts developing. Instead, the times are softly faded out, similar to the old tape echo machines that used the tape speed to change the delay and where the system also had a certain sluggishness.

Analog delay emulates vintage tape echo units which determined the delay time by the tape speed, and speed changes were slow and affected the pitch (feedback). The feedback has a two-band filter that can be used to create dark, high, or mid repetitions depending on the settings.


You can use these characteristics to your advantage by creating, for example, "out-there" dub/reggae-style delays which become less defined with each repetition and are slightly warbled. Here "analog" means that the delay cannot be digitally overdriven. Even in a "looped" repetition the signal cannot be distorted indefinitely, but compressed by an increasingly slight degree and distorted similar to a tape.

## Analog delay parameter

Analog delay has the following parameters:

### Delay type

**Delay type (l + r):** Left and right delay times can be controlled separately (see below). You can choose a note value for the control pots to snap to. Even and syncopated note values from 1/2 to 1/32 are available. Note that the delay times are always in relation to the project's current tempo.

 **Link button (lock symbol):** Press this button to control the “delay type” pots for both channels simultaneously.


**Mix:** Adjusts the ration between the original signal and the echo.


### Modulation

**Speed:** The tape warble speed. Low values result in very light fluctuations, high values result in drastic warbling.

**Depth:** The warble intensity. When this control is turned all the way to the left, there is no pitch modulation. For a subtle "analog" feel, we recommend a setting between the 9 and 11 o'clock position.

### Filter

**"Low"**  This control progressively reduces the bass frequency as it is turned to the right, making the signal sound "thinner".

**"High"**  Once turned all the way to the right, the control only attenuates the treble very lightly; turned completely to the left, the delay repetitions become progressively less treble.

### Feedback

**Width:** This controls the stereo width of the delay repetitions. When you turn “Width” to the right, an additional effect is produced: the panning of the delays increases. This is commonly referred to as a "ping-pong" delay.

**Drive:** When this control is turned all the way to the left, the delayed signal is repeated only once. Turned all the way to the right, the feedback is seemingly endless and the repetitions continue for a long

time.

The actual strength of the effect is dependent on the material, since the feedback loop (as explained earlier) is addressed via compression and uses a "tape saturation" effect. If you send a "loud" signal to the delay, then the feedback will sound longer than at a lower level as compression "brings it up" to a certain level. If you are used to "purely digital" delays, then this might take some getting used to, but it will probably sound "livelier".

## Flanger



The "flanger" effect is similar to the chorus, but its history is different. It was developed by coincidence when someone (according to legend it was actually John Lennon!) briefly slowed down one of the reels of two tape machines that were linked together. The result: the rather brief delay of the second signal compared to the first resulted in cancellations within the frequency spectrum, leading to a so-called comb filter effect (the sum of both signals creates "peaks" and "lows" in the spectrum that look familiar to the teeth of a comb).

Flanging is basically a chorus effect that modulates a shorter delay

time (under 10 ms). Flangers are not meant to double or disembody a sound like chorus does, but aim to manipulate its frequency range.

When the “Feedback” parameter is turned up, a familiar flanging effect is produced – the sound characteristics of a jet engine warming up.

### **Flanger parameters**

**Speed:** Modulation speed.

**Depth:** The overall amount of modulation.

**Feedback:** The volume of the internal feedback loop.

**Mode:**

**Normal:** Flanging.

**Dual:** Two parts, panned left and right.

**Quad:** Four parts, alternately panned left and right.

**Quad pan:** Like “Quad”, but the “Depth” control also sets the intensity of the signal’s pan movements between left and right.

## Filter



"Filter" is a modulation effect similar to the chorus and flanger effects, but it controls the frequency range and modulation source instead of the pitch. Therefore, it has different filter types and modulation times.

The filter is particularly effective for synth sounds ("filter sweeps" on pads and atmospheres) and for creatively manipulating drum loops (such as for variations, fills etc.). It can also be used on guitars to produce the well-known "wah" effect with tempo modulation or a special mode.

### Filter parameters

**Speed:** The modulation speed is set by note values ranging from 1/1 to 1/16 (even or dotted). Similar to analog delay, the tempo information is automatically provided by the arrangement.

A peculiarity of the final position of the controller:



Tempo synchronization stops and modulation is controlled via the signal level.

**Freq:** This is the base frequency for modulating the filter, and



generally takes place above this frequency, i.e. the modulation increases the filter frequency.

**Depth:** This control determines the modulation depth, i.e. the amount by which the speed control (or envelope mode, as described above) increases the base frequency. For extreme effects, turn “Freq” all the way to the left and “Depth” all the way to the right.

### Filter modes

#### Low-pass



A filter with a slope of 24 dB/octave and a small amount of resonance. The treble frequencies above the base frequency (cut-off frequency) are filtered steeply. This is great for filter sweeps on synth pads and drum loops.

#### Band-pass



Only the frequencies around the base frequency are passed through the filter (24 dB slope with resonance). Use this mode to create wah-wah effects for guitars.

#### Band elimination („Notch-Filter“)



Two parallel filters (-36 dB) with linked base frequencies create two ‘notches’ in the frequency spectrum. This allows you to create interesting sounds (e.g. guitar chords), and it sounds similar to a phaser.

#### High-pass



This mode achieves the opposite effect to the low-pass filter. Frequencies below the base frequency are filtered steeply. If you ‘thin out’ sections of your track (for example, a drum track) with a tempo-based modulation, this can sound very effective when contrasted with the full-range frequency spectrum (for example, if the filter is turned off for the next object).

## Chorus



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

The chorus sound is created by using the so-called "Doppler" effect. You probably have noticed this phenomenon daily life: The sound of an approaching ambulance sounds higher than when it is moving away. This effect is a result of the speed of the sound which first increases and then decreases, thus also changing the sound pitch. If there were a second siren at your location, an oscillation would develop between both sounds (just like when two instruments are out of tune).

Chorus also splits the signal into at least two parts: the direct sound and effects. The Doppler effect is created by a short signal delay of the effect.

This delay is within the range of 10-30 ms (as in this one), this means that it is short enough to be perceived as an "echo". The times would also be similarly short if you were to duplicate a guitar track for instance. A short delay in the mix already sounds "duplicated", but is

not authentic. This is where the above mentioned "out-of-tune" effect comes in: the pitch of the effect signal is slightly modulated by gently "drifting" forward and backward in the delay curve. The result is a floating effect where the speed is influenced by drifting.

### Chorus parameters

You can enter the following parameters to control the floating effect:

**Speed:** Modulation speed. Low speeds create an even, continuous development. High speeds produce vibrato-like qualities, but can also result in an "underwater" 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:** You can choose between **four operating modes** of the chorus effect:

**"Normal"** is a combination of the direct signal and the detuned delay signal.

**"Normal, low-pass"** is designed for bass-heavy signals like 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". The character of the sound becomes livelier than with a single voice only, and it is also distributed over the stereo panorama, making the mode sound "broader".

**"Quad, low-pass"** is ideal for creating sounds such as deep synth pads with tight bass frequencies.

Tip: Similar to 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” distortion unit for crunch and lead guitar sounds. If you like typically “British” amp sounds and want to quickly record a guitar track with little effort, then this is the pedal 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. pickup 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, but these interact with each other and can thus generate quite a variable sound. These parameters are:

- **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, e.g. “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, then we recommend setting the controller to the middle position or even moving it slightly to the right. This way the “sharp” highs which all guitar amps generate without a suitable loudspeaker disappear. At the same time the mids stand out more to give 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 sufficient to set the controller to 10-11 hours 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 signal move to the fore so that the “high-gain” lead sound can be heard better.

You can also use the distortion effect in combination with the amp simulation.

## BitMachine



Audio material can always be edited into high-quality with MAGIX Music Maker 16 Premium. Nevertheless, there are situations where a more imperfect lo-fi sound would perfectly suit a drum loop or a synthesizer sound.

Remember the first hardware samplers from the 80s that usually only ran in 8 or 12-bit resolution and at low sample rates? With the BitMachine, changing the sound to suit such an “antique” device is no problem.

You can use the BitMachine to bring back to life the times when minimalist, scratchy sound chips in home computers were commonplace.

The BitMachine opens up a gateway to "acoustic time travel" where you can encounter bit and sample rate reduction and downstream filters based on analog models.

Plus, the effect has a modulation section for you to control individual parameters using an oscillator (LFO) or the input signal.

We have designed a range of "typical" presets to demonstrate the time travel abilities of the BitMachine. These can be opened at the top right of the interface.

## "Reduction" section

### Bits

This dial controls the resolution of the audio material. Turning the dial to the left results in 16-bit quantization (CD quality). The further it is turned to the right, the lesser the signal dynamic becomes. In extreme cases (1-bit), there are only "on" or "off" states.

At the intermediate levels, you'll notice an increase in the background noise and a decrease in the dynamics. For example, 8-bit quantization will exhibit dynamics of only 48 dB. Quieter points in the material sound noisy and very quiet points sound "capped". This effect is amplified the more you turn the dial to the left until it starts crackling or "groaning".

### Sample rate

The audio material is "down-calculated" with this dial, i.e. the internal sample rate is reduced. A new separation ratio between old and new rates is created. In relation to this ratio, a sample from the data stream will be "dropped" at the various points.

Note: The two smaller dials from this section are explained under **Modulation**.

## "Filter" section

The filter in the BitMachine is a digital model of one of the most well-known filters in music electronics, i.e. the "Chamberlin 2-pole" filter used in old Oberheim synthesizers. These types of filters sound exceptionally musical. They can also be used quite creatively in the BitMachine, but should not be used exclusively to smooth out

existing artifacts.

The filter works in the so-called "high-pass" mode, i.e. it lets through deep frequency (or medium) material according to setting, and dampens highs and medium areas.

**Freq:**

You can specify the cut-off frequency of the filter using "Freq". Filtering starts above this frequency.

**Reso:**

The signal in the area around the cut-off frequency can be strongly elevated to just below self-oscillation. Sharp, cutting sounds are possible at this level, and the effect becomes even clearer when you vary the cut-off frequency.

**Drive:**

Both of the individual filters of the connections mentioned above have the ability to overmodulate themselves internally. With the "Drive" dial, you can regulate the amount of overmodulation. The more you turn this dial up, the more the signal is overmodulated. In this case, the parameters of the internal workings of the filter interact with one another. Increasing drive weakens the resonance, but, at the same time, the signal gets more volume, more bass and becomes acoustically fuller.

Note: The two smaller dials from this section are explained under "Modulation".

**"Modulation" section**

You can automate your effects via the settings in the modulation section.

Here, you'll find the so-called low frequency oscillator (LFO), which resonates with adjustable speed. You can influence the speed and type of resonance.

To influence the resonance, use the two small dials in both the reduction and filter areas. These four dials display modulation targets.

**Example:** You've left the dial for the sample rate at its default setting.

Change the small dial beneath from its middle position to either side. The modulation for the dial value is added to the sample rate: The LFO now controls these parameters proportionately and the sample rate reduction resonates at this modulation.

You can use this technique on other dials as well. You just have to make sure that the main dial isn't turned up to full, because then the modulation wouldn't have any effect. The modulation is always added to the set value.

**Example:** Turn the small dial beneath the "bits" dial fully to the left (Value: -50) and the one beside it (beneath "sample rate") to the right (+50). You've now assigned a modulation to both parameters with the LFO. They are not changed uniformly, but rather opposite to one another: A negative setting is nothing more than an inversion of the modulation, so you're effectively turning down the control signal.

### waveforms of the modulation section

We've already explained this example with the help of sine oscillation. The LFO can be in:

- Sine form
- Square wave (0 or 1, no intermediate level)
- Random value (an internal randomizer will be queried at the set speed)

### Oscillator speed

The LFO speed is specified with the "speed" dial. If the "sync" button is active, then the LFO adapts to the song speed, and the dial locks musical values into place (e.g.  $\frac{1}{4}$  note). Rhythmic paths of the sound distortion are therefore enabled. You can also switch off this synchronization and set the speed manually (in Hz).

### Modulation with the "Envelope follower"

In the modulation section you'll find a fourth button, the audio input signal. If this mode is active, then the signal itself can be called upon to extract "modulation tension"; a so-called "envelope follower" continuously scans the volume of the input signal.

Note: The BitMachine doesn't recognize the type of audio signal automatically. For this reason, you should set the input sensitivity roughly with the "gain" dial. To do this, use the control LED: With



accurate detection of the signal dynamics, assigning the four small dials to modulation lows is easier and you can use the full control range.

In envelope mode, the "speed" dial is used to control the response speed of the envelope (the display now switches to milliseconds). Lower times result in a faster response, higher times make the envelope rise (and fall) slower. You should experiment with the signal according to its complexity. The presets provided can only point you in a rough direction.

## Vandal



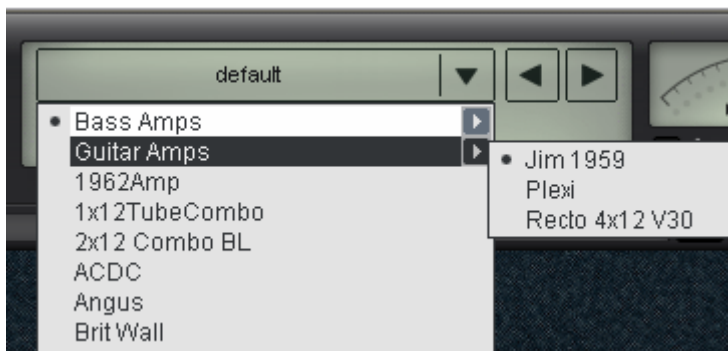
### Virtual Guitar & Bass Amplification

VANDAL is a complete simulation suite for guitarists and bassists. The plug-in is capable of simulating the entire signal chain, from input to stomp boxes, amplifiers, microphone loudspeaker boxes and post-processing studio effects, all in top quality.

### Vandal SE - quick start via preset selection

Would you like to know about everything that's possible with Vandal SE? Go for the strings and listen or flip through some of the included presets. These are available via the list in the upper edge of the interface.

A preset includes all settings for the main elements of Vandal SE: Stomps, amp settings, cabinet simulation, and studio effects.



### Vandal SE - Tuner

The best amp or the best simulation is useless if the guitar is out of tune. Vandal SE offers its own chromatic tuning device for this. Use it just like any analog device: it automatically displays the note played (with octave position) and visualized the deviation in the display (in cents).



### Vandal SE - Input

The station that you will most likely want to activate first is the input controller. Just like with a genuine guitar or bass setup, it's important to ensure the highest possible input level, in order to work optimally. This is even more important for distorted sounds and natural high-gain playing styles. Use metering for this, too.

As required, activate the noise gate and adjust it so that it lightly suppresses the input signal during pauses in playing. Vandal SE does not cut the input on classic gates too hard, but rather regulates them finely via the signal energy beginning at the highs (where noise is

most audible).



## Vandal SE - Stomp boxes

The real world has produced a series of effect devices popular with guitarists and bassists in the "stomp box" format. We've also included a rich palette of these devices. Vandal SE includes for "stomp slots" for use with effects equipped from the list. The signal flow within this chain runs from left to right. Since all of the controls are self-explanatory, we won't describe them here.



## Vandal SE - Amplifier

Vandal SE basically offers 2 different amplifiers: Guitar Amp and Bass Amp. The amplifier type depends on the selected preset.

During development, a large selection of famous amplifier brands and models were not included. So that you are able to get a number of different sound characteristics out of your Vandal SE amp, the amplifiers are setup variably. Internally, circuit designs work absolutely the same as the real versions. In several ways, however, Vandal SE goes in its own direction in terms of the sound it offers.

### Guitar amp

The Vandal SE guitar amp offers three different preamp modes and two switchable end stage models. These basic configurations differ according to the the selected preset.

The guitar amp is setup with three channels. These may be set up with the pre and post gain controllers per channel (**Clean**, **Crunch**, and **Lead**) for the desired mix ratio. Don't worry about switching things around: The amplifier will remember the gain settings when channels are changed. These are the gain presets for the different

playing styles within the song.



**Voicing:** We have provided Vandal SE preamps with something that we call **Curve EQ**. For example, if you take a simple EQ pedal and shape the signal a little before the amp, then this may change the sound quite drastically. Curve EQ does something similar: It's located (in some cases multiply) at strategically points between individual amplifier stages and filters the signal, before it is distorted by the next stage. For fun, turn a curve in both directions and move around a bit with the frequency controller in the spectrum. This will give the amp a completely different character...

**Equalization:** The actual sound control (the "tone stack") functions rather conventionally: Vandal SE offers low, mid & high settings. Everything functions like the passive sound regulation network in genuine amps so that the controllers influence each other to produce numerous variations.

**Reverb:** Surf and twang simply needs on-board spring reverb. We've drawn on the modeling of famous reverb spirals. Everything sounds natural with complete authenticity.

### Bass amp



After roughly setting the **Gain controller**, the bass signal will first be treated with the **Contour circuit**. This filtering stage works similarly to the "Loudness" function by cutting the (lower) mids and lifting the deep bass and highs. It's sort of like "instant slap")

Next, the signal passes through the compressor stage (**Comp**). This

is a simple but extremely musical, optical design: The bass triggers a light source that is couple with a photo resistor which dampens the signal. This may already be familiar to you from the most famous studio compressor for bassists, i.e. Urei LA2A, which functions according to the same principle.

After any possible compression, **Drive** provides the option to take the bass sound to the next level. Saturating the signal takes place depending on the frequency: In spite of a level of distortion, the basses remain relatively clean and contoured.

The equalization stage offers 4 frequency ranges, whereby the two mid bands are variable. The final master volume controller specifies the volume of the final stage. As with the guitar amp, the end tubes are also engaged in this case as much as remains sensible.

### Cabinet simulation

For the cabinet simulation, playback of guitar sounds is simulated via speaker cabinets and pick-up from the boxes via 2 microphones.



The selection list features multiple speakers, housing types, and microphones. Two separate microphones are included with a modeled recording space. Analogously to a real situation, you may position a virtual microphone stand in a space to achieve interesting mixing ratios and stereo effects.

It's up to your creativity whether you would like model the cabinets on realistic role models (e.g. 12" vintage speakers in a 4 x 12 housing) or place a 10-inch design in a 15-inch box. You may also specify how strongly the speakers may/should or how penetrating the housing portion affects the overall sound. The dampening characteristics of the loudspeaker cabinet may also be adjusted.

In terms of microphones, the parameters room size and dampening may be set via the simulated recording space. Model a silent chamber or put the sound "on stage".

### Rack effects (FX1/FX2)

There are effects that don't always work well before the amp, e.g. reverb or delay, especially when they are distorted. Normally, these

effects are better placed at the end of the signal chain.

For final processing and enriching, we offer two separate studio-quality effects units just like real 19" rack devices.

Many algorithms create a stereo signal. Take care that the sequencer track operates the duct in "stereo" mode.



Effects units may be selectively operated one behind the other (serial) or parallel. Switching may be changed via the mode switch.

### The following algorithms & effects are available:

- **Mono delay** (msec & tempo sync): Possibly a simple delay with free selection of delay time or synced to the sequencer tempo with a musical raster. In case of high feedback values, a reduction of the damping frequency is required to provide naturalness to echoes.
- **Stereo delay** (msec & tempo sync): Like mono delay; features two models. Repetitions may take place on separate channels (feedback controller to the right: dual delay) or in ping-pong mode (controller to the left), whereby the signal alternates between the sides.
- **Chorus**: Produces a typical "floating/shimmering sound" by modulated detuning of a signal to "thicken up" its sound or spread it across the stereo field. Detuning is achieved by a short delay, the length of which can be varied by the modulation. This produces the so-called "Doppler" effect and broadens the signal.
- **Flanger**: Algorithmically similar to chorus, but different in that the delay time is significantly lower and delay works with repetitions (feedback). A flanger sounds more "cutting" and up-front than a chorus.
- **Phaser**: A modulation effect just like chorus & flanger, but in this case no detuning takes place. Filter components periodically alter the signal's "phase response" (principle of the "phase shifter"). Characteristic notches are produced in the frequency spectrum response (comb filter effects).
- **Room reverb/hall reverb**: Reverb offers realistic simulation of realistic reverberation. **Room** creates the impression of a small to mid-sized recording room, while **Hall** produces the sound impression of a concert hall. A particular is that both effects algorithms provide a **modulation** parameter, which may remove possible resonance at low dosages and can produce a soft chorus effect at higher values.

- **LoFi:** This algorithm gives the sound a little bit of "grit", or a certain measure of signal destruction depending on its setting. Turn down the internal sample rate as much as you like to steal a few bits from the sound's resolution. This is definitely unconventional...
- **Vintage compressor:** Ideal for thickening up the signal a little. The algorithm emulates an older popular circuit design that is similar to studio legends like the Urei 1176 or simple compressor pedals. A so-called "FET building block" controls the volume via the input level simply, effectively, and quite musically, as well as the set compression ratio and the attack and release.
- **3-band EQ:** This sound controller works like a conventional mixer with controller for bass, highs, and two controllers for the (variable) mids. This adds the final polish to your sound.

# Video and Bitmap Objects

## Video and bitmap formats

MAGIX Music Maker 16 Premium can load and export videos in AVI, MAGIX Video (\*.mxv), Windows Media (\*.wmv) and Quicktime Movie (\*.mov) formats and in addition export in Real Media Video (\*.rmv) format.

Graphics can be loaded and exported in BMP and JPEG formats. Also RTF text files can be loaded and used as subtitles.

On the content media you will find the included image and video files. You can also use your own files or even record your own videos.

To get the best results with video effects, you should save the video and bitmap files used in True Color (24-bit color).

## Adjusting the video screen

The video screen can be positioned freely on the screen as well as adjusted in size. To position it, you must first switch off the standard layout view in the windows menu before you can move the video screen. To adjust its size, click on the video screen with the right mouse key and select the desired size from the object menu or define it yourself ('user defined'). Please note that larger screens require a greater computing performance!

## Loading and editing videos and bitmaps

Video and image objects can be loaded and edited just like other objects. In order for you not having to decide which file is to be loaded, you can use the preview function on the video monitor. Simply click on a video or graphics file in the Media Pool: The corresponding video or graphic is displayed or played in the video monitor.

- Via the context menu (right mouse-click into the list) you can choose between different views ("List", "Details", "Large symbols"). In the "Large Symbols" view the videos are displayed with a preview frame – very useful to preview the available images.



- If you want to use the video for your arrangement, drag the video or bitmap file onto a track in the arranger while holding the mouse key. During playback in the arranger, the entire video and image material on all tracks, including all effects, is played back in real-time.
- Video and image objects can be edited in the same manner as other objects: You can touch and move them with the mouse, fade them in or out with the handles at the top corners, or change their brightness with the middle handle, etc. Please also read the chapter "Arranging objects (see page 62)".

## Simplify object presentation

With the TAB key you can switch between two object presentations. The objects in the alternative presentation are not displayed frame by frame in the arranger, but in simplified form. This saves working memory and improves overall play performance. Scrolling and zooming in the arranger as well as various object manipulations are far quicker in TAB mode. The video display in the video monitor is not influenced by the simplified object display.

## Visualizer objects

You can load so-called visualizer objects into MAGIX Music Maker 16 Premium (\*.vis files). The principle: The sound creates graphic changes to the visualizer objects. The graphics and structures move according to the beat of the music.

You can load visualizer objects in the same manner as other objects. The "Audio & Video Effects" selection button is located on top of the Media Pool.

The submenu "Visuals" now contains many algorithms for different automatic animations. Just try them out by dragging an audio object into the arranger and playing it. If you click on the different visualizers with the mouse, you will see in the video monitor how the computer animations move according to the beat of the music...

Visualizer objects can be used just like video and image objects: You can drag them from the Media Pool into the arranger and arrange them as you like.

## Video scrubbing

The scrub mouse mode is particularly useful for quickly finding certain positions within a video. To do this, activate the scrub mode in the mouse mode bar and drag the mouse pointer over a video object while holding down the mouse key. The video is played back according to the speed and position of the mouse, including all effects.

## Extract sound from videos

Video with sound material appears in the arranger on two tracks as two objects (an audio object and a video object). The two objects automatically form a group.

To edit the video and audio material separately from one another, the objects can be separated with the Ungroup (see page 291) function in the "Edit" menu or button in the arranger. Now you can replace the audio or the video track, or process each file separately. Rejoin/regroup the tracks with the "Export arrangement" function.

## Video effects

All video effects work in real time. In principle, almost any combination of effects may be assigned to any video or image object: For example, mix mode stanzas with a false color effect and a double playback velocity.

By overlaying of multiple videos or bitmaps, MAGIX Music Maker 16 Premium proceeds from the bottom up. The background video object must be placed in the upper track. It will be overlaid by and mixed with objects lying below.

Example, if you want to put a dancer on a landscape, place the landscape on track 1, the dancer on track 2 and activate the Blue Screen effect for the dancer.

Video effects are stored in the "Video FX" directory. Open the directory by clicking "Templates" in the Media Pool. All video effects have a preview function and can be dragged & dropped on a video object into the Arranger.

## Title editor

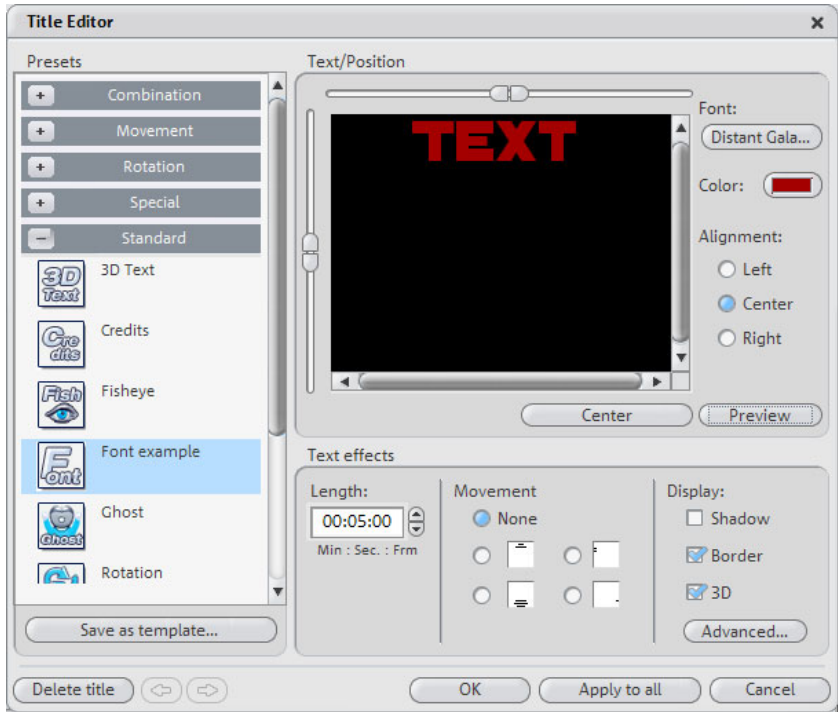
### Text objects and title presets

MAGIX Music Maker 16 Premium includes a function which simplifies insertion and editing of tracks. This feature is particularly useful for the karaoke function on the audio FX page, as well as for subtitling videos.

The basis for this is the "Titles" folder that located as a subfolder in the MAGIX Music Maker 16 Premium folder. You can access it via the button in the Media Pool. This directory contains a selection of preset title templates. To integrate a title template into your project, proceed as follows:

- Select a file. As usual, a simple click generates a preview. This way you can see how certain title settings will look and the effect they will have.
- Once you've found the right track, drag & drop it onto a track in the arranger. It is represented there as a title object.
- The title editor (see above) opens automatically. You can open it again later by double clicking (or by right clicking in the context menu below "Title editor").

## Title editor



Enter text of any color or font for subtitles or credits, then choose from a variety of movements (such as scrolling credits), effects and designs within the template menu. You can make your credits scroll up the screen just like in the movies!

**Menu presets:** The menu contains the title templates from the Media Pool title folder. This way, you can try out different movements, effects, and designs. The presets are arranged in various subfolders; the icon and the description will help you find the template you want.

**Save as template:** You can save the entire settings as a title template. You can then easily drag & drop them from the Media Pool.

**Text/position:** Type the text for your video subtitles in the title editor. Use the scrollbar to the left and above the text window to organize your text in the video screen and position it horizontally or vertically. You can freely position the writing vertically and horizontally. If you have selected moving text, this position determines the starting position. Please note that setting movement to text places the starting position of the title outside of the video window. You can,

however, always change the starting position.

**Font type:** Enter the desired font type, size, color, or type.

**Color:** Press this button to choose your own color. If you want to format individual words or letters, select them with the mouse and choose a different format. If no selection is made, the entire text will be formatted.

**Alignment:** Specifies whether the title should be aligned left, right, or to the center.

**Center position:** Clicking on "Center position" puts the title back in the middle.

**Preview:** This button starts the title preview in the video monitor together with the movie or scene. If you have selected a movement for the title, it will also be animated in the video preview window. You can interrupt the preview anytime by pressing "Stop".

**Text effects:** This function allows you to add motion, 3D shadows, and 3D effects, or a border. The effects settings can be adjusted in detail using "**Advanced**".

**Length:** Set the duration for which you would like to display the title.

If everything is as it should be, close the title editor by pressing "OK".

## Video capturings

MAGIX Music Maker 16 Premium can be used with all USB cams, graphic cards, video cards, or video cards that are compatible with DirectShow

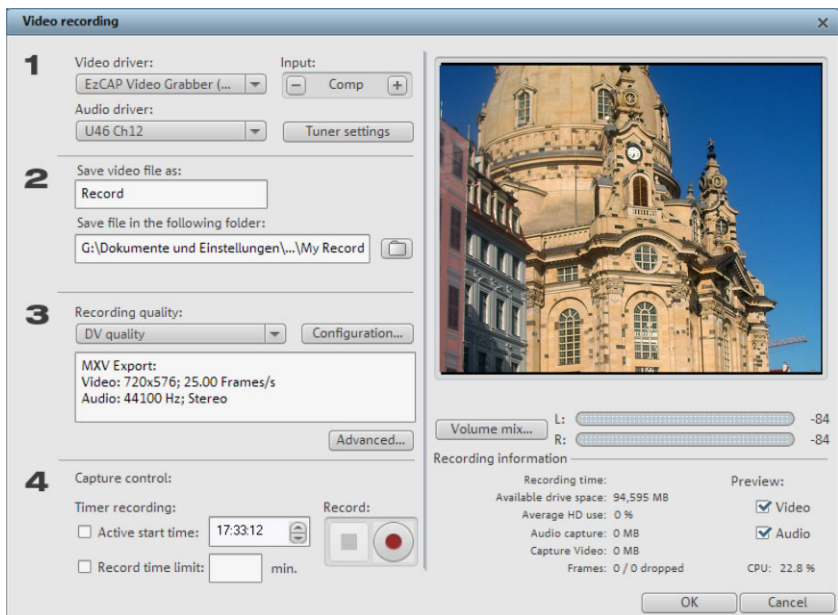
Video recorders or other devices are connected to the video input of the video card, TV card or graphic card. If your card also possesses audio ports, these should be used for capturing and playing back sound so that the image and sound do not diverge during a lengthy video.

To record from analog sources:

- Start MAGIX Music Maker 16 Premium.
- Click on "Record Video" and select "Record video".

- In the Video Record-Dialog, select the correct videotape and audio card driver in case you have several installed on your PC. A video preview window is displayed immediately.
- Name the capturing appropriately so as to be able to find it later.
- You can now select the desired video quality with the fader. The default setting is the highest quality that your PC system is capable of.
- Now start the capturing by pressing the “Record” button – end it by pressing “Stop”. Be aware of the “Drop Frames” notice. If, for example, more than 10 dropped frames per minute occur, the quality of your video will be compromised, and your computer may be overburdened.
- End the video capturing dialog with “OK” You can now view your capturing in the film bar in the lower third of your screen.
- To check the capturing, start the playback by pressing the space bar.

## Video recording dialog



**Video/Audio driver:** Here you can set up the video card or sound card for recording. In practically every case the driver software supplied with the hardware must be installed.

**Save movie file as/Save in folder:** Here you can enter the title of the

movie you want to record. You can also select the folder where you want to save your video file. This can be changed via "File menu > Properties > Program settings > System > Path settings".

**Record quality:** You can choose between various predefined recording qualities in the list box according to your computer's processing power and how you wish to use the picture material. They are listed in order of picture quality. Using "**Configuration**" you can fine-tune the quality for the selected preset.

**Advanced...** – Opens the video driver setting dialog (see page 231).

**Record control:** Here you'll find the red record and stop buttons. These start and stop recording.

**Preview:** On some graphics adapters you can reduce the system load by deactivating the video preview. If you hear an "echo", deactivate the audio preview.

**Recording information:** Here statistical details on the recording time, the available disk space, the number of recorded "frames" (individual pictures), and "Dropped frames". Dropped frames are frames that have been left out because the computer processor is too slow for the selected image format and cannot accept all incoming frames.

### **Advanced configurations in the video capturing dialog**

Here you can adjust certain settings for the video recording driver.

These dialog boxes, so-called "property sheets," come with the video card drivers. These driver-specific performance properties may deviate depending on the cards. We also have a very limited influence on the behavior of these drivers. If you encounter any difficulties, please contact the video card manufacturer for the latest driver updates.

**Input:** Sets the crossbar of the video card.

The crossbar determines which video and audio input signal will be recorded. The crossbars are connected in series to the video recording chip itself. In the output field, the video output (for the crossbars) is the input for the recording chip (video or audio decoder-in) of the video card. In the "Input" field, select the signal source that will be used by the video card to capture for this input. Many video cards have separate crossbars for audio and video. If you have a problem, try out the different configurations until the right sound

matches the right image.

Composite-in = the normal video input (typically a cinch jack)

S-video = S-video input (mini-din jack)

SVHS-in = SVHS input (special cable)

Tuner-in = TV signal of the integrated tuner

### Imagesetting

**Video decoder:** If the picture only appears in black & white or it flickers, the video standard may be set incorrectly. In mainland Europe, **PAL\_B** is used.

**VideoProcAmp:** Fine-adjustment of colors, brightness, contrast etc. We recommend against changing any of the manufacturer's settings.

**Format:** Please do not change anything here. The capturing format is set in the "Recording quality" option in the video recording dialog.

### Station selection

This option is only available if a TV tuner is integrated into your video card.

## Video Compression

Compressed video data is typically saved in AVI files. AVI stands for 'Audio and Video Interleaved', i.e. mixed picture and sound. Depending on the compression rate, high data rates will be required – a good video starts at about 2 MB per second, equivalent to compression of about 1:10 as opposed to uncompressed video with 20 MB per second data flow rate. High quality video systems only work with a compression of 3 or 2 – i.e. creating up to 10 MB per second data for video flow. Even uncompressed video can be used. MAGIX Music Maker 16 Premium can also process such high-resolution video data completely. Within MAGIX Music Maker 16 Premium, video data is processed in uncompressed format – all effects, mixes etc are carried out in the highest quality. It is possible that replay of a project with several videos or realtime effects may 'jump' more than is the case with smaller videos. This does not harm the end result though – video export is calculated frame by frame.



## Choppy or uneven playback

Don't panic if the picture on your screen is choppy or uneven. The finished product will look perfect and play smoothly. Don't forget that MAGIX Music Maker 16 Premium calculates all effects in real time. This lets you see for yourself what sort of influence each of the effects will have on your video footage. Some effects make even today's high-performance PCs work quite hard, and often, a steady, continuous video stream is simply not possible on your PC. The final product, free from previous choppiness, is only available after rendering it to DVD or exporting it. For that reason, you should first edit the movie in its raw version without effects. The preview generally delivers a steady picture, allowing you to work quickly and quietly. Towards the end, you can add effects to your movies to give them a special touch of Hollywood!

## General notes on AVI videos

The AVI format (**A**udio **V**ideo **I**nterleaved) isn't actually a proper video format! Rather, it is a so-called "container", where the conventions for transferring audio and video files to the program are only loosely defined. The codec (**c**oder/**d**ecoder) actually defines what storage format is used. A codec compresses audio/video data into its own unique format which can only be read by the codec itself and is decoded when the film is played.

In concrete terms, a computer-generated AVI file **can only** be loaded by and played on a different computer if the same codec is installed on it.

Many codecs (e.g. Intel Indeo<sup>®</sup> video) have now become standard components of the Windows<sup>™</sup> installation. Others like the popular DivX codec are not standard. If you are generating an AVI file for future play on another computer using one of these codecs, you should first install this codec on the other PC. The best method available is to copy the codec installer to your export directory and burn it every time you create a video disc (slideshow disc) for play on computers.

You may encounter some problems when using older video editing cards with codecs which only function with the card's hardware. Such AVIs can **only** be used on the computer which was used to

create them. Try to avoid using this kind of codec.

## Create a video project for the Internet

Internet video formats such as RealVideo, Windows Media, and Quicktime Movie can be found in the "File > Export arrangement" menu. When selecting one of these options, the current arrangement will be converted into the target format.

The Internet video formats are different from normal AVI files in two ways:

- **Streaming capability:** Modern Internet browsers can play RealVideo, Windows Media and, to a limited extent, also Quicktime videos even during the downloading process, whereas normal AVI files must be completely downloaded prior to the start of playback.
- **Lower data rate:** Internet formats, especially RealVideo, are optimized for the lower data rates used by today's Internet access devices. A dialog appears on export, for setting the playback data rate (i.e. dial-up modem, or high-speed access). If you use Windows Media or Quicktime videos for the Internet, choose a suitable codec and use a small pixel resolution to set up the necessary data rate.

## Video export via TV-out

Video and graphics cards with a TV out socket can also export videos directly to external video recorders. The arrangement must be played in full screen mode when saved with external equipment.

Note: With many graphic cards, the tv output can only be activated when a television or video recorder is connected before turning on the computer!

Switch the video monitor to full screen mode with Alt+Enter and start the playback by pressing the space bar.

You can play the video directly from the arrangement. However, it can sometimes lead to errors if the processor becomes overloaded as a result of processing the audio and video effects in real-time.

If direct playback doesn't work without causing errors, export the arrangement to the AVI video and load it into a new arrangement

which will then play without any problems.

Occasionally, it is enough to just mix the soundtracks of the arrangement into one. To do this, use the menu command “Edit” > “Audio mixdown”.

## Automation curves

Alongside the object-based effects and the mixer effects for entire tracks/for the entire sound, there is also the option of controlling audio and video effects via freely drawn curves.

There are track curves and object curves. The track curves are saved on the track and influence all objects of the track. The object curves "hang" off the object and can be moved with them. Changes to the object length are adapted correspondingly.

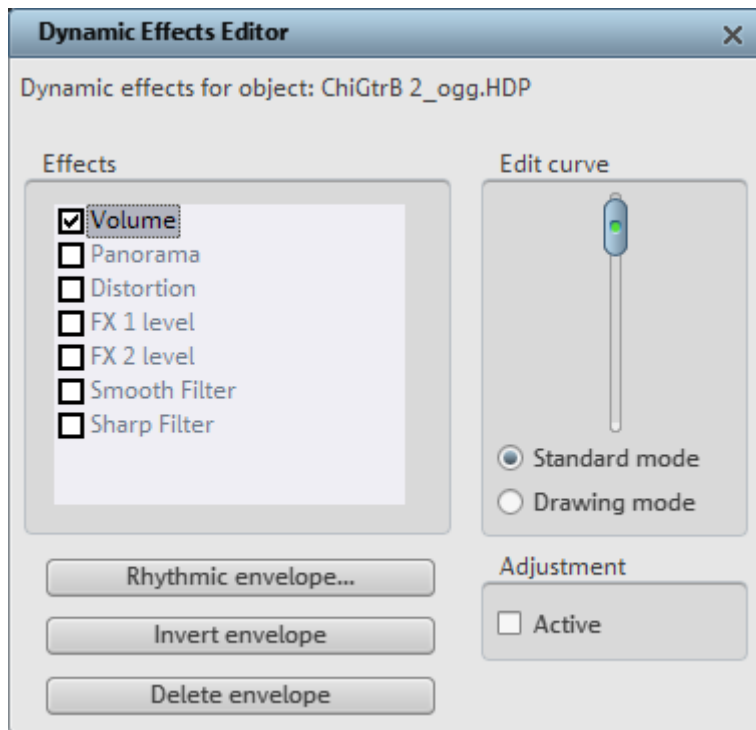
Selection and editing of the object curve effects takes place in the "Dynamic effects editor" dialog. This can be opened with the command "Object automation" or "Track automation" from the menu "Effects -> Automation" (key: "Ctrl + H / Ctrl + J").

### "Dynamic Effects Editor" dialog

Here you can activate different effects to be controlled by a definable curve. Every effect is categorized into a group. Activated effects are check-marked and are separately listed in the bottom part of the dialog under "Active Effects". The bottom part of the dialog lists all the audio and video effects, which are currently activated and which can be adjusted using the corresponding curve.

For each of the selected effects a curve is created which is placed over the object. The greater the curve, the greater the effect. The effect curve can be also be edited in the "Dynamic Effects" dialog.

For clarity purposes, not every effect curve can be shown simultaneously. In the "Dynamic Effects Editor" dialog select which of the active effects should be visible as a curve in the object. To do so, click on the active effect whose effect curve you wish to display (right-hand side of the dialog).



**Delete envelope:** Deletes the current effect curve.

**Invert envelope:** Mirrors the current curve on the horizontal 0-axis.

**Rhythmic envelope:** This options creates a rhythmic curve, either via the Generator or – for audio objects – via volume analysis of the object.

## Dynamic effects

The following effects can be controlled via the effect curves:

- Volume and Panorama are identical to the functions in the mixer, whereby a volume curve is added to the mixer setting and a panorama curve entirely replaces the mixer setting.
- Softening and sharpening filters as well as distortions are additional effects only available for effect curves and independent of the filter or distortion effect in the effect rack of the object or the track.
- FX Level 1 and 2 control the effect share that is sent to the two FX tracks (see page 243) from the object or track.

## Rhythmic envelope

This option creates a so-called 'envelope' for controlling effects. It 'envelops' the audio files on the track in different ways. In this manner it is possible to directly control effects by rhythm of the music.

After you have called the option 'rhythmic envelope' in the 'dynamic effects' dialog, a selection dialog appears where you can define the shape of the envelope more closely.

**Beat-based:** With this option, the shape of the envelope and thus the effect portion in the video follows the beat of the arrangement. Four different basic shapes are available for the beat-based envelope: 2 saw-tooth shapes, rectangle and triangle.

These shapes are regularly run through the video (visualized) in time with the beat and control the intensity of the activated effect.

On the left side of the dialog you can adjust whether the basic envelope shape is to be run through once per eighth, quarter, half or whole note.

**Options:** This takes you to an additional dialog, which determines the direction and strength of the beat influence on the envelope.

**Scan envelope:** As an alternative to the beat-based envelope, the volume course of an audio track can be used as an envelope for the video. Loud passages make strong video effects, while quiet passages create weak effects. In this way, a drum loop can, for instance, control the distortion of a dancer.

**Normalize first:** With this function, the level of the audio object is normalized first before the object is scanned to create an envelope. (See also 'audio effects', section 'normalizer' in this regard).

## Curve Generator - Options

**Limitation:** Specifies the minimum and maximum envelope value.

**Delay at minimum/maximum** allows you to further alter the curve shape of the pre-defined basic shape. **Shift** moves the entire curve, which lets you create interesting beats. This lets you create interesting offbeat effects.

## Editing the effect curve in the dialog

**Standard mode:** Before playback, it is possible to use a slider at the start marker position to create an effects curve point and move it vertically. You can edit an effects curve by setting the start marker at different positions and setting the curve value for this point with the slider.

**Draw mode:** Move the slider in the dialog (when playback is stopped) and a curve will be drawn in the track between the start and end marker accordingly. The duration of the drawing process corresponds the duration of the object, and the range between start and end markers in the case of track curves. Furthermore, if Automation (see page 60) mouse mode is activated, the curve can also be drawn with the mouse. This also works during playback.

**Adjust active:** Specifies object curve behavior if the length is changed retroactively. If "Adjust active" is on, the object curves are compressed and stretched with the objects, i.e. the curve points are moved correspondingly. For instance, if a movement curve is set so that an object is moved across the entire screen, then this is also done in case the length is changed (only slower or faster). This option has no function with track curves.

## Editing the effect curve in the arrangement

In the arranger, only one object and track curve can be edited at a time. The "Dynamic effects editor" can be kept open during editing so that you can switch between the curves.

The volume and panorama curves of an object may also be hidden/shown via "Effects -> Automation".

The curves can either be edited with the individual handles or by freely drawing the effects curve (in Automation (see page 60) mouse mode).

New handle points can be added by double clicking on the curve; existing ones can be deleted by double clicking. All handles can be moved with the mouse in a horizontal and vertical direction.

## Mixer



MAGIX Music Maker 16 Premium includes a real-time mixer with a master effects section that professionally mixes all the tracks within an arrangement. The Mixer can be opened by pressing the "M" key or via the toolbar in the main window (also: "View" menu > "Mixer").

The Mixer displays eight tracks simultaneously by default. With the «/» buttons beside the scroll bars at the bottom, the Mixer can be increased or reduced in size. You can view further tracks using the scroll bar.

### Master Limiter

The limiter, which prevents overmodulation, can then be connected.

## Fader

Every channel has its own volume or brightness fader. As a result, the volume can be lowered quickly and accurately, to add more bass or to fade out a video that is just playing. This fader also acts on any linked MIDI files.





The stereo position for each track can be defined with the Pan controls.

The "Solo" button switches a track to solo mode, i.e. all other tracks are muted. Mute: The mute button mutes the active track.

Double clicking on each of the controls resets it to the passive basic setting, in which no processor output is needed.

## Control groups

The volume, panorama, and FX send faders of the various tracks can be compiled into control groups. To do this, first click on a fader and then, while holding down "Ctrl", click on all other faders that you wish to include in your group. If you select "Shift", all faders in between the first one selected and the next one will be grouped.

Now you can set the volume of multiple tracks together without having to change the volume ratios of the tracks. For example, you can set the volume of an individual instrument of a drumset (kick, snare, HighHat) in such a way that they can harmonize with one another. Now, if you group together the volume faders of the tracks, you can set the master volume of the drumset.

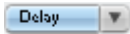
To ungroup a fader from a control group, click the instrument and press "Ctrl" again. There may only be one control group active at a time, creating a new group automatically deactivates an existing group.

## Track effects

Besides the object audio effects, a separate track effects rack with equalizer, reverb/echo, compressor as well as the Vintage Effects Suite plug-ins can be used.



There is also a separate 4-channel parametric equalizer (see page 194) that may be opened via the small EQ button beside the panorama controller.



The plug-ins are loaded via the plug-in slot.



You can open the track audio effects rack with the FX button.

A bright blue track effects button signifies that effects are active in the track.

The track effects can also be applied without having to open the mixer.



The arranger's trackbox also features the track FX menu. In it, you will find presets for track effects (see page 167) sorted according to the instrument type.

Track effects always apply to all audio objects of a track. In comparison to applying an effect to each object individually, this saves storage space. The effect itself works the same way as object effects.

For more information on using and controlling the individual effects, please read the chapter Audio effects (see page 165).

## VST and DirectX audio plugins

MAGIX Music Maker 16 Premium supports VST and DirectX audio plug-ins. Most of these are effects modules such as reverbs, equalizers and so on, but there are also many software synthesizer modules as well as other types of controller modules. Thanks to their standardized formats, these plug-ins can also be used in the mixer section of MAGIX Music Maker 16 Premium.

Before DirectX plug-ins can be used, the DirectX system needs to be installed on your computer. Manual installation is rarely required as most Windows installations include DirectX. If, however, your computer does not have DirectX or just an older version, you can use the up-to-date DirectX installer provided on the MAGIX Music Maker 16 Premium installation CD.

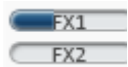
Naturally, the DirectX plug-ins themselves also need to be installed before they can be used! Installation procedures may vary from plug-in to plug-in.



Two so-called slots for track effects are located in the channel strip of the mixer for the corresponding track as well as in the FX tracks.

Clicking on the small triangle will let you select an effect from the list. Select "No effect" to remove a plugin from the slot. A left-click temporarily disables the plug-in. Active plug-ins are displayed in light blue. Right-clicking on the slot opens the settings dialog of the plug-in.

## FX tracks



Two FX send controllers (FX1 and FX2) are located below the plugin slots.

You can determine the volume at which you want the signal to be routed to the two available FX tracks.

An FX track is a complete, additional mixer track which provides a complete track FX rack and two plugin slots for use as a send effect.

A send effect differs from a normal effect found in the track (Insert) insofar as it can edit the signals from multiple tracks or objects simultaneously.

The FX are usually hidden in the Mixer. They will be displayed as soon as one of the FX send controllers is used.

In the first FX track the hall function is activated as standard as it is the most important application of the send effects.

The volume controllers serve to regulate the volume of the FX track and corresponds to the old AUX return controller. The mute button is used to switch the FX function on and off. The solo button enables you to single out FX individual tracks. The peak meter of the tracks, which send to the FX track, are displayed in grey.

## Live monitoring



Click the speaker button in a mixer channel to activate "low latency" monitoring.

Instead of the objects, the channel now plays the audio signal arriving at the sound card's input – through all the channel's effects and

without latency! This also applies to the AUX and master effects.

You can now add effects to your vocal or instrumental performance while recording them, and you can ‘

jam’ along to a complete arrangement in real-time. (Please note that this only works during recording and playback, not while the arrangement is stopped.)

This monitoring method requires an ASIO driver to be installed. ASIO drivers are usually supplied with professional sound cards. For all cards without a proprietary driver, MAGIX has included a MAGIX Low Latency driver. This provides an ASIO driver for any sound card (or on-board sound chip) that can use WDM drivers. For further information, please refer to the chapter "Menu File – Settings/Information – Playback parameters..."

The MultiMax effect has a high-latency design, which is why it is deactivated during live monitoring.

## Master track

The FX button and the plug-in slots function exactly like in the tracks. The FX button will open the **Master Audio Effect Rack**. With the **Reset** button you can reset all Mixer settings including the FX tracks.

**MAGIX Mastering Suite:** the MAGIX Mastering Suite (see page 193) is opened here.

**5.1 Surround:** This button switches the Mixer to Surround Mode (see page 248).

Both faders control the total volume.



**Link buttons:** If you deactivate this, you will be able to control the volume of the right and left channels individually.

## 5.1 Surround

MAGIX Music Maker 16 Premium supports playback in real 5.1 Surround.

### Requirements

You will require a sound card or a sound chip which is integrated into the computer's motherboard with six individual outputs to playback the individual channels:

- front left (**L**) / right (**R**)
- centre (**C**) / subwoofer (**LFE**)
- back left (**Ls**) / right (**Rs**)

Surround playback is possible with all audio driver models (see Playback settings), (Wave, DirectSound, ASIO).

**DirectSound** is supported by most of the standard sound cards.

**Wave drivers** are similarly supported by many standard sound cards; however, individual sound cards (for example, Soundblaster) require access to DirectSound.

Note: 24-bit Surround playback is often not possible, therefore please select 16-bit output.

For Surround output with **ASIO** drivers, you will require a 6-channel-capable ASIO driver (e.g. MAGIX Low Latency). Older multi-channel audio cards that activate their stereo output couples via multiple separate drivers are not suitable.

Output of the six output signals is achieved in all driver models in the output channels in the same (standardized) order:

**Channels 1/2: L-R**  
**Channels 3/4: C-LFE**  
**Channels 5/6: Ls-Rs**

When using WAV or ASIO drivers, the loudspeaker settings normally have to be changed to 5.1 playback in the control panel.

In order to do this you have to start the Control Panel for "Sounds and audio devices" and select "Loudspeaker settings", "Advanced", "5.1 Surround loudspeakers".

On most systems the program does this automatically while using DirectSound.

## Import and export of surround audio files

### Import

Interleaved 6-channel Wave files and MP3 Surround files can be imported. On loading, these can be transformed automatically into 3 stereo Wave files and the corresponding track settings can be activated (First track L/R, second track C/LFE, third track Ls/Rs).

### Export

Surround exports can occur in any one of the following formats:

- Interleaved 6-channel Wave files
- MP3 Surround files
- Windows Media files (Windows Media Audio or as a surround soundtrack of a Windows Media Video).

The files created are fully compatible with the normal file formats, this means that they can also be played on computers incapable of playing surround (in normal stereo).

The export can be implemented with the same menu commands (for example, Menu File -> Export arrangement -> Audio as Wave) like the normal stereo export. You will then be asked if the export should be in stereo or surround format.

## The Mixer in surround mode



To activate Surround playback, open the mixer ("M" key) and click on the "5.1 Surround" button in the master.

In the master, 6 peak meters for the individual channels are shown. The normal panorama button turns into a representative display of the Surround editor (see below (see page 248)) which can be opened by clicking on the display.

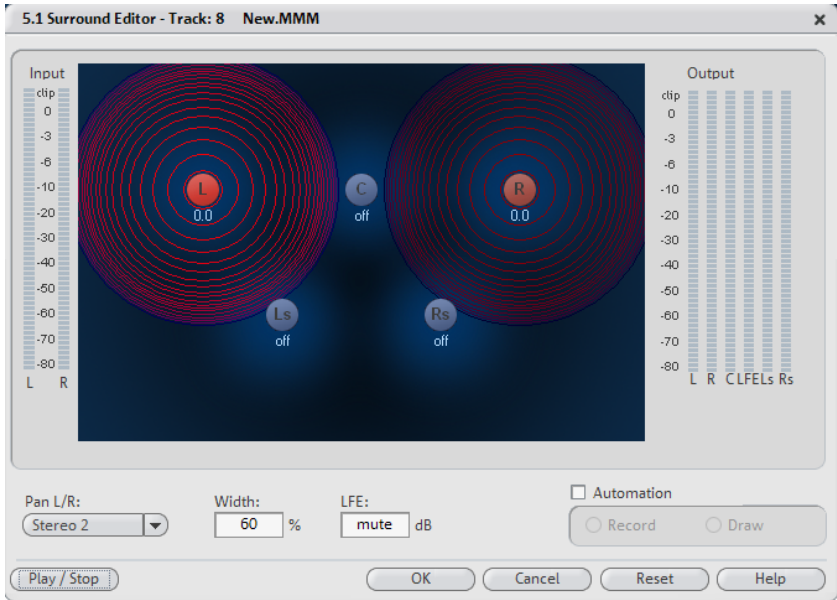
The Surround editor is also available to the FX tracks (see "Mixer"). For example, you can send the original track to the front loudspeaker **L/R**, the FX track however will remain at the rear loudspeakers **Ls/Rs**.

The master volume is applied to all channels, here the left controller influences channels L and Ls, the right controller; channels R and Rs and the middle value of both controller; the channels C and LFE.

The master plug-ins are only applied to the front channels!

In the master FX rack of the MAGIX Mastering Suite, the full effect palette is not available in 5.1 Surround mode, but rather only the compressor and the parametric equalizer (see page 194) (from the Mastering Suite). The settings of these effects have the same effect on all six channels.

## 5.1 Surround Editor



In the 5.1 Surround Editor of the mixer track you can arrange the audio signal of a track (displayed as two red sound sources) in the “imaginary” room. The signal is dispersed to the 5 (blue) loudspeakers which represent the individual surround channels.

There are 6 channels

**L:** front left

**R:** front right

**C:** Center

**Ls:** back left/left surround

**Rs:** back right/right surround

**LFE Subbass** (Low Frequency Effect) channel

Dispersing the signal to the 5 loudspeakers occurs after the so-called sound source emits a sound field of a certain level (displayed as red circles). The further away a loudspeaker’s source is, the lesser its share of the corresponding loudspeaker channel. The position of the



loudspeaker can be moved with the mouse.

The subbass share (**LFE**) is set directly from the corresponding value table. It can also be changed with the mouse.

There are various modes in which you can use the source signal:

**Mono:** The (stereo) source signal is seen as mono material, the left and right channels are mixed together and arranged together. The original stereo information is lost here.

**Stereo 1:** Similar to mono mode insofar as the left and right channels are moved together, however, only a portion of the left source is audible in the loudspeakers L and Ls and only a portion of the right source in the right channels R and Rs. The stereo information remains as intact as possible.

**Stereo 2:** The left and right channels can be arranged independently of one another, when moving the left source, the distance between the left and right sources remains unchanged. You can move an individual source by holding down the Alt key.

**Center/LFE:** Only the left channel is arranged. In return, the LFE share is drawn solely from the right channel. This mode is only of importance to the Import of surround material (see page 246).

“**Width**” determines the level of the sound field of an individual source.

## Automation

Panning of the sound source on the loudspeaker can be automated to simulate movements in the room.

For this to happen “Automation” must be activated. There are two methods to create automations: record and draw.

To record (when automation is on), the sound source is moved between the loudspeakers during playback. When recording the automation, the “Record” checkbox lights up red.

An alternative to drawing out complex movements is the draw function. When drawing in active mode, all panner movements are transmitted to the time interval between the start and end marker

(when the mouse button is held).

“Reset” deletes surround automation from the track.

There is no automation of the parameters for width and LFE, of the distance between the left and right source in “Stereo 2” mode, or of the loudspeaker positions.

## Integrating other programs - Synchronizing and ReWire

MAGIX Music Maker 16 Premium enables other programs or external MIDI hardware (e.g. Grooveboxes, hardware sequencers) to be remote controlled via MIDI synchronization or to be controlled by these devices. Synchronization means that both components involved always use exactly the same tempo and operate at the same time position.

ReWire technology makes it possible to play ReWire-capable programs like Propellerheads Reason or Ableton Live in MAGIX Music Maker 16 Premium just like a software synthesizer via MIDI objects.

### Synchronization

Sometimes MAGIX Music Maker 16 Premium is not enough on its own. A friend has a Groovebox and wants to jam...

If two software or hardware sequencers (devices like Grooveboxes or keyboards) are intended to play music together, then it's important to synchronize them.

#### **Why is this necessary**

You would have to be pretty skilled to be able to play both programs or devices at the same time - there would most likely be problems with time delays, and as soon as one side pauses or skips forward, chaos is fairly likely the result.

Even when playback is started simultaneously (synchronously), the sequencers can get out of beat over time, since even if tempo is programmed on both sides, this will never truly match 100%. Software sequencers determine the tempo based on time which is derived from the sample rate on the sound card. Theoretically, this

has a fixed, predefined value, e.g. 44,100 Hz, but in practice, this value can deviate so that the real tempo is slightly faster or slower than what is displayed.

Therefore, synchronization means that one side constantly receives information about the current time position from the other, and that the position and tempo is corrected correspondingly to result in a match. This includes provision of all transport functions like start stop, or jump to a specific time position.

The side which sends the synchronization information is called the **Master**, and the side which receives the information is called the **Slave**.

MAGIX Music Maker 16 Premium can run in both of these functional modes. For synchronization, the protocols **MTC** (MIDI time code) and **MMC** (MIDI machine control) are applied.

For synchronization, a normal MIDI connection is required, i.e. depending on the operational mode, you connect a MIDI output (MIDI OUT) on the computer with the MIDI input (MIDI IN) on the other computer/device for master synchronization or other way around (MIDI input on the computer with the output on the other machine for slave sync).

Activate synchronization in the dialog "Arrangement settings" ("E") under the "Synchronization" tab.

## Synchronization settings

**Receive synchronization (slave):** Slave sync on. MAGIX Music Maker 16 Premium follows the tempo and transport control of the external device/program.

**Device:** Here you have to select the MIDI input driver via which MAGIX Music Maker 16 Premium should receive the MIDI timecode.

**Framerate:** The master and slave framerates must match. Synchronization with video programs/video hardware matches the framerate of a specific video format, e.g. 24 for cinema, 25 for PAL video audio synchronization, 29.97 drop/no-drop or 30 for NTSC video.

**Preroll frames:** Here you can enter a frame number that MAGIX Music Maker 16 Premium will ignore before synchronization starts. This will ensure that analog devices first require a certain time to reach the correct speed. In order to prevent synchronization of MAGIX Music Maker 16 Premium to an invalid time, this can be skipped by means of preroll frames.

**Send synchronization (master):** Master sync on. The external device/program follows the tempo and transport control in MAGIX Music Maker 16 Premium.

**Start offset (ms/SMPTE):** Specify an offset in milliseconds or SMPTE frames (minutes:seconds:frames) to be deducted from the incoming timecode before the time is used for synchronization. An offset of

60:00:00 (1 hour) will synchronize a tape with an SMPTE code that starts at 1 hour; MAGIX Music Maker 16 Premium however still starts at the tape beginning at "0". Vice versa, sending a timecode snaps this value to the current position.

**Correction factor:** Normally, this value should be at "1" if you don't change it. In seldom cases, synchronization of MIDI and audio can run apart for longer arrangements. You can accelerate the speed of the MIDI playback in this case by slightly increasing this factor (e.g. to 1.000001).

**MMC settings:** Open the dialog for the MMC protocol settings (see page 253).

## MIDI Machine Control (MMC)

### MMC modes

The synchronization window provides settings for remote control via MIDI Machine Control. MAGIX Music Maker 16 Premium supports synchronization of external devices via MMC. Three working modes are provided:

**Receive MMC commands (slave):** If you have set up MAGIX Music Maker 16 Premium to work as a slave, activate this option. MAGIX Music Maker 16 Premium keeps track of the JOG shuttle operations and fast forward and rewind commands of external devices. MAGIX Music Maker 16 Premium also receives the current playback position of the device and displays it as an additional blue cursor on the timeline.

**Send MMC commands (master):** MAGIX Music Maker 16 Premium operates as master. The external device follows the time position every time the playback cursor moves to a certain position within the arrangement.

While playing a range in MAGIX Music Maker 16 Premium, the MMC device stops once the end of the range is reached. If this option is activated, the start and stop commands sent by the space bar only control the MMC device.

### Use transport console as remote control for external device

If you activate this option, the transport control no longer controls playback and recording directly within the program but instead controls the external MMC device. Play, stop, fast forward, rewind, and fast rewind no longer have any direct effect on playback. The

record button starts recording in synchronization with the playback of the MMC device.

Use the space bar to start playback remotely: If this option is activated, the start and stop commands are controlled via the space bar on the MMC device.

### Advanced options

**Input MIDI device:** Here you can set the MIDI device via which MAGIX Music Maker 16 Premium should be controlled.

**Output MIDI device:** Select the MIDI device which is connected to the device you want to control remotely.

**MMC input ID:** Enter the MAGIX Music Maker 16 Premium input ID here. Normally this is "All".

**MMC output ID:** Set the input ID of the MMC device you wish to control remotely. Normally this is "All".

## ReWire

If this option is activated, ReWire-compatible client applications (like, for example, Propellerheads Reason) can be integrated into MAGIX Music Maker 16 Premium as synthesizers.

Activate the ReWire function in the arrangement properties ("E") under the "Synchronization" tab.

Afterwards, installed ReWire applications can be loaded as instruments into a track. All ReWire client applications appear as individual sections in the selection menu for software instruments in the track box and in the MIDI editor and are loaded as software instruments (VSTi).

Several client applications can be opened automatically by right clicking on their name in the selection menu, just as you can open the plug-ins window for VST instruments by right clicking. ReWire clients which support the direct opening of the client application via the host application (MAGIX Music Maker 16 Premium) need to be started manually. You can do this by starting your client application as you would normally. It then automatically recognizes the host and starts in a special client mode. The client application should always be

launched after MAGIX Music Maker 16 Premium and should be closed before exiting.

The ReWire application can be controlled via MIDI, just like a software instrument. The client application runs, starts, and stops synchronously with the time position in MAGIX Music Maker 16 Premium so that you can also use the sequencer in the client application.

The "classic" MIDI channel of MIDI notes and events is not important; it is replaced by the ReWire MIDI bus system. MAGIX Music Maker 16 Premium only sends to the ReWire MIDI bus and only supports the ReWire master output-side, not the ReWire audio bus system.

# Reprocess arrangement

## Export assistant



The export icon on the toolbar opens the export wizard.

This bundles different options for exporting your arrangement in different formats, for burning onto CD, or publishing on the Internet with different platforms.





**Export as MP3:** This selection exports the arrangement in the popular MP3 format for use on the Internet or on mobile playback devices (Mp3 players, mobile phones, etc.). For details about the export dialog, please see the chapter concerning the file menu, particularly the "Export (see page 270)" section.

**Burn to CD/DVD:** This selection exports the arrangement in the best-possible quality and opens an additional program for burning an audio CD. The option is also available to backup the entire arrangement with all involved files onto CD or DVD. See Burn audio CD (see page 267).

**Upload to MAGIX Online Album laden:** Uploads the arrangement to MAGIX Online Album. This platform enables friends and acquaintances to experience your work. The MAGIX Online Album online player may also be embedded into any other websites. More information about MAGIX Online Album is available in "Online (see page 309)"

**Publish on MySpace™:** There is a special MAGIX Online Album upload for the MySpace social network which automatically creates the HTML code for embedding your song on your MySpace profile. More about this is available in Adding songs to your MySpace profile (see page 264). You may also upload your song to the DJ Tunes community via this selection. This requires registration with the DJ Tunes.

**Publish on YouTube™:** This selection uploads the arrangement as a music video to YouTube. To use video in MAGIX Music Maker 16 Premium read the chapter video and image objects (see page 223). More info about YouTube™ export is available in "Export to YouTube (see page 264)" in this chapter.

**Send via email:** Converts the arrangement into Windows Media and adds it as an attachment to an email. An email program (e.g. Outlook Express) must be installed and setup.

Note: If you only use browser-based email, then this function will not be available. However, you could invite others to listen to your uploaded music via email to your MAGIX Online Album or Youtube™. To do so, you will have to use the functions of the respective website (for MAGIX, this is MAGIX Online Media Manager).

## Export as email attachment

The option "Send arrangement as email" in the "File" menu > "Internet" creates a file in the Windows Media format. Your mail program is activated simultaneously and the created file of an opened message is added as an attachment. Thus, any arrangement can be compressed without intermediate steps and sent as an email immediately.

## Export as ringtone

With MAGIX Music Maker 16 Premium you can produce your own individual ringtone melodies. Once completed, export the arrangement using the "Audio as ringtone" option in the File menu.

In the export dialog you can select various formats for which useful tips and tricks are also available.

### Some advice on creating ring tones

**Audio material:** When designing your ring tone please take into account that the loudspeakers of your mobile phone can only poorly reproduce bass tones. High tones are also heard more easily in a loud environment. If your ring tone includes MIDI Objects, you should activate VST Instruments on the respective tracks in the arrangement, so that MIDI information included in your ring tone becomes audible.

Some manufacturers offer VST effects which simulate the loudspeaker of your mobile phone on the PC.

**Length:** Typical ring tones have a length of about five to sixty seconds. MAGIX Music Maker 16 Premium lets you create longer ring tones; however, you should note that large ring tone files require sufficient memory in your mobile phone.

**File format:** First, select a format suitable for your mobile phone from the Export dialog. If several formats are possible, please note that the resulting audio quality will vary. In general, the quality increases in tandem with the size of the file. If your mobile does not support stereo audio playback, you can activate the "mono" export option which reduces the required memory space by about half. The size of the file that will be generated using your current settings is displayed

in the Export dialog.

**Transferring the ringtone to your mobile phone:** Depending on the type of mobile phone and the items included in delivery there are several possibilities to transfer your ringtone from the PC to the phone:

1. Wireless via infrared (IrDA) or BlueTooth link
2. Using a data cable and, if applicable, the transfer software supplied by the manufacturer
3. By WAP or MMS

### Transfer with Bluetooth

**Warning!** The procedure described here refers to Windows XP with Service Pack 2!

Dialogs may be different depending on the Bluetooth driver and operating system version, or their order may vary (e.g. for password allocation) when transferring to your mobile phone. However, the process is usually similar if other drivers are used. Read more on this in the help file or the corresponding chapters of your operating system's manual and Bluetooth adapter.

- If you own a Bluetooth device, you can export the movie straight to your device. To do so, your device and your PC must both have Bluetooth interfaces. If your system has a Bluetooth device, you can activate the **"Transfer via Bluetooth"** option.
- After converting the movie into the desired format, the **Bluetooth file transfer assistant** opens.
- The first time you try to transfer files to your device via Bluetooth, you have to specify your device as the receiver in the dialog by clicking on **"Search..."**, selecting your device and then pressing "OK". The name of your device in the Bluetooth network is specified in the Bluetooth settings of the device. Check your device manual for this. Select your device and confirm your choice by pressing "OK".
- Now enter a password of your choice, which you will later have to confirm on your device and click on the "Continue" button in the assistant. Since connections between multiple Bluetooth devices can be set up simultaneously in a room, the password serves to identify certain connections as well as to safeguard your data.

The order may be the other way around, depending on the Bluetooth device driver, i.e. the mobile phone will request a password which must be confirmed on your PC. It's important that you use the same

password in each case.

- You may be asked once again to enter the file name and path of the movie. In this case, we recommend using a folder that you will be able to find again quickly to export the file (e.g. "...My Files/My Videos").
- Click the "Scan..." button, open the set up folder, and select your video file by double clicking it. Now, in the wizard, click the "Continue" button.
- Next, you may have to activate the reception of files on the device and re-enter the password. Afterwards, the transfer of the videos will begin automatically.
- Once the transfer has been completed successfully, "1 new message" will display on your device. Read more on how to save and play videos in the corresponding device manual.

**Warning!** We only recommend activating data reception via Bluetooth on your device once this function is actually required, e.g. for transferring files. Once you have completed the uploading process, you should deactivate Bluetooth again, since permanently activated Bluetooth reception constitutes a security risk!

### Transfer via infrared

For devices with infrared interfaces, the transmission of movies works similarly to using the Bluetooth transfer method. To do this, your PC and your device have to have infrared interfaces. Many notebooks are already fitted with such IrDA interfaces.

- Before starting the export, an infrared connection must already be established between the computer and the device. Activate the infrared interface on your device and establish the connection to your computer. You can check if a connection has been established via a corresponding symbol in the task bar. More information on this can be found in the Windows help under the keyword "Wireless connection".

**Note:** Some devices deactivate the infrared interface when no data is exchanged after a certain amount of time. In this case, you can search for the exported movie in the Media Pool again, reactivate the infrared interface of your device, open the context menu of the file, and then send the video to your device again by clicking "Transfer".

- Open the "Export" dialog via the export button, and under "Play after

export", select the option "Export with infrared". Confirm with "OK". A window will now be displayed which informs you of the current status of the transmission.

- Once the transfer has been completed successfully, "1 new message" will display on your device. Read more on how to save and play videos in the corresponding device manual.

## Podcasting

Podcast is the name for a relatively new Internet transfer form. It is made up of "**pod**" from "iPod", the name of a popular portable MP3 player, and the term "casting" for broadcasting content to a wide group of listeners/viewers.

A podcast is therefore something like an online radio station. "Broadcasting" web radio stations means you can only listen to and record the currently broadcast radio station. Podcasting is different. You as the listener can subscribe to the podcast and the files will be downloaded at a specific time and you can listen to them whenever you like, for example, on the move with your portable player. The shows are pre-produced and placed on an Internet server for download.

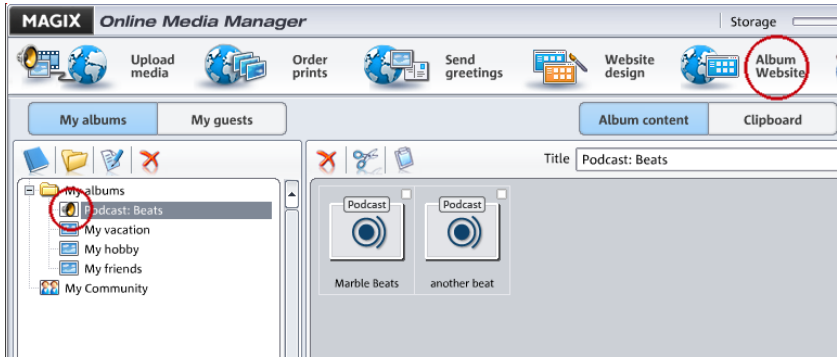
### Export as podcast

Select the "Upload arrangement as podcast show (audio)" in the Online > MAGIX Podcast Service menu and the exciting journey of your podcast to the pages of the largest podcast providers begins.

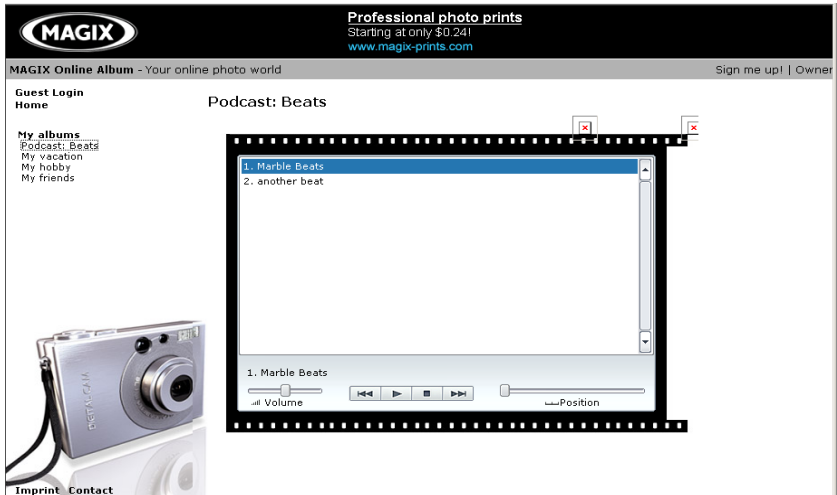
The first stop is your personal MAGIX Online Album, the place your podcast will call its online home. From here it can be accessed from anywhere in the world. Login with your password or register.

Your free MAGIX Online Album with 128 MB webspace can be set up at any time. It will then be available to you from anywhere in the world.

When uploaded via the "Make podcast" button the podcast will be sent to your personal MAGIX Online Album. In the MAGIX Online Media Manager of your MAGIX Online Album the cast can now be found in its new format in the newly created folder "My podcasts".



Now take a look at your album website: Here you can listen to the cast on your own website. You will immediately notice the small button "Subscribe to RSS feed" which allows any user of your MAGIX Online Album to automatically receive podcasts now and in future.

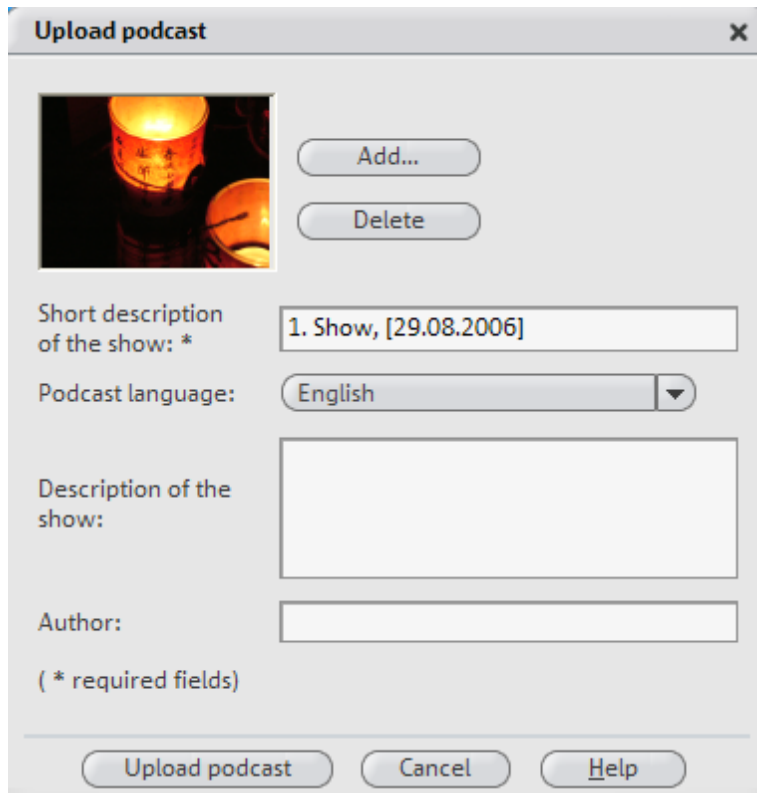


### How is your podcast distributed?


Your RSS feed - the technology behind a podcast - will automatically guarantee that your podcast will be sent from your MAGIX Online Album to many large podcatchers, including MAGIX Podcast Service. Here your podcast can now be subscribed to by a worldwide audience. Currently, a podcast created with MAGIX Music Maker 16 Premium and uploaded to MAGIX Online Album is sent to 10-20 international podcatchers. The distribution depends on the topic of the podcast.

You may even find your podcast via a search engine without knowing how long the journey of a cast over the web may be.

## Upload podcast



**Upload podcast** [X]



Short description of the show: \*

Podcast language:

Description of the show:

Author:

( \* required fields)

With "Upload arrangement as podcast show (audio)" you can publish your arrangement as a track on one of your podcasts. The **Upload podcast** dialog will open. Here the required information for your podcast track has to be entered.

**Add/Delete:** Here you can add a picture in JPEG format to your show. Delete removes the picture.

**Short description of the show:** This is the name of the show. A podcast typically contains several shows and new ones are added regularly. This is **not** where you enter the name of the podcast to which the show belongs. You can enter the name when you upload to MAGIX Online Album. A podcast then corresponds to an album.

**Podcast language:** This field must be specified correctly as the podcast databases sort the podcasts according to language.

**Show description:** It is important to enter a unique show name and

description so that other listeners will find your podcast.

**Author:** Here you enter your email address so that you can be contacted.

**Upload podcast:** The project is encoded as an MP3 and then uploaded to the MAGIX Online Album. You can only upload one show at a time (one file).

## Export to YouTube

You can upload your arrangement to YouTube™ directly from within MAGIX Music Maker 16 Premium.

You can find this function in the menu "File -> Export -> Youtube".

The command opens a dialog where you can set the name of the arrangement for YouTube (default is the same as in MAGIX Music Maker 16 Premium), description, keywords (so-called "tags"), and the category for the video. After submitting this data by pressing "OK", the arrangement is exported and uploaded to YouTube™. This is why you have to enter your YouTube™ account access data (username, etc.) to connect to YouTube™. If you don't have an account open your browser and go to YouTube™ to sign up for an account first.

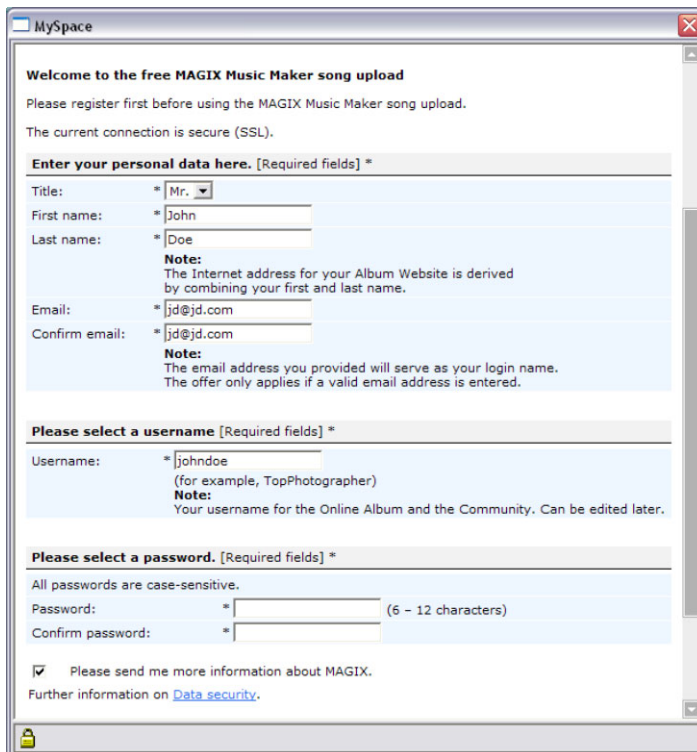
If uploading was successful, your browser will open the info page for the video you just uploaded to YouTube™ to double check your description and tags. If everything looks correct, just leave this page and the new video is already listed under your videos. YouTube™ takes some time to process the video for online presentation, but after this period you and every web user around the world will be able to watch it.



## Add songs to your MySpace profile

With this function you can add your finished MAGIX Music Maker 16 Premium arrangement directly to your MySpace profile. The following will happen:

1. The arrangement will be exported to an MP3 file.
2. The file will be uploaded to a MAGIX server. When used for the first time you have to register for the MAGIX Music Maker song upload.



The screenshot shows a MySpace browser window with a registration form titled "Welcome to the free MAGIX Music Maker song upload". The form includes the following sections:

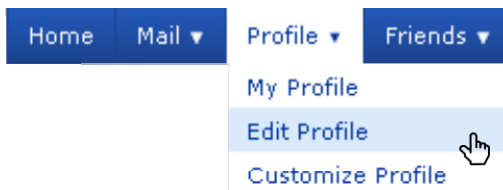
- Welcome to the free MAGIX Music Maker song upload**: A message stating "Please register first before using the MAGIX Music Maker song upload." and "The current connection is secure (SSL)."
- Enter your personal data here. [Required fields] \***:
  - Title: \* Mr. (dropdown menu)
  - First name: \* John (text input)
  - Last name: \* Doe (text input)
  - Note:** The Internet address for your Album Website is derived by combining your first and last name.
  - Email: \* jd@jd.com (text input)
  - Confirm email: \* jd@jd.com (text input)
  - Note:** The email address you provided will serve as your login name. The offer only applies if a valid email address is entered.
- Please select a username [Required fields] \***:
  - Username: \* johndoe (text input)
  - (for example, TopPhotographer)
  - Note:** Your username for the Online Album and the Community. Can be edited later.
- Please select a password. [Required fields] \***:
  - All passwords are case-sensitive.
  - Password: \* (text input) (6 - 12 characters)
  - Confirm password: \* (text input)
- Please send me more information about MAGIX.
- Further information on [Data security](#).

Please enter your name, a valid email address, user name and password. A confirmation email will be sent to the email address containing a link you have to click on to finally activate the upload. All further uploads will be fully automatic so so you won't have to re-enter your login data. It will be saved in the program.

3. A dialog displaying the HTML code will open. The "Copy" button copies the selection to the clipboard.



4. Now log onto MySpace and click on Profile > Edit profile.



5. Enter the code section into one of the fields (click into the field and press Ctrl+V), to enter HTML directly, for instance, in the section "Personal information" > Interests". This is where the player will be displayed on your MySpace profile that anyone can use to play your

MAGIX Music Maker 16 Premium songs.



You only have to enter the code once as all other songs will be added as tracks to the player.

Notes:

- If you already own an MAGIX Online Album (see page 309) - account you can use the login data for the MAGIX Music Maker 16 Premium upload.
- To edit the track order or delete tracks later you have to register with your login data at MAGIX Online Album <http://www.magix-photos.com> and open the **ONLINE MEDIA MANAGER** there. You can find uploaded songs in the folder "Music Maker" in your "MySpace" album.

## Upload song to DJ Tunes

Become a part of the largest music communities for dance-oriented music and earn back the purchase price! Submit via MAGIX Music Maker 16 Premium directly to DJ Tunes for sale.

Find out more at <http://www.djtunes.com> <http://www.djtunes.com>

The website is provided in English.

## Create Audio CD

To burn an Audio CD, export your arrangement as a wave file: Click on "File" and select the "Export arrangement" option > "Audio as Wave". The WAV file created can be burned as an Audio CD with any burn program.

In the Premium version, the burner program MAGIX Goya burnR as well as the MAGIX Music Editor are at your disposal. You can load your arrangement into the MAGIX Music Editor with the help of the option from the menu command: "File" > "Export arrangement" > Burn arrangement on audio CD-R(W), and burn an audio CD using this CD mastering tool. Or you can open MAGIX Goya burnR, for example, with the help of the context menu in the Media Pool. An MP3 data CD can also be created with MAGIX Goya burnR.

## File menu

### New arrangement

A new MAGIX Music Maker 16 Premium arrangement is created with this menu item, with 16 tracks. More tracks can be added via the menu "Edit".

Shortcut:                      Ctrl + N

### Load arrangement

A previously saved MAGIX Music Maker 16 Premium arrangement is loaded with this menu item. Please note that the object files for the arrangement must also be available! MAGIX Music Maker 16 Premium will look for the sounds and videos that were used first in the path where they were located when the arrangement was saved. If they are not found there, then the MAGIX Music Maker 16 Premium Arrangement will look for the objects in the same directory as the arrangement itself.

Shortcut:                      Ctrl + O

### Save arrangement

The current arrangement is saved under the existing name. If no name has been selected, then a File requester opens, where the path and name can be defined.

Shortcut:                      Ctrl + S

### Save arrangement as...

This opens a file requester where you can define the path and the name of the arrangement that is to be saved.

Shortcut:                      Shift + S

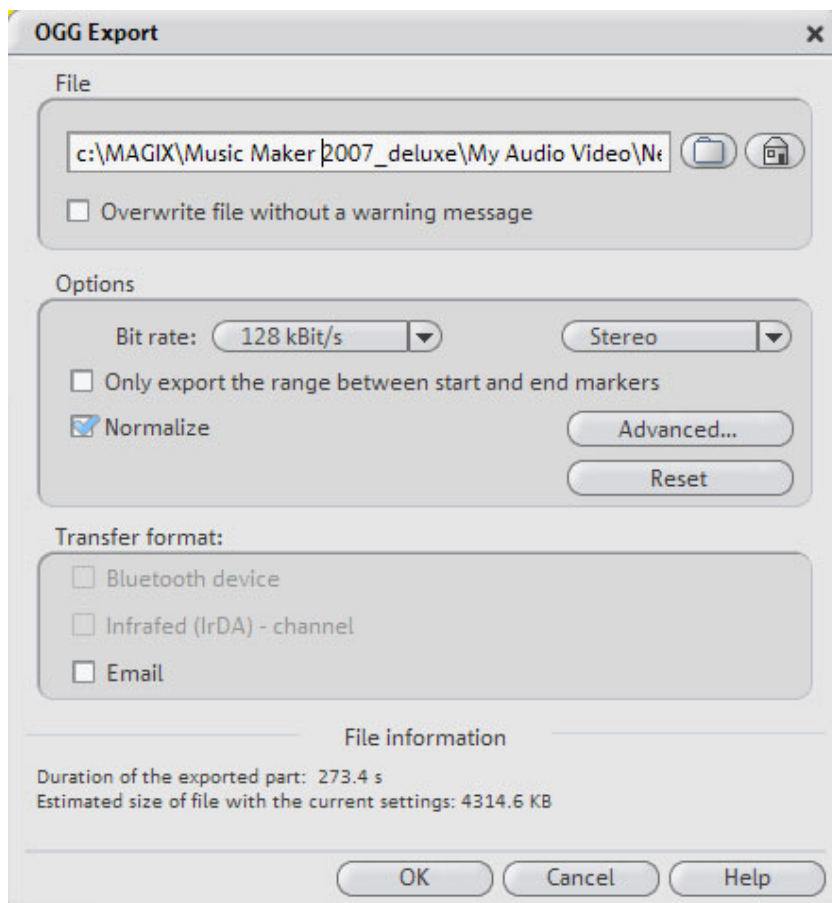
## Export

### Burn audio to Audio CD/DVD-(RW)

With this option the arrangement will be exported as a WAV file and loaded into the CD mastering program MAGIX Music Editor. From there it can be burned straight to disc.

Shortcut: Alt+Shift+A

### Audio export dialog



### File

In **File** you can enter the file name for you exported file.



Use the folder symbol to select the folder into which you want to export it. The dialog will remember the export path for future exports.



Use the "home" symbol to restore the original preset path.

With "**Overwrite file automatically**" you can perform multiple exports from the same file.

## Options

**Only export the area between the start and end markers:** Set the option if you wish to export only one of the clippings from the arrangement.

**Bit rate:** The "Bit rate" selection specifies the level of compression: The higher the bit rate, the higher the quality of the exported audio file. On the other hand, the bit rate determines the final file size: The smaller the bit rate, the smaller the files.

**Mono/Stereo/5.1 Surround:** Most mobile devices have only one loudspeaker. To save on memory, you can export in mono as well. In 5.1 Surround Mode (see Mixer in Surround Mode (see page 247)) you can also export in MP3surround.

**Advanced:** Here you can open the advanced settings dialog for the corresponding audio format (see below).

**Normalize:** This function should always be activated. It guarantees that the music is not too loud/overmodulated or too quiet.

## Transfer format:

Here you can state whether you want to send the exported arrangement to mobile devices via Bluetooth, infrared or email. Read more in the Reprocess arrangement (see page 255) chapter.

## Audio as Wave

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

Shortcut:                      Alt+W

### Audio as MP3

MAGIX Music Maker 16 Premium supplies an optional MP3 encoder for especially fast and good-quality conversions into the popular MP3 audio format.

**Hint:** The MP3 encoder cannot be used as a codec for the audio track of AVI audio files.

#### Transmission format

Here you can specify how you wish to send the audio file to the mobile device. Read more on this under Transferring files (see page 258).

### Options

In the "Options" section you can set the format and the compression of the audio file.

**Bit rate:** The "Bit rate" selection specifies the level of compression: The higher the bit rate, the higher the quality of the exported audio file. On the other hand, the bit rate determines the final file size: The smaller the bit rate, the smaller the file.

**Mono/Stereo/5.1 Surround:** Most mobile devices have only one loudspeaker. To save on memory, you can export in mono for these devices. In 5.1 Surround mode (see Mixer in Surround mode (see page 247)) you can also export in MP3 Surround.

**Note:** Before you can use the MP3 encoder, you will have to activate it. Activation is fee-based! For more information, read the Activate additional functions (see page 320) chapter.

**Normalize:** This function should always be activated. It guarantees that the music is not too loud/overmodulated or too quiet.

Keyboard shortcut: Alt + M

### Audio as Ogg Vorbis

"Ogg Vorbis" is a royalty-free Open Source audio codec with a high sound quality but relatively small data volumes (comparable to MP3).



Shortcut: Alt + Z

### **Audio as Windows Media**

Exports the arrangement in Windows Media Audio format. Please read more on the advanced settings in the Windows Media Video Export (see page 276) section.

Keyboard shortcut: Alt+E

### **Audio as AIFF**

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

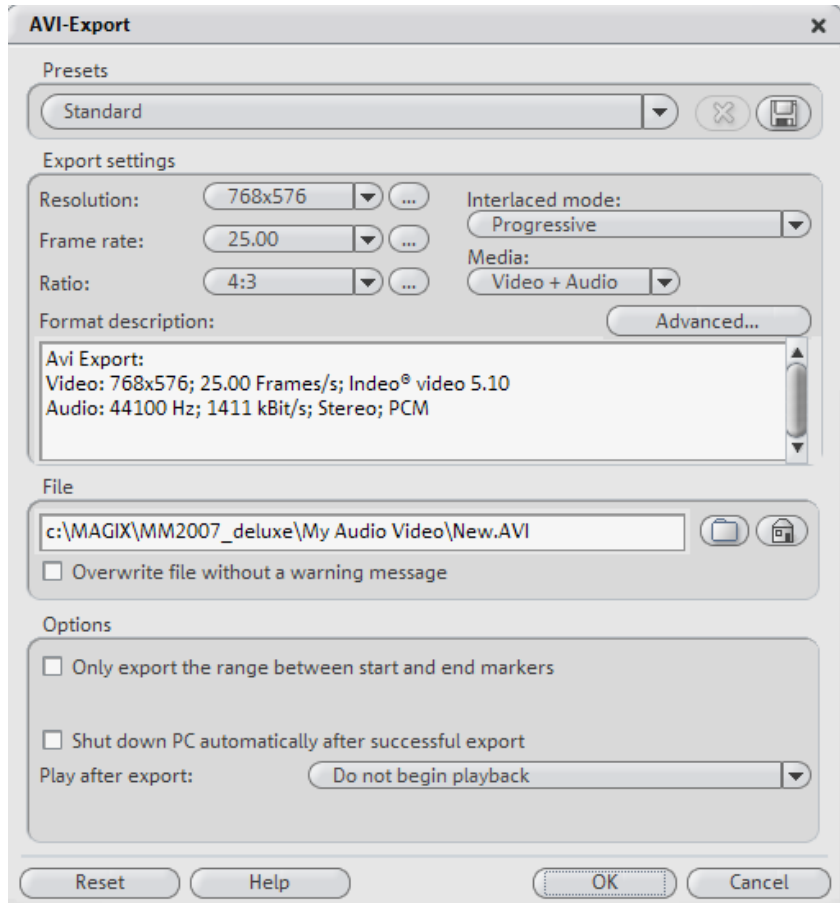
Shortcut key: Alt + F

### **Upload audio to MySpace/DJ Tunes**

The audio material will be exported as an MP3 file and uploaded to the MySpace or DJ Tunes communities.



Keyboard shortcut: Alt + C

## Video export dialog



You can export your arrangement into various video formats. The options on offer can vary according to the selected format.

**Presets:** Under "Presets", you'll find the typical settings for the selected format for the most important applications.

  You can save your personal settings by pressing the **"Save"** button and remove them by pressing the **"Delete"** button.

**Export settings:** You can set up the general export parameters like resolution, page proportions and frame rate in the dialogs. Select the most-used values from the list field, to set your own values click on the "...". The **"Advanced"** button opens the specific settings

dialog for selected video format (see below).

In **File** you can enter the file name for you exported file.



Use the folder symbol to select the folder into which you want to export it. The dialog will remember the export path for future exports.



Use the "home" symbol to restore the original preset path.

With "**Overwrite file automatically**" you can perform multiple exports from the same file.

## Options

**Shut down PC automatically after successful export:** Use this option to have the computer switch off automatically after lengthy export processes.

**Only export the area between the start and end markers:** Set the option if you wish to export only one of the clippings from the arrangement.

**Play after export:** Here you can state whether you want to send the exported arrangement to mobile devices via Bluetooth, infrared or email. Read more in the Reprocess arrangement (see page 255) chapter.

## Video as AVI

When exporting to AVI video, you can set and configure the size and frame rate of the AVI video and the compression codec for audio (audio compression) and video (codec).

Please also note the general info on AVI videos (see page 233, see page 275)!

Keyboard shortcut:     Alt + A

## General info on AVI videos

The AVI format (**A**udio **V**ideo **I**nterleaved) isn't actually a proper video format! It's rather a so-called container where very general conventions can be specified like audio and video data and sent to a program. The exact memory format of the files is specified via the codec (**coder/decoder**). A codec compresses audio/video files into

its own private format with which only the codec can work and decodes the files on playback again.

This means that an AVI file created on your computer can **only** be loaded/played on computer B if this computer has the same codec installed.

Many codecs (for example, Intel Indeo® video) have now become standard components of the Windows installation, others, such as the popular DivX codec are not. If you create an AVI file with such a codec and you wish to use it other computers, install the corresponding codec on them as well.

On older video editing cards certain codecs that function only with the hardware of the corresponding cards can be problematic. This type of AVI can **only** be used on the computer on which they were created. Avoid using this type of codec when possible.

### **MAGIX video export**

Exports the movie in MAGIX video format. This format is used for video recording by MAGIX video software and is optimized for digitally edited high-quality video material.

Keyboard shortcut:     Alt + D

### **Video as Quicktime Movie**

Exports the movie in Quicktime Movie format. This format enables streaming playback of audio or video files via the Internet.

Like with Real Media exports, the corresponding video size, frame rate, and codec settings can be adjusted for Quicktime Export as well. In the export dialog, however, you cannot add comments, etc. to videos.

The Quicktime Library has to be installed for Quicktime files (\*.mov)

Key:                     Alt+Q

### **Video as Windows Media**

Exports the arrangement in Windows Media format. This is a universal audio/video format from Microsoft. Accordingly complex are the settings options in the "**Advanced...**" dialog.

## Manual configuration

**Audio/Video codec:** Various codecs corresponding to the various Windows Media versions (7, 8, 9) are possible. Should compatibility problems arise on playback, try an older codec with a lower version number.

**Bit rate mode:** Constant and variable bit rates are possible, most devices and streaming applications use constant bit rates. For VBR two pass modes the movie is compressed in two passes in order to optimally use the bandwidth for highly-compressed movies for the Internet.

**Bit rate/Quality/Audio format:** The bit rate is decisive in defining the display/audio quality. The higher this is, the better your videos will look and the larger the files and the required encoding time will be. For variable bit rates, the bit rate is adapted dynamically to the requirements of the corresponding picture or sound material. Here, either the quality value of between 1-100 can be set or, for two-pass encoding, an average or maximum bit rate. For audio, the bit rate is set additionally by the audio format.

**Import from the system profile (export type):** For the most used methods (other than playback on mobile devices, with which you should use the supplied presets), like, for example, Internet streaming, Microsoft provides diverse system profiles to choose from. If you have the Windows Media Encoder 9 installed, which is available from Microsoft as a free download, you can edit the profiles or create your own. These can be loaded by pressing the "**Import from profile file**" button.

In **Clip info** you can add the title, author name, copyright information and a description.

Shortcut key:                      Alt + W

### Single picture as BMP

Exports the picture located at the current start marker and displayed in the video monitor as a bitmap (.BMP) file.

Keyboard shortcut:                      Alt + B

### Single picture as JPG

Exports the picture located at the current start marker and displayed

in the video monitor as a JPEG (.JPG) file.

Shortcut key:                    Alt + J

### **Upload to YouTube**

Upload the current arrangement to YouTube. See Export to YouTube (see page 264) for details.

Keyboard shortcut: Alt + U

### **Internet > Send arrangement as email**

This option generates a compressed file in the Windows media format. At the same time, the respective mail program is activated and the previously generated file is added as an attachment to an open message. Any type of arrangement can thus be compressed and sent without any intermediate steps.

Shortcut:                         Shift + U

## **Import**

### **Import Audio CD track(s)**

You can simply import one or more CD tracks like a regular file from the Media Pool via drag & drop. If this simple method should fail, you can use the menu command to open the CD Manager where you can select tracks from Audio CDs and load them into the arrangement. More on this can be found in the section "Importing Audio CDs (see page 74)" in the "Audio objects" chapter.

Keyboard shortcut: C

### **Audio recording**

See Audio recording (see page 71).

Keyboard shortcut:                R

### **Video recording**

See Video recording (see page 229).

Keyboard shortcut:                G

## Backup

### Load backup arrangement

Using this command you can load a backup arrangement. Backup arrangements are created automatically by MAGIX Music Maker 16 Premium and can be used when, for instance, a program crashes in order to recover the last status of files. This type of automatic backup gets the file extension MM\_ (underscore). This command is also useful if you unintentionally saved your change and wish to return to the previous version.

Keyboard shortcut: Alt + O

### Backup > Create backup

With this menu point, you can put a complete MAGIX Music Maker 16 Premium arrangement, including all used multimedia files into one folder. This is especially useful when you wish to reuse or archive such an arrangement later on, or when the files are located on multiple CDs so that on loading you continually have to change CDs. Furthermore, the effect files used are saved in a folder with the other files.

A dialog opens where you can specify the path and name of the arrangement.

Shortcut: Shift + R

### Backup > Create backup in OGG format

You can create a backup copy as an OGG file, whereby all audio files used will be compressed into OGG format. This way you can compactly archive your song or put it on the web as a remix kit.

Shortcut: Ctrl + Alt + R

### Backup copy > Burn backup copy to disc

Use this option to burn the arrangement as well as all the relevant files to CD or DVD.

Even larger arrangements can be burned straight to disc. The arrangement, if necessary, will then be split up and burned automatically to multiple discs. A restore program which is burned to the first disc of this type of backup, guarantees easy re-recording of

the backup.

Shortcut:                      Ctrl+Shift+R

### **Backup copy > Burn manually selected files to CD/DVD**

Opens the MAGIX Goya burnR burning application for burning movies or other files onto CD/DVD. The files are selected by simply dragging & dropping them into the MAGIX Goya burnR explorer. Further information can be found in the MAGIX Goya burnR help file.

Keyboard shortcut:      Alt + Shift + R

## **Settings**

### **Arrangement properties**

In this dialog, the general properties of the arrangement can be set. Statistical information about the arrangement is also displayed.

#### **Properties**

**Name:** Here you can enter the name of the current arrangement.

#### **General project settings**

**Path:** This is where you can set the folder on your hard drive to which your arrangement is saved.

**Number of tracks:** Here you can set the number of tracks you wish to use.

**Video resolution:** Here you can specify the presets for the video resolution used and the video format.

**Use as presets for new projects:** The settings specified in the dialog are used as the standard settings for newly created projects.

#### **Information**

**Name/Path:** See above

**Created on:** Displays the time the arrangement was created.

**Last changes:** Displays the time when last saved.

**Number of used objects:** Displays the number of all objects in the arrangement.

**Used files:** Here the names and paths to all multimedia files used in the arrangement are shown.

#### **Properties**



**Name:** Here you can enter the name of the current arrangement.

### Universal arrangement settings

**Path:** This is where you determine the folder on your hard drive in which your arrangement is saved.

**Number of tracks:** Here you can set the number of tracks you wish to use.

**Audio sample rate:** The sample rate determines the pitch and the speed at which audio objects are played back. The sample rate you can use depends on your sound card (some sound cards even permit changing the sample rate during playback). The sample rate you can use depends on your sound card (some sound cards even permit changing the sample rate during playback). If you halve the sample rate, wave audio objects are played one octave lower.

**Type of beat:** Several types of bars are available to choose from, for example  $\frac{3}{4}$  beat. With various grid settings you can also set additional beat types. For example, with a set  $\frac{3}{4}$  beat and a  $\frac{1}{8}$  note grid a  $\frac{6}{8}$  beat would be the result.

**Video resolution:** Here you can specify the presets for the video resolution used and the video format.

**Use as presets for new projects:** The settings specified in the dialog are used as the standard settings for newly created projects.

### Synchronization settings/ReWire

Options for Synchronization (see page 252) and ReWire (see page 254) support.

### Information

**Name/Path:** See above

**Created on:** Displays the time the arrangement was created.

**Last changes:** Displays the time when last saved.

**Number of used objects:** Displays the number of all objects in the arrangement.

**Used files:** Here the names and paths to all multimedia files used in the arrangement are shown.

### Properties > Program settings

#### General

**Autoscroll:** If autoscroll is activated, the screen view automatically shifts when the playback marker reaches the right edge of the screen, which is particularly useful for longer arrangements. Scrolling requires constant recalculation of the screen view, which may lead to interrupted playback if the amount of system RAM is too low. If this happens, simply deactivate the autoscroll feature.

**Simplified object display:** This lets you switch between various object views. Here video objects are displayed in the tracks either with detailed preview frames or in simplified form. Audio objects are displayed either with one or two separate wave form displays for stereo.

**Automatic saving of backup arrangements:** Here you can the time intervals at which automatic backup arrangements will be saved.

### Soundpool

**Hide unavailable loops:** All Soundpools are saved into a database automatically. The Media Pool lists all loops saved in the database, i.e. also those which originate from external media (Soundpool discs) that may not be in the drive at the moment. These results can be hidden, but this slows down the search results in the Media Pool.

**Multi-view:** You can use this menu to subdivide the match list of the Soundpool display and use up to four different Soundpool folders at the same time. A separate search query can be set for each list.

**Hide instruments not available in style:** Instrument groups for which there are no loops present in a certain style are completely hidden in the Media Pool (instead of being grayed out).

**Clean up Soundpool:** Every detected Soundpool (on CD/DVD or on the hard drive) is added to the database and displayed there, even if the corresponding medium is currently not in the drive or if the Soundpool has been deleted or moved. This option helps to remove these entries in the database.

**Reset Soundpool:** Deletes the Soundpool database. You have the option of maintaining the included and installed factory-provided Soundpool in the database.

**Hide advanced tooltips:** The additional information for the detected loops in the Media Pool will be hidden.

**Hint dialogs:** In its newly installed state, MAGIX Music Maker 16 Premium displays a number of security queries at various parts of the program. Every one of them can be switched off by clicking the small box at the bottom that says "Don't show this message again". To display these warning messages, select the "**Reactivate dialogs**" option.

## Program interface

**Darken screen when dialogs are opened:** Darkening signals modal dialogs which need to be closed before the rest of the program can be operated. This can be deactivated if it disturbs you.

**Hide news:** This option deactivates the MAGIX News Center in the main interface of MAGIX Music Maker 16 Premium.

## Import

Preview samples (Wav, OGG): Preview Wave files while playing the arrangement: Here you can switch off the preview when a playback is running (Smart preview).

**Adapt waves automatically to the BPM:** When loading to the arrangement or previewing, MAGIX Music Maker 16 Premium tries to adapt the samples to the speed of the arrangement. This always works properly with newer MAGIX soundpool samples as the tempo information is saved in the wave file. It usually works with all other loops as well, provided the loops are clean, that is, they are cut to entire bar lengths (see the Arranger chapter).

With "For patched samples only", automatic timestretching can be deactivated for all other samples. With "Apply to longer samples as well", longer samples will also be adapted if they contain tempo and bar information provided by the Remix Agent.

Remix Agent for the tempo and beat recognition of longer samples (>15 s): Here you can deactivate the automatic opening of the Remix Agent for longer samples (for example, CD tracks or MP3s).

Automatically adjust waves to pitch: A wave's pitch can be adjusted automatically using pitchshifting. For this to work however, the used samples (much like the samples on the MAGIX soundpool CDs) must have the corresponding key and pitch information. The pitch of the arrangement will then correspond to the pitch information of the first sample in the arrangement.

Use destructive adjustment for shorter samples: Usually, loaded samples are adapted to the arrangement in realtime with timestretching. For computers with lower processing power, this method can be deactivated – the timestretching effect will then be calculated into a new file which is copied to the hard disk.

**Import CD tracks analog instead of digitally:** If this option is

activated, you can record audio CDs via the record button in the transport control. Read more on this in the "Recording audio CDs" section in the "Audio objects" chapter. (see page 78)

Automatically open MIDI editor during import of MIDI files: The MIDI Editor will automatically open after the loading of MIDI files, allowing you to make changes to channel and instrument assignment and other settings.

Start file preview in Media Pool for...: Here you can deselect automatic file preview start for Media Pool files and certain file types.

**Import formats:** You can deselect file formats that you never use, and these will no longer be imported. Please keep in mind that for some file types (AVI, WMA) several import modules exist, and MAGIX Music Maker 16 Premium uses the fastest one in each case. If you experience problems during the import of certain files, you can experiment with deactivation of certain import modules, forcing the program to use the slower, but more compatible import module.

## Audio

**Wave output device:** This option specifies which sound card or output the wave audio objects play and which drivers should be used.

**Advanced:** Use these buttons to access the playback options window which provides information on the current sound card. ASIO provides the settings dialog for the ASIO driver, e.g. the MAGIX Low Latency ASIO (see page 286) driver.

**Wave/Direct Sound/ASIO:** Specifies which of the conventional Windows wave drivers should be used for the sound card, i.e. the DirectSound system or ASIO.

Windows **wave** drivers have the advantage of being relatively stable against strained peaks caused by large buffers. If playback becomes jerky as a result of processor-heavy effects like time-stretching, switching to wave drivers may solve the problem. Otherwise the system may react more slowly with wave drivers because of the large buffers, that is, all changes are heard with a delay.

**16/24-bit wave/driver communication:** If your sound card is able to play 24-bit audio, your arrangement will be played at this higher resolution (internal 32-bit float calculation). This is applicable only to

wave drivers.

When using live monitoring and when playing and recording VST instruments in real time, i.e. with as low a reaction time (latency) as possible, it's recommended that you use **ASIO** drivers. If your sound cards do not have ASIO drivers, you can use the MAGIX Low Latency driver.

If you select ASIO as the driver model, you can set the output in the upper list field (for cards with multiple outputs) and the ASIO driver in the lower list field. **Advanced** opens the settings dialog of the ASIO driver. Please refer to the sound card manual for more information.

**Audio buffer:** Here you can specify the buffer size that should be used for playback of the entire arrangement or for previewing audio files in the Media Pool.

**As a rule of thumb:** If response and loading times are too slow, reduce the buffer size; otherwise increase the buffer size if the audio playback is choppy or if real-time effect computation errors occur.

As error-free playback is usually more important than fast reaction times, the buffer size should be raised to 16384 or 32768 if dropouts occur.

## MIDI

**Output device:** Without using software instruments and to preview a MIDI file in the Media Pool MAGIX Music Maker 16 Premium uses the external MIDI device. Here "Microsoft CD Wavetable SW synth", a standard software synthesizer included in Windows® as an OS component, should be set as default. If sound cards with their own synthesizer are used or in case MIDI hardware synthesizers are connected, the MIDI driver of the sound card or a MIDI interface should be set!

**FX:** If MIDI playback is too fast or lagging behind, you can enter a speed correction factor here.

**Input device:** Lets you select the MIDI drivers for MIDI recording, i.e. the drivers for the MIDI device which you have connected your MIDI or USB keyboard.

**Use MIDI target channel:** The MIDI system offers 16 different channels to control 16 different sounds. Normally, MAGIX Music Maker 16 Premium receives MIDI notes on all channels simultaneously. With this option, you can select a specific channel.

Next you have to set the desired sound together with the MIDI channel on the device and select the MIDI recording options on this channel.

**Synthesizer latency:** Some synthesizers, especially software synthesizers like VST instruments, create delay during playing, i.e. playback of the sound is delayed when the button is pressed. This value lets you even this out, causing all notes to be moved over by a certain temporal value.

**Integrate MIDI keyboard with Live Performer:** The MIDI keyboard can be used to remotely control the Live Performer (only in Premium version); see Live Performer MIDI assignment (see page 163).

### Options

**Create "Undo" before destructive editing of audio data:** To undo destructive effects, the original files must be saved to the hard disk. If you use this type of effect quite often, you can switch off the undo function and save on time used to create an undo file as well as save space in memory.

**Write real-time audio to wave file:** If this option is activated, the entire arrangement can be mixed live and recorded simultaneously. During playback you can, for example, control mixer fades and effects or, with the help of keyboard shortcuts, you can play the beats in the arrangement – all activities will be recorded and written to a separate wave file. – All real-time activities are recorded and saved in a separate WAV file. Every time playback stops you will be asked if the portion you just played should be saved as a wave file, loaded into the arrangement, or deleted.

### MAGIX Low Latency ASIO driver settings

These settings usually do not need to be changed; they are already optimized for maximum compatibility. However, if you wish to increase performance and reduce latency, then you can change individual settings.

**Audio device:** If you have more than one audio device (e.g. on-board sound and additional sound cards), you have to specify the device that you wish to use for the MAGIX Low Latency driver here.

**Buffer size:** Sets sample buffer size. The smaller the buffer, the lower the latency and the larger the CPU load. Modern computers can manage latencies of up to 256 samples.

**Always convert 44.1 KHz:** Some on-board sound chips (AC97) and sound cards (e.g. manufactured by Creative) support 48 KHz as the only hardware-side sampling frequency. If these are accessed via normal audio with a sample rate of 44.1 KHz, they either function not at all or the sound card's driver changes the sample rate, usually into quite poor quality. You will be able to recognize this by the sound during playback of soundpool files being much more thuddy than when playing DVDs whose audio is set to 48 KHz. The MAGIX Low Latency driver provides a significantly better resampling function and is for this reason activated by default, that is, the output signal is boosted to 48 KHz. If you are certain that your sound card can play 44.1KHz sample rates properly, you can deactivate this option, and thereby reduce the processing load.

## Video

**Video standard:** PAL is used in Europe, the US and Japan use NTSC. This setting should not be changed.

**Video display:** The resolutions that can be set here concern only the picture display of DV videos in the Arranger. If playback becomes jerky, we recommend entering a lower value. The quality of exported videos is not influenced by this.

**Extract sound from videos during import:** If a video contains audio data as well, you can use this function to extract the audio track from the video. It will be loaded directly underneath the video track and grouped together with it. If you ungroup them (in Edit menu), you can edit the sound as an independent object.

**Automatically adjust videos to BPM during import:** With the available BPM information you can automatically create a video in which the rhythm and order of pictures are synchronized. This does not play all frames of a video, but some are excluded according to the BPM setting on frame playback. The video appears faster at a higher BPM setting; it "dances" to the rhythm. The tempo can be set before every new arrangement in the transport control. Otherwise, the arrangement applies the BPM tempo of the first sample that is loaded.

**Adjust minor deviations from 04:03 aspect ratio during export:** This option automatically customizes photos that have an approximate 04:03 aspect ratio to 04:03 TV screen format. The pictures are therefore easily stretched or compressed. This inevitably brings about distortions in the picture. If this option is deactivated, black bars

appear along the sides.

**Automatically preview exported clips:** This option starts the clip immediately after exporting for verification.

**Automatically copy exported material to clipboard:** This option is particularly useful when used with other programs, such as Microsoft PowerPoint. If switched on, the created multimedia file will be available straight after being inserted.

Video priority: Usually, audio objects have priority over playback. Here, an overloading of the computer as a result of too many effects can bring about jerky video playback while the audio continues to play without any problems.

To change this, you can give the video playback precedence over the audio. Video playback is then renewed after every audio buffer, which may lead to interruptions in the sound.

## Folders

Here you can set the path, in which

- arrangements will be saved (**Arrangements**)
- the files to be exported (**Export**) or imported (**Import**) as well as the recordings (**Record**) will be placed.
- –temporary files are to be stored (necessary for the running of the program) (**Temporary**)
- The EXE file for the external **audio editor**, which can be opened via the context or effect menu ("Edit Wave externally" only Premium version). MAGIX Music Editor is set by default.

## Reset program settings to default...

Use this function to reset all program settings (see page 280, see page 281) you made in MAGIX Music Maker 16 Premium to their original settings.

## Exit

Exits MAGIX Music Maker 16 Premium.

Keyboard shortcut: Alt+F4



# Edit menu

## Undo



10 commands can be undone, including object and cursor manipulations. If you don't like the result of a change in your arrangement, the Undo function will take you back to the previous arrangement.

Shortcut:                      Ctrl + Z

## Redo



Redo lets you reverse the last Undo command.

Shortcut:                      Ctrl + Y

## Object

### Create a new object

### Record a new object

A new audio object is recorded; see Audio recording.

### Create a new MIDI object

This function creates a new MIDI object in the current track. After invoking the function, a pop-up menu opens in which you can choose between an empty MIDI object or several standard templates.

Keyboard shortcut:              Ctrl + Alt + M

### Create speech from text

Please refer to the Audio objects (see page 90) chapter.

Keyboard shortcut:              Ctrl + Shift + X

### Record a new object

A new video object is recorded; see Video recording (see page 229)

**Create a new title object**

Creates a new title object and opens the title editor (see page 227).

**Cut**

The marked objects are cut out of the current arrangement and placed onto the clipboard. They can then be inserted at different positions.

Shortcut: Ctrl + X

**Copy Objects**

This menu option lets you copy all selected objects. The copy appears next to the original and can be moved easily by holding the left mouse button (drag & drop).

Shortcut: Ctrl + C

**Duplicate objects**

This menu option lets you copy all selected objects. The copy appears next to the original and can be moved easily by holding the left mouse button (drag & drop).

Shortcut: Ctrl + D

**Paste**

The contents of the Clipboard is added at the position of the start marker in the current arrangement.

The playback marker is positioned at the end of the most recently inserted object so that the quick and easy multiple use of the command is also possible. Existing objects now become overwritten.

Shortcut: Ctrl + V

**Multiple insertions**

Like Insert, but you can stipulate how often the content of the clipboard is to be inserted.

Shortcut: Ctrl + Num "+"

## Delete objects

This menu option lets you delete all selected objects from the arrangement. To highlight or select more than one object, use the "Shift" key while you click with the mouse.

Shortcut: Del

## Select all objects

All objects in the arrangement will be selected.

Shortcut: Ctrl + A

## Split objects

You can cut up a selected object at the S marker position. If you have not selected an object, all objects will be cut into pieces at the S marker position.

Later on, if you want to re-join the pieces of an object, select "Build group" to join all selected objects to a group.

Shortcut: T

## Save objects as takes

The selected objects are saved in the takes directory. To use takes, please read the chapter "Saving objects separately (see page 68)" in the PDF manual.

Keyboard shortcut: Ctrl + F

## Grouping

### Form group

Orders all selected objects into groups. As soon as an object from the group is selected, all other objects in the group will be highlighted as well so that you can work on them collectively.

Keyboard shortcut: Ctrl + L

### Ungroup objects

This turns all selected objects into free-standing objects again.

Keyboard shortcut: Ctrl + M

## Loop range

### Setting user-defined loops

Normally an object is always looped over the full length of the underlying data material (audio or video file). To set a clip from a file as a loop, shorten the object at the front and the back with the handles and choose the command "Edit menu > Insert user-defined loop". This function is very useful for setting your own recording as a loop, as the silence at the beginning of a recording can be cut away.

Shortcut:                    Z

### Remove user-defined loops

The user-defined loop length is reset.

Shortcut:                    Shift + Z

## Properties

This function displays all the information about the currently selected objects such as file name, position on the hard-drive, tempo, etc. The Object Editor also defines the foreground and background color of every object in the arrangement.

More information is available under Object properties (see page 68).

## Range

MAGIX Music Maker 16 Premium provides object-based functions as well as "band-oriented" editing functions. These always refer to the whole project from the first to the last track as well as to the area between the start and end marker.

### Cut out

The section between the in and out points is cut from the current arrangement and placed on the clipboard. This section can then be reinserted elsewhere.

Keyboard shortcut:                    Ctrl + Alt + X

### Copy

The section between the in and out points is copied from the current arrangement to the clipboard. This section can then be reinserted

elsewhere.

Keyboard shortcut:                      Ctrl + Alt + C

### **Delete**

The section between the in and out points is deleted from the current arrangement and not copied to the clipboard.

Keyboard shortcut:                      Ctrl + Del

### **Insert**

The contents of the clipboard are inserted at the current arrangement's position of the in point.

Keyboard shortcut:                      Ctrl + Alt + V

### **Multiple insert**

Similar in function to "Insert", but you can stipulate how often the content of the clipboard is to be inserted.

Keyboard shortcut:                      Ctrl+Alt+Num "+"

### **Extract**

The section between the in and out points is preserved, and all of the material in front and behind it are deleted. Use this option to isolate a specific part of an arrangement for further individual editing.

Keyboard shortcut:                      Ctrl + Alt + P

## **Track**

### **Add track**

A new empty track will be added to the arranger. In the "File > Arrangement properties" the count of tracks can be set in large increments.

Shortcut key:                              Ctrl +K

### **Audio mixdown**

This option joins all audio objects in one audio file ("mixdown"). Afterwards, the audio material will only occupy one track and take up

hardly any RAM (does however take up space on the hard drive [ca. 10 MB/min in stereo]). This way you get a clear overview of further objects as well as space for them.

MAGIX Music Maker 16 Premium automatically normalizes the audio file, i.e. the loudest part of the wave audio object is identical with the highest figure of the 16-bit resolution peak. This guarantees the same sound quality, even if you repeat the mix down procedure or you combine the mix down file with other wave audio objects again and again. The mix down function is very helpful if you want to go on using the mix down object.

**Tip:** To create the final AVI or WAV (or any other multimedia) file, we recommend using the various option of the submenu "Export movie" option in "**File**", instead of the mixdown function.

Shortcut:                      Shift+M

## Navigation

### Set jump marker

This sets a jump marker at the position of the current playback marker. Here you can note specific parts of the arrangement. With the "Move playback position" function you can quickly jump to these positions.

Shortcut:                      Shift + 1...0

### Create jump marker sequence

This option duplicates the currently selected playback area between the start and end markers by setting start markers equivalent to one another in the bar ruler. Now you can jump to every jump marker using keyboard shortcuts.

Shortcut:                      Ctrl+Shift+M

### Delete all jump markers

Deletes all jump markers

Shortcut:                      Alt+Shift+M

### **Move playback position**

This sets the playback marker to the position of a jump marker. This function can best be used via the keyboard.

When stopped, you can immediately move the playback markers to the position of the saved jump markers. During playback, the playback marker along with the playback range will be moved. Here, the old range is always played until the end so that you can remix your arrangement live once the jump markers have been placed where you want them without losing the beat.

Keyboard shortcuts:                      1..0

### **Move screen view**

Using these commands, a viewable portion together with the start marker will be moved in the timeline. You can quickly skip between different jump markers and object edges.

Keyboard shortcuts:                      See keyboard shortcut overview in the Arranger View (see page 330) section.

## Effects (FX)

### Song Maker

With the help of the Wizards, several audio objects (Loops) of the standard-delivery samples can automatically be arranged as songs or song parts, without having to pull each single one out of the File Manager onto the given track.

1. Activate the Song Maker with the “Song Maker” button or via the file menu.
2. Select a music style (e.g. Easy Listening).
3. Select the instruments that you want to use. The color Blue which appears under the names in the instrument selection box means that the particular instruments have been chosen. If, for example, you only want a rhythm section with drums and bass, deactivate the other instruments with a mouse-click.
4. Enter the desired length of the song or song part in seconds. You will always achieve a suitable musical result.
5. Specify whether a Song Maker should create a completely new arrangement, attach a new part to an existing arrangement, or add new elements to the existing blocks. At your discretion, the Song Maker will automatically add new sound blocks to the tracks in the Arranger – initially only “virtually”, i.e. it is only a suggestion.
6. Listen to the suggestion by pressing, “Play” under “Preview (audio)”. If you do not like the result yet, you can create other arrangements, song parts or enhancements by pressing the appropriate interfaces in the “Arrangement Options” of the Song Maker Dialogue.
7. If you agree with the Wizard’s suggestions, click on “OK”. Then the blocks will be added to the existing arrangement. A click on “Terminate” ends the Song Maker and returns to the original arrangement status.

Shortcut: W

### Audio

Please read the chapter "Audio effects (see page 165)" for more details on audio effects.



## Master audio effect rack

Opens or closes the master effects rack; you can also use the "Master FX" button in the mixer window for this.

Keyboard shortcut:     B

## Mastering Suite

You can open the MAGIX Mastering Suite (see page 193) with this option.

Shortcut: U

## Create speech from text

Please refer to the Audio objects (see page 90) chapter.

Keyboard shortcut:             Ctrl + Shift + X

## Object effects rack

See Object and master effects rack (see page 168).

## Audio effects

This submenu includes all audio object effects plus the vintage effects and the effects from the MAGIX Mastering Suite (Premium version only); the latter can be used individually.

Individual effects can be found in the chapter "Audio effects (see page 165)".

## Volume

An assortment of different menu commands which influence the volume of your audio objects.

## Mute/Unmute objects

Use this command to mute one or more selected objects. Selecting this command again makes it audible once more.

Shortcut key:             F6

## Set volume

This function, located in both the effects menu and the context menu, controls the sound volume for individual objects, just like the object

handles in the arranger.

### **Automatic track damping**

This command automatically dampens the volume of other audio objects. This can be used to insert voice-overs into your arrangement or add commentary to a film (with the original sound). You can also specify whether you want to dampen the original sound of existing videos or all soundtracks equally.

In the dialog you can activate and deactivate the value of the dampening.

You can use this command while recording audio (Audio recording (see page 73), advanced options)

Keyboard shortcut:                      Alt+L

### **Normalize**

The "Normalize audio" function increases the level of the audio object to the maximum possible without overmodulating the material. To do this, the largest signal peak in the audio material and the level of the object are detected so that this point corresponds exactly to 0dB (full modulation).

Keyboard shortcut:              Shift + N

### **Tempo and pitch**

An assortment of different menu commands which influence the pitch and tempo of your audio objects.

### **Timestretch and pitchshift**

See Timestretch/pitchshift.

### **MIDI transposition**

This command is only available for MIDI objects. This increases/decreases the pitch of a MIDI object's notes to a specific value (in semitones). Use this function, for example, to adjust the sound of imported MIDI files to other audio objects. This is more effective than repositioning audio objects (pitchshifting), since this can diminish the sound; transposition does not diminish the quality of MIDI objects because they are produced by the synthesizer.

Keyboard shortcut:                    Alt + Shift + D

## Harmony Agent

The Harmony Agent is designed to analyze harmonies.

Read more on this in the corresponding section of the "Audio Objects (see page 89)" chapter.

Shortcut:                                Alt+Shift+F

## One pitch higher/lower

You can quickly alter the octave of an included sample without having to access the corresponding Soundpool folder in the Media Pool.

The "\*" and "÷" keys on the numeric keypad (right on the keyboard) place the sample one level higher or lower.

The "+" and "-" keys on the numeric keypad change the pitch via pitchshifting; the respective effect in the audio effects rack is utilized for this.

## Set pitch

Use this command (only in the Soundpool sample's context menu) to quickly change the pitch of the selected object (if present). This also functions when working with multiple selection. Simply select all the objects which are under one another and select a new pitch to create variations in the arrangement.

## Remix

These are the commands for MAGIX Music Maker 16 Premium's remix functions.

## Audio > Loop Finder

The Loop Finder was developed for the purpose of finding BPMs in short rhythmic passages and placing BPMs into the arrangement. Furthermore, the Loop Finder can help to fit short loops into an existing arrangement or extract short rhythmic passages from drum loops.

Note: For longer passages (for example, complete CD tracks), you

can use TBPM Finder.

The waveform of the audio material is displayed in the upper part of the dialog, preset at a zoom level of about 10 seconds.

The principle involves moving the green start marker to the start of the beat and the red end marker to the start of the next beat. The BPM display to the left then shows the tempo of the loop in beats per minute (BPM). Here we presume that there are exactly the same amount of beats in the selected passage as is displayed in the "Beats" input field – 4 is the default. If there are two full bars between the start and end markers, the number of beats has to be increased to eight, otherwise the Loop Finder will only correlate half the speed.

The precise marking of the beat length is required for exactly defining the loop length. This is also possible manually by moving the start and end markers, and can be similarly precise when using the zoom functions. But it's easier to do so using the following:

**Tap tempo:** activates the automatic procedure for setting the tempo. First, audio playback begins at the start marker position. Then you will be requested to tap in the beat with "Tap" or by pressing the "T" key, that is, the "T" key should be pressed in time with the music. Playback stops after the number of beats set above is reached. The start marker is now positioned at the start of the tap process and at the end marker at the end. And that was it! The beat has now been set and the tempo can be read. Program automation makes sure that the start and end positions are placed exactly at the next beat. Even if the tap process didn't work out exactly, automation nearly always finds the right beat meant when tapping.

**Snap marker:** You can use the red and green arrow buttons at the top beside the wave display for moving the start and end markers one beat forward or one beat back. This makes it very easy to select "round loops", that is, whole bars, during running playback.

As long as a loop runs through without any problems, the correct tempo will be able to be read to the left.

Here you should make sure that the number of beats per bar (default: 4) has to adapted to the actual loop length. So, if four bars are selected as a loop, 16 has to be entered into this field.

**Start and end markers:** Both of these markers show the start and end points of the loop. You can move them around with the mouse to

fine-tune the range.

**Cut:** Once a correct loop has been found, it can be cut using the Cut function in order to, for example, be able to use it again later.

**Use new BPM:** The arrangement applies the BPM value found.

**Timestretching:** Adapts the object to the tempo of the arrangement (as a result of the determined tempo) via timestretching.

**Resampling:** Adapts the object to the tempo of the arrangement (as a result of the determined tempo) via resampling.

### Audio > Remix Maker

With the Remix Maker, automatic remixes can be created from Remix Agent loop objects.

Please read more on this in the "Audio objects" chapter.

### Audio > Remix Agent – Tempo and beat assignment

MAGIX Music Maker 16 Premium provides a Remix Agent for the automatic determination of the speed in BPM (beats per minute) and for the creation of loop objects.

Please read more on this in the "Audio objects" chapter.

### Audio > Create remix objects

If, while running the Remix Agent, the tempo and beat information were saved to the audio file, this command can be used to create remix objects. If the Remix Agent has not yet been implemented, this command starts it and opens the presets dialog for creating remix objects.

### Load/Save/Reset audio effects

You can save the current effect combination of an audio object separately and apply it to other objects later. Or you can deactivate all currently used effects entirely (Reset) if you want to undo the changes.

Shortcuts:            Load audio effects            Ctrl + Alt + O

Save audio effects	Ctrl + Alt + S
Reset audio effects	Ctrl + Alt + H

### **Audio > Extras > Stereo – 2 mono objects**

With this option stereo recordings can be split into two mono objects which are then connected to a group. You can use the "Ungroup" button to edit the channels as independent objects.

### **Edit wave files externally**

A selected audio object into the external program MAGIX Music Editor where it can be edited with lots of special features. Once editing has been completed, the edited material is used in MAGIX Music Maker 16 Premium instead of the original object.

Keyboard shortcut:                      Ctrl + Shift + A

## **Video**

### **Video effects**

Opens the Video Controller for selected video and picture objects. Please read the "Video Effects" chapter for more details.

Shortcut:                                  Shift + G

### **Load video effects**

This command lets you load a saved effects combination for the currently selected object. If you have selected multiple objects, then the effects combination for each object will be applied.

Shortcut: Alt + Shift + O

### **Save video effects**

This command lets you save the current effects combination for each object separately.

Shortcut: Alt + Shift + S

### **Reset video effects**

This option allows you to deactivate all currently used effects entirely if you want to undo the changes.

Shortcut: Alt + Shift + C

## Video > Edit bitmap externally

Graphic files (BMPs or JPEGs) from the arranger can be post edited in an external graphics program. The selected image file is loaded automatically and, once editing has been completed, is used in the MAGIX Music Maker 16 Premium instead of the original material.

## Title

### Title Editor



**Title Editor** (More Informationen can be found in the section "Title editor" on page 227)

Key                      Ctrl+t

### Load Title Effects

You can store the current preset effects combination for each title object separately and later apply them to other title objects if they have worked satisfactorily.

### Save Title Effects

You can store the current preset effects combination for each title object separately and apply it later to other title objects.

Keyboard shortcut:      Alt + T

## Automation

### Display object volume curve

The automation curve for object volume is shown and can be edited in Automation mouse mode (see page 60).

More about automation in the chapter Automation curves (see page 235).

Shortcut: Ctrl + P

### Display object panorama curve

The automation curve for object panorama is displayed and can be

edited in Automation mouse mode (see page 60).

More about automation in the chapter Automation curves (see page 235).

### **Object automation / Track automation**

The dialog Dynamic effects editor (see page 236) for object automation or track parameters is shown. A parameter can be selected and edit in Automation mouse mode (see page 60).

More about automation in the chapter Automation curves (see page 235).

Keyboard shortcut:	Object automation	Shift + H
	Track automation	Ctrl + J

### **Media Pool views / template folders**

Opens the corresponding folder in the Media Pool for dragging an effect onto an object.

It's even easier to access the corresponding Media Pool views and folders via the corresponding keyboard shortcut.



# View menu

## Easy mode

Switches the screen in MAGIX Music Maker 16 Premium to "Easy" mode's simplified interface. More about this in the chapter "Arranger -> Normal mode/Easy mode".

This documentation describes MAGIX Music Maker 16 Premium in normal mode. If you can't find one of the functions while reading, make sure that you don't have Easy mode turned on.

## Arranger

### Optimize arrangement view



The start marker is set at the beginning of the arrangement and the end marker is set at the end of the last object in the arrangement such that the arrangement may be played back in full.

Zooms out of the arrangement so that the complete duration of the arrangement is visible. The vertical zoom steps (track height) remain preserved.

Keyboard shortcut:                      Shift + O

### Change object presentation

This lets you switch between various object views. Here video objects are displayed in the tracks either with detailed preview frames or in simplified form. Audio objects are displayed either with one or two separate wave form displays for stereo.

### Highlight loop area

With this option, you can fade the loop area in and out, that is, the strip above the first track which displays the area that will be played as an endless loop.

Shortcut:                                  Shift + X

### Show object marker > Show beat marker/harmony marker

After using the Remix agent or the Harmony Agent, the analysed

material receives beat and harmony information which is then shown in the arranger via these commands.

Shortcut:	Beat Marker	Ctrl + Shift + F9
	Harmony	Ctrl + Shift + F10
	Markers	
	Beat Markers	Ctrl + Shift + F11

## Media Pool

### Media Pool

This option can be used to conceal the Media Pool or make it visible again.

Keyboard shortcut: F

### Media Pool views / template folders

Opens the corresponding folder in the Media Pool for dragging an effect onto an object.

It's even easier to access the corresponding Media Pool views and folders via the corresponding keyboard shortcut.

## Video monitor

### Video Monitor

Opens and closes the video window.

Shortcut: V

### Full-screen Video Monitor

This option shows the video preview monitor in full-screen mode. The right mouse button opens the context menu, the Esc-key returns you to normal viewing mode.

Shortcut: Alt + Enter

### Arrangement overview

With this option you can display an overview of the entire arrangement on the video screen. It is particularly suitable for long

and complex arrangements so that you don't lose track.

You can view the whole arrangement and you are, despite this, able to access the sought object in a split second – you can zoom in directly on the video monitor or move around the clip displayed in the Arranger.

### Overview

The function can also be opened via "Overview" on the video monitor.

Keyboard shortcut:            Alt+Shift+U

### Peak meter

#### Peakmet.

The video monitor is transformed into an analyzer which displays the sound as a graphic.

### Infobox

#### Infobox

"Infobox" mode shows help text in the preview monitor if you hold the mouse pointer over a button on the screen.

## Mix

### Mixer



This option allows you to display or conceal the real-time mixer. You will find further information, especially with regard to the integration of effects plug-ins, in the chapter "Mixer".

Keyboard shortcut:        M

### Master audio effect rack

Opens or closes the master effects rack; you can also use the "Master FX" button in the mixer window for this.

Keyboard shortcut:        B

### Mastering Suite

You can open the MAGIX Mastering Suite (see page 193) with this option.

Shortcut: U

**Live Performer**

Activates the Live Performer . Please refer to the "Arranging objects" (see page 62) chapter, section "Live Performer" (see page 155)!

Keyboard shortcut: K

**Standard layout**

Determines whether the video monitor and Mediapool should be integrated into the main window or shown on a separate window.

Keyboard shortcut: L

## Online menu

The Online menu provides access to MAGIX Online World and other online functions in MAGIX Music Maker 16 Premium.

The submenus provide commands for uploading individual objects in the arranger or files from the Media Pool as well as the entire arrangement, audio or video. Vice versa, you can use the menu commands to download media from MAGIX Online Album or Catooh or to open the website with the corresponding service directly.

## 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 "Online" 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 Music Maker 16 Premium.

## 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](http://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.

## magix.info

**Share your knowledge & get answers** This MAGIX service offers you and the MAGIX Community at large a central platform for exchanging knowledge, photos, videos, and music, for discussing and evaluating, for communicating with one another, for presenting yourself, and networking with other members.



You will find the sections "Questions & Answers", "Show & Discuss", "Online Training", and "Chat" where you can play an active or passive role in the MAGIX Community. For this there's not only the [www.magix.info](http://www.magix.info) <http://www.magix.info/uk> portal, but [magix.info](http://www.magix.info) directly in your product.

### **Ask questions online**

If you have questions or problems with your MAGIX program or you're looking for tips & tricks concerning multimedia, then you're at the right place.

### **Display all questions & answers...**

Use the questions which other community members have asked and the collective knowledge of the answers to improve your own working methods, to solve problems, and to get to know the details of MAGIX Music Maker 16 Premium.

### **Launch the online training center**

Learn not only theoretically, but also practically what the program is capable of: "learning by doing", quickly and uncomplicated.

### **Let your friends view the contents of your MAGIX.info screen over the Internet on their PCs.**

Ideal for viewing photos and videos together or for receiving support for questions arising during your creative workflow while using the program (a licensed client will be installed for this purpose).



## MAGIX News Center



MAGIX can supply you with all of the latest information about your software. In the MAGIX News Center, you will find all of the links to current online tutorials as well as tips & tricks on individual topics or software application examples.

You will also be informed of the availability of brand new updates and patches for your program as well as special offers, contests, and surveys.

The news is split into three color-coded sections:

- Green for practical tips & tricks for your software
- Yellow reports the availability of new patches and updates for your product
- Red for special offers, contests, and surveys
- And if there are no new messages, then the button will be grey

All available information is shown as soon as you click on MAGIX News Center. If you click on one of the news items you will be forwarded to the corresponding website.

## More online services

### MAGIX Online Print Service

MAGIX Online Print Service lets you order paper prints and photo gifts (t-shirts, mugs, etc.) directly from within MAGIX programs such as MAGIX Music Maker 16 Premium or via [www.magix.com](http://www.magix.com). Upload your photos with a click and have the developed photos delivered to your home within days.



### Order photo prints and gifts

Order real paper prints or great photo gifts straight from your MAGIX Online Album and have them delivered directly to your home or pick

[www.magix.com](http://www.magix.com)

them up (no shipping costs) from your nearest photo developer.

Delivery usually takes 2 - 3 days.

More about MAGIX Online Print Service

- Order your valuable digital photos in impressive quality on premium photo paper from a digital photo printing specialist
- Brilliant prints on premium photo paper in all formats
- Impressive picture quality; true-to-color for up to 100 years
- Huge selection of great photo gifts (t-shirts, mugs, calendars, and much more)
- Includes MAGIX Photo Manager for conveniently ordering your photos
- Real prints and great photo gifts of your digital pictures – it's that easy

### **1. Select photos**

Take your time and select your favorite photos from the program and optimize them for best results. Remove redevye, enhance colors and contrast, and much more. All offline and on your PC!

Then simply select MAGIX Online Print Service from the "Online" menu and "Send selected".

### **2. Select format and quantity**

Now select the desired number and the image format (e.g. 10x15) or photo gift (mug, t-shirt). Do you have a voucher? Then click on "Use voucher" and enter your voucher code.

### **3. Specify zoom**

One great option is the crop function for your prints. To use it click on the button "Edit photo". Here you can set the format (small 2:3 or digital 3:4) you would like for your photos.

You can see how your photo prints will look in the preview window. Using the selection frame you can crop your photos individually.

### **4. Submit order**

Once you have made all your settings click on the "Submit order" button. Now all you have to do is enter your details and the type of delivery. Your order will now be dispatched online.

You will now receive an order confirmation by email including a link where you can find up-to-date information about your order anytime.

### **Delivery straight to your doorstep**

Have your prints and photo gifts conveniently delivered straight to your doorstep or pick them up from a photo retailer close to you to save postage. Orders usually take 2-3 days.

### **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.

### **MAGIX Blog Service**

With MAGIX Blog Service, YOU make the news! Share your thoughts, experiences, and news with a worldwide audience in no time using your own interactive online multimedia journal. Invite family, friends, and acquaintances to join in and enter their comments! A free MAGIX Online Album belongs to the MAGIX Blog Service so that you always have full control over your contributions.

You can also read the FAQ (frequently asked questions) on the Internet. <http://rdir.magix.net/?page=GRF14Q24VIRN>

### **MAGIX Podcast Service**

MAGIX Music Maker 16 Premium allows you to publish your own music as a podcast for a worldwide audience. The finished arrangement is then uploaded to your MAGIX Online Album and listed in the other podcast folders at MAGIX Podcast Service.

Read more in the "Podcasting" section in the Reprocess arrangement (see page 255) chapter.

## 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.

## Tasks menu

In this menu you will find direct solution and short video explanations on how to perform tasks in different topics. Not only will you find step-by-step instructions for sound and pictures here, but you also find quick access to many of functions. If you click on an entry with a camera symbol, then you will open a short tutorial video which displays a solution. Entries without camera symbols offer a solution to the problem immediately.

## Help menu

### Show welcome dialog

With this command you can display the "Welcome" dialog again. There, you have a quick access to important functions during program start.

Shortcut: Shift + F1

## Documentation

### Content

Use the command "Content" in the "Help" menu to open the start page of the help file. You can read through the help file step-by-step and jump to specific sections via the tree structure on the right hand side.

### Context help



By choosing the context help entry from the "Help" menu, or by clicking on the button in the top toolbar, the mouse cursor will turn into an arrow with a question mark.

Then, when you click on any button of the main screen, program help describing the control element in question will open.

Shortcut key: Alt + F1

### Display tool tips

Tooltips are small information windows that open up automatically if the mouse pointer stops briefly on a button or some other area. They provide information about the function of the button. These information boxes can be switched on or off with this option.

Keyboard shortcut: Ctrl + Shift + F1

### Start introductory video

The introductory video shows you how all the most important features work. Specific topics are explained in detail in additional tutorial videos.

Shortcut: Ctrl + F1

To play the introductory video you may have to insert the program CD.

### Show MAGIX Music Editor video

The MAGIX Music Editor tutorial video shows you just how clear and easy it is to use this additional program.

### Open the online training area

Opens the [magix.info](http://magix.info) with online tutorial videos.

## Help from other users

### Ask the Knowledge Community a question online

Ask [magix.info](http://magix.info) a question.

### Find other MAGIX Music Maker 16 Premium users

Opens the browser with the myGOYA Online Desktop chat module

[www.magix.com](http://www.magix.com)

and switches to the MAGIX Music Maker 16 Premium users' channel. This helps to quickly find other MAGIX Music Maker 16 Premium users to get in contact with.

### **MAGIX Screenshare**

This function makes it possible for you to offer assistance to other users directly via the Internet, or to get help from others. To do this you have to register MAGIX Music Maker 16 Premium first.

**Hint:** To inform the screensharing guests of exactly what is being shown, it is also a good idea to telephone or chat simultaneously.

#### **Register as host for a screen transfer**

1. If you want to start a screenshare instance yourself, then you have to register as a host first. To do this open the menu "Online" and then select "Screen transfer as host...".
2. In the dialog you can enter a name for the screen session. Your user account name is used here by default.
3. Now click on "start session". A small window will now open in the bottom right corner which displays the status of your screen session. A number will also be displayed (session ID) which serves as a password for your guests.
4. Start the screenshare instance.

#### **Register as guest of a screen session**

1. You have to register as a guest to view a screensharing instance. To do this open the menu "Online" and then select "Screen transfer as guest...".
2. Enter the password you received from your host (8-digit session ID).
3. Now click on "start session". A window will open displaying a smaller version of your host's screen.

## Update program / Upgrade functions

### 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 (see support) where various program updates and help programs can be downloaded.

With the registration form supplied (start menu under "MAGIX Music Maker 16 Premium -> Service and support -> Register") you can register via post or fax. Simply print it out, fill it in, and send it off!

### Online update

Connects directly to the MAGIX online update page where you can get the latest version of your program.

### Activate additional functions

In the submenu you have the option of activating encoders/decoders for various file 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 Music Maker 16 Premium 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 be able to provide you with optimum value for money for your software.

The following fee-based activations are available on MAGIX Music Maker 16 Premium: **MP3 Surround encoder**.



## Fee-based MP3 activation

To create Surround MP3s the appropriate fee-based codec must be activated first.

The screenshot shows a two-step activation process. Step 1, titled "1. Register and order activation code", contains the text: "Easily order your personal activation code online, by telephone, email or fax any time. Your activation code will be emailed to you within minutes." Below this text are two buttons: "Activate online..." and "Activate by post/fax...". Step 2, titled "2. Enter activation code", contains the text: "Please enter your activation code and click on the 'Activate' button. An online connection will be established during the activation process." Below this text is a text input field and an "Activate" button.

### Order activation code online

Click on "Order online..." (Field 1). The web browser will open for you to register MAGIX Music Maker 16 Premium 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..."**.

### **Possible problems and their solutions**

#### **The code entered is incorrect (telephone activation)**

- Make sure your entry is correct; in most cases a typo is the culprit.
- If the code is entered correctly, then you can dial the number for our call center. Our co-workers are glad to help you personally.

#### **The MAGIX website won't open**

- Check your Internet connection; you may have to use manual dial-up.

#### **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)

#### **I installed my MAGIX program onto my new computer or built a new hard disk (sound card, memory...) into my old computer. Now my activation code is no longer accepted.**

Activation is linked to a specific computer. Changes to the computer's hardware, for example, integrating a larger hard disk can lead to the computer no longer being recognized as the one for which the activation code was created. This will most likely happen if you install MAGIX Music Maker 16 Premium on a new computer. If

this is the case, simply request a new activation code. Since you're already registered as a MAGIX customer, you won't have to pay for another activation.

**Online:** When registering on the MAGIX website use your existing MAGIX login details.

**Post/Fax:** Print out the order form again and send it to the addressee/fax number stated.

## MAGIX Creation Logo

Use this option to open a PDF information file that will show you how to use the MAGIX Creation Logo. This guide explains in detail what must be taken into account and what is needed for non-private use of the content provided (the photo, video, and audio files included in the software).

We explain when and where the MAGIX Creation Logo must be applied and which logo is suitable for your application. If you have any questions, please contact MAGIX Support.

## About MAGIX Music Maker 16 Premium

Displays copyright info and version number of MAGIX Music Maker 16 Premium.

# Buttons overview and keyboard shortcuts

## Toolbar



Save arrangement



Copy selected objects



Export



Insert



Undoes the last action (Undo)



Song Maker



Redo action



Select mouse mode  
(see page 59)



Cut



MAGIX.info

## Keyboard shortcuts

In MAGIX Music Maker 16 Premium, there are many functions for which key commands can be used to open your desired program at the touch of a button. In detail:

- Menu and object context menu entries
- Functions of the Media Pools (Options menu)
- The video monitor menu
- Move and zoom of the arranger view
- Playback control (Moving the playback marker and the playback area)
- Mouse modes
- Smart preview function (Previewing Media Pool files in the arrangement context)

### File menu

#### Load/Save arrangement

New arrangement	Ctrl + N
Load arrangement	Ctrl + O
Save arrangement	Ctrl + S

Save arrangement as                      Shift + S

### Import

Import audio CD track(s)                C

Audio recording                          R

Video recording Premium                G

### Export

Export assistant                          X

Burn audio to CD-R(W)                  Shift + Alt + A

Audio as WAV/ADPCM                    Alt + W

Audio as MP3                             Alt + M

Audio as OGG Vorbis                    Alt + O

Audio as Windows Media                Alt + E

Audio as AIFF                            Alt + F

Upload audio to MySpace/DJ            Alt + C

Tunes

Video as AVI                             Alt + A

Video as MAGIX video                  Alt + X

Video as QuickTime movie             Alt + Q

Video as Windows Media video        Alt + V

Picture as BMP                          Alt + B

Picture as JPEG                         Alt + J

Upload to YouTube                      Alt + U

Send arrangement as email             Alt + I

### Backup copy

Load backup arrangement                Alt + Y

Create backup copy                      Shift + R

Create backup copy as an OGG         Ctrl + Alt + R

Burn backup copy to disc                Ctrl + Shift + R

Burn manually selected files to        Shift+Alt+R

CD/DVD

### Settings

Program settings                        Y

Arrangement settings                    E

Quit                                        Alt + F4

### Edit menu

Undo                                        Ctrl + Z

Restore                                     Ctrl + Y

**Object**

New MIDI object	Ctrl + Alt + M
Cut	Ctrl + X
Copy	Ctrl + C
Duplicate	Ctrl + D
Insert	Ctrl + V
Multiple insert	Ctrl + "Num+"
Delete	Del
Select all	Ctrl + A
Split	T
Save objects as takes	Ctrl + F
Form group	Ctrl + L
Ungroup	Ctrl + M
Set user-defined loop	Z
Remove user-defined loop	Shift + Z
Object properties	Ctrl + E

**Range**

Cut	Ctrl + Alt + X
Copy	Ctrl + Alt + C
Insert	Ctrl + Alt + V
Multiple insert	Ctrl + Alt + "Num+"
Delete	Ctrl + Delete
Extract	Ctrl + Alt + P

**Track**

Add new track	Ctrl + K
Mix audio	Shift + M

**Navigation:** Set jump marker, move playback position (see Playback control), move view (see Move arranger view (see page 330)).

**Effects menu**

Song Maker	W
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**Audio**

Master audio effects rack	B
Mastering Suite	U
Text to speech	Ctrl + Shift + X
Object effects rack	Shift + A

10-band equalizer	Shift + Q
Parametric equalizer	Shift + U
Sketchable filter	Alt + Shift + Z
Compressor	Shift + D
Stereo processor	Shift + P
Invert phase	Alt + H
Echo/Reverb	Shift + H
Distortion/Filter	Shift + F
Elastic Audio	S
Vocoder	Shift + C
Gater	Ctrl + G
reverse	Ctrl + B
Mute/Unmute	F2
Reduce volume	Alt + L
Normalize	Shift + N
Timestretch and pitchshift	Shift + V
MIDI transposition	Alt + Shift + D
Harmony Agent	Alt + Shift + F
One pitch higher	Num *
One pitch lower	Num /
Create remix objects	Shift + J
Remix Maker	Shift + B
Loop Finder	Shift + L
Remix Agent – Tempo and beat recognition	Shift + K
Load audio effects	Ctrl + Alt + O
Save audio effects	Ctrl + Alt + S
Reset audio effects	Ctrl + Alt + H
Convert stereo into two mono objects	Alt + K
Edit wave in external editor	Ctrl + Shift + A
<b>Video</b>	
Video Controller	Shift + G
Load video effects	Alt + Shift + O
Save video effects	Alt + Shift + S
Reset video effects	Alt + Shift + H
Edit bitmap in external editor	Ctrl + Shift + B

**Title**

Title editor	Ctrl + T
Load title template	Alt + Shift + T
Save title template	Alt + T

**Automation**

Display object volume curve	Ctrl + P
Object automation	Ctrl + H
Track automation	Ctrl + J

**View menu****Arranger**

Optimize view	Shift + U
Change object presentation	Tab
Show loop range	Shift + X

**Show object marker**

Bar marker	Ctrl + Shift + F9
Harmony marker	Ctrl + Shift + F10
Beat marker	Ctrl + Shift + F11

**Media Pool**

Media Pool	F
Audio effects	Ctrl + Alt + A
Vintage audio effects	Ctrl + Alt + N
Video effects	Ctrl + Alt + G
Video mix effects	Ctrl + Alt + F
Visuals	Ctrl + Alt + U
Title effects	Ctrl + Alt + T

**Video monitor**

Show video monitor	V
Fullscreen video monitor	Alt + Enter
Arrangement overview	Alt + Shift + U

**Mix**

Mixer	M
Master audio effects rack	B
Mastering Suite	U
Live Performer	K
Standard layout	L



**Help menu**

Show welcome dialog	Shift + F1
Table of contents	F1
Context help mouse mode	Alt + F1
Display tool tips	Ctrl + Shift + F1
Start introductory video	Ctrl + F1
Register online	F12
Online update	Ctrl + Shift + F12
About MAGIX Music Maker 16 Premium	Alt + Shift + F1

**MIDI objects context menu**

MIDI editor	Ctrl + Shift + D
Track VSTi editor	Ctrl + Shift + F
MIDI transposition	Alt + Shift + D

**Media Pool****Settings**

Soundpool	F5
File browser	F6
Synthesizer	F7
Templates	F8
Object inspector	F9

**Template folders**

Audio effects	Ctrl + Alt + A
Vintage audio effects	Ctrl + Alt + N
Title effects	Ctrl + Alt + T
Video effects	Ctrl + Alt + G
Video mix effects	Ctrl + Alt + F
Visuals	Ctrl + Alt + U

**View options**

List	Ctrl + Alt + L
Details	Ctrl + Alt + D
Large symbols	Ctrl + Alt + I

**File operations**

copy object	Ctrl + Shift + C
-------------	------------------

Insert	Ctrl + Shift + V
Delete	Del
Rename	Ctrl + Shift + N
Properties	Alt + Shift + E
New folder	Ctrl + R
Folder as link	Ctrl + Shift + L
Burn file to CD/DVD	Ctrl + Shift + B

### Video Monitor

Fullscreen video monitor	Alt+Enter
Standard layout	L
Video Monitor	V

### Video monitor resolutions

160x120	Ctrl+Shift+1
320x240	Ctrl+Shift+2
360x288	Ctrl+Shift+3
680x480	Ctrl+Shift+4
720x480	Ctrl+Shift+5
720x576	Ctrl+Shift+6
768x576	Ctrl+Shift+7
User-defined resolution	Ctrl+Shift+8
Adjust video monitor to selected video	Ctrl+Shift+0
Reset to default size	Ctrl+Shift+2
Show time	Ctrl+Shift+I
Time foreground color	Ctrl+Shift+J
Time background color	Ctrl+Shift+K
Time background transparent	Ctrl+Shift+L

### Move Arranger view

Note: These commands similarly move the playback marker when it's stopped, the marker always remains visible in the arrangement clip.

To the next object edge	Ctrl+0
To the previous object edge	Ctrl+9
Go to beginning of arrangement	Home
Go to end of arrangement	End
Go to start marker	Ctrl+Home
Go to end marker	Ctrl+End
Page to right/left	PgDn/PgUp
Grid to right/left	Ctrl+PgUp/PgDn
Go to the next jump marker	Ctrl+Shift+PgDn

Go to the previous jump marker	Ctrl+Shift+PgUp
Go one track up/down	Shift+Arrow up/down

### Arranger view: Increase/Reduce clip size (zoom)

Increase clip size (zoom in)	Ctrl+Arrow up
Reduce clip size (zoom out)	Ctrl+Arrow down
Zoom 1 frame	Ctrl+1
Zoom 5 frames	Ctrl+2
Zoom 1 sec	Ctrl+3
Zoom 10 sec	Ctrl+4
Zoom 1 min	Ctrl+5
Zoom 10 min	Ctrl+6
Zoom view between start and end marker	Ctrl+7
Zoom over whole arrangement	Ctrl+8
Increase track pitch	Alt+Arrow up
Reduce track pitch	Alt+Arrow down

### Move playback control / playback marker / playback area

Start/Stop playback	Space bar
Stop at position (stop playback, move playback marker to current position)	Escape
Set jump marker	Shift+1...0
Playback marker to jump marker	1..0

Note: When stopped, the playback marker is moved to the jump marker (after the end of the current loop).

Create jump marker sequence (10 markers with intervals equal to the current playback area)	Ctrl+Shift+M
Delete all jump markers	Alt+Shift+M
Move playback range	Arrow left/right
Move playback one quarter of its length	Ctrl+Arrow left/right
Double/Halve playback area length	Shift+Arrow right/left
Double/Halve playback area length by a bar	Ctrl+Shift+Arrow left/right

**Mouse modes**

Mouse modes for individual objects	Alt + 1
Connect objects in one track	Alt + 2
Connect objects in all tracks	Alt + 3
Curve mouse mode	Alt + 4
Draw objects	Alt + 5
Splitting objects	Alt + 6
Object stretch mouse mode	Alt + 7
Preview objects mode	Alt + 8
Scrub mode	Alt + 9
Replace mouse mode	Alt + 0

**Preview/Smart preview**

Preview of pitches	Numbers 0..9
Change preview object	Arrow keys
Insert into arrangement	Enter
Delete smart preview object	Del

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