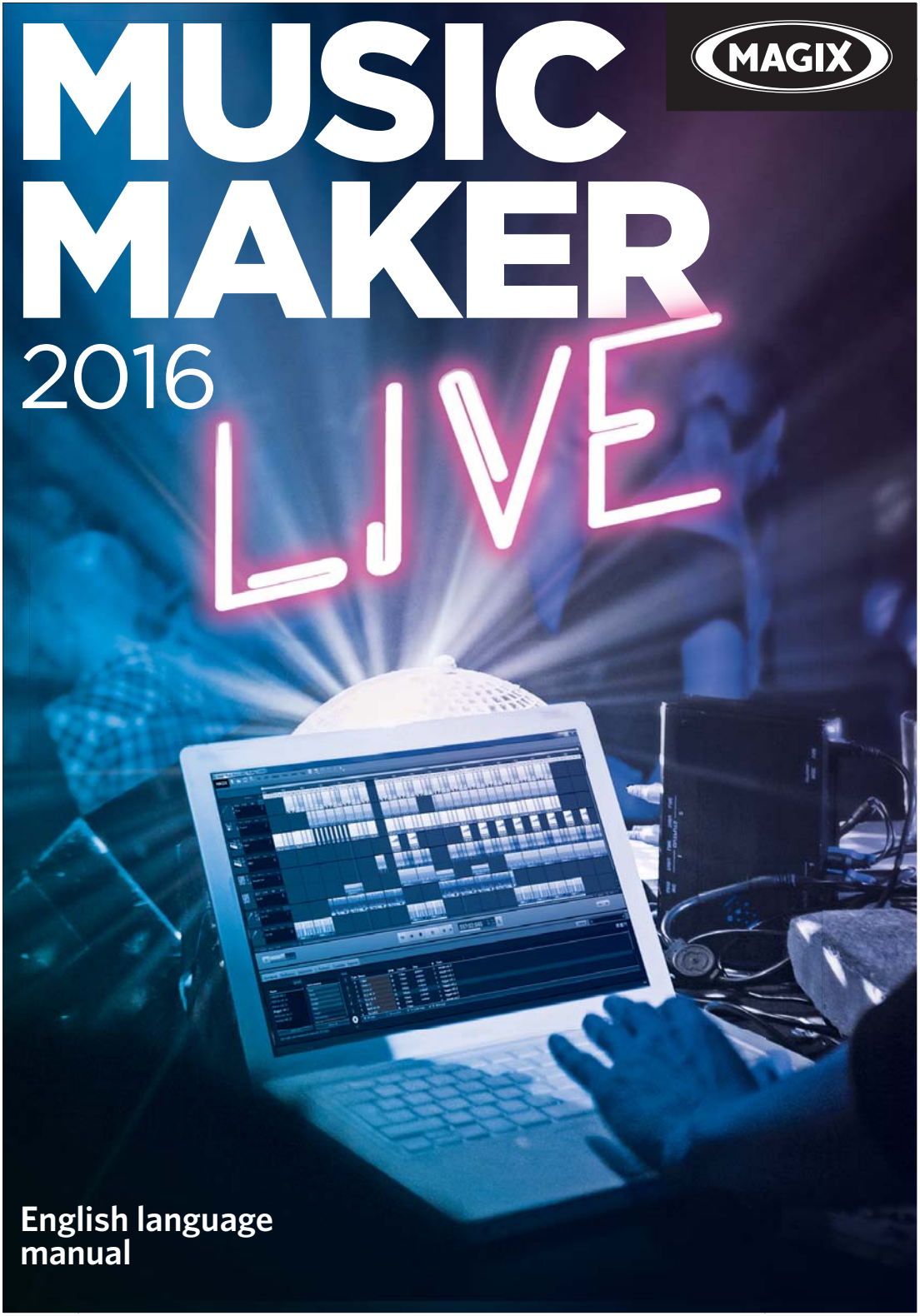
MUSIC MAKER 2016 LIVE



English language manual

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Preface

MAGIX Music Maker 2016 Live offers an easy start and the option to dive deeper into the world 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.

The handling is especially easy and consistent. The included sound files can be combined with the software synthesizers easily. MP3 songs can be used with audio CD tracks, your own music recordings and even videos, photos or graphics. Even VST and DirectX plug-ins or MIDI files can be added easily.

This turns 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. And for those of you who want to start making songs effortlessly and straight away, the integrated "Song Maker" will take care of almost everything for you.

The tutorial (view page 22) starts off by explaining all of the basic features in the program and then goes on to provide complete, detailed descriptions of each of the functions. If you prefer to discover the many possibilities of the program by yourself, you can also use the PDF manual and the Help feature as references. An alphabetical index is included at the very end.

Have fun with MAGIX Music Maker 2016 Live.

The MAGIX Team

Support

Dear MAGIX customer,

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

- Unlimited web support:
  As a registered MAGIX customer, you have unlimited access to web support offered via the convenient MAGIX service portal on http://support.magix.net, including an intelligent help assistant, high-quality FAQs, patches and user reports that are constantly updated.
  The only requirement for use is product registration at www.magix.com
- The online community, on-the-spot support and a platform for exchange:
  MAGIX customers have free and unlimited access to the online community at www.magix.info, which includes approx. 150,000 members and offers the opportunity to ask members questions concerning MAGIX products as well as use the search function to search for specific topics or answers. In addition to questions & answers, the knowledge pool includes a glossary, video tutorials and a discussion forum. The multiple experts, found round-the-clock at www.magix.info guarantee quick answers, which sometimes come within minutes of a question being posted.
- Email support for MAGIX products:
  For each new MAGIX product you will automatically receive 12 months free customer support by email.
- Premium Email Support:
  For priority support, or if you want the support team to help with non-MAGIX related hardware problems you can purchase a premium email support ticket. Proceed as follows:
  1. Go to the MAGIX customer support page at http://support.magix.net http://support.magix.net.
  2. Sign in using your login details.
  3. Click on "Purchase access code" in the navigation bar.
     Each ticket corresponds to a specific problem, it will remain valid until the problem has been solved. A ticket is not limited to a single email.

Please note: To be able to use the Premium email support and free product email support via the Internet, you have to register your MAGIX product using the serial number provided. The serial number can be found on the sleeve of the installation disc or on an insert card included in the package.

- **Additional telephone service:**
  Besides the large number of free customer service offers, we also offer a fee-based telephone customer service.

Here you can find a summary of our technical support telephone numbers:

http://support.magix.net/

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

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

Please make sure you have the following information at hand:

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

MAGIX Sales Department

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

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

Europe

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

U.K.: 0203 3189218

Denmark: 45 699 18763

Sweden: 46 852 500713

Finland: 35 89 42419023

Norway: 47 210 35843

North America

9 am to 4 pm EST Mon-Fri

Phone: 1-305-722-5810

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Introduction

What is MAGIX Music Maker 2016 Live?

MAGIX Music Maker 2016 Live is the ideal program for creating professional sounding recordings without having to learn any complicated musical theory. You can simply combine the professionally produced loops in the intuitive arranger and mix them to create your own personal sound.

Are you aiming for a unique sound that will set you apart from the crowd? Then try creating your own special sounds with the included software synthesizers or load your own plug-in synthesizers. High-quality effects help to give your tracks the final polish or you can take things in the other direction and distort them until they are almost unrecognizable. Express your own creativity by recording your vocals or instruments and adding them to the project.

Whether rock, techno or film music, you can produce all kinds of tracks using the wide range of styles available in the program. When you combine elements from different style libraries the tempo is adjusted automatically to make sure your arrangement fits together perfectly. Who knows? Maybe flamenco rock or country techno is the next big thing.

If you need even more sounds and samples, Catooh offers a rich selection of audio, video, images and professionally created sound effects, which can add even more variety to your project.

Or how about a remix? Load up your favorite hits from the past and add some fat bass or a totally modern beat! When you load audio CD tracks and MP3s into Music Maker the tempo of the song is recognized and adjusted to fit the project. The track can also automatically be cut into loops.

But music alone isn't everything! You can import images and video files to your project, include text and add video effects and cool visuals. The finished video can be directly exported from Music Maker and posted on MAGIX Online Album, Youtube or Facebook

What's new in MAGIX Music Maker 2016 Live?

New sounds and loops

As usual, there is a brand new sound archive with various styles ranging from "trendy" to "retro".

New synthesizers

This version also contains new Vita Solo Instruments: The **Accordion** lends itself well to all types of traditional and folk music. **Cinematic** gives you big movie sounds, such as mystical soundscapes, ambient tones and atmospheric sound effects ranging from dark to mysterious. MAGIX Music Maker 2016 Live also features **Folk**, which contains instruments such as a banjo and a honky tonk piano, and **Choir** for conducting angelic female and male-voiced choirs.

Improved Vita Sampler

The Vita Sampler provides a simple instrument for jamming and remixing all kinds of audio loops. It can automatically split up an audio file to be played on eight pads or using the keys on your keyboard. In the improved version of the Vita Sampler, you can move loop borders and lock individual pads for the randomize feature.

Improved automation for Vita Solo instruments

Vita 2 and MAGIX Vita Solo Synthesizer now contain useful pre-defined assignments with MIDI controllers (view page 106) which allow you to automate the most important parameters in a MIDI object. These controllers are optimized for the Novation Launchkey mini keyboard contained in the MAGIX Music Maker 2016 Live Control Bundle.

New effects interface

The MAGIX Music Maker 2016 Live effects for objects, tracks and master now have a new, uniform interface. The object effects dialogs have been completed integrated into the Inspector. It's also now possible to use more than two plug-ins per effects rack.

Screen Keyboard Scale Mode

The new screen keyboard Scale Mode enables you to hit the right note every time, even if you can't play piano. In this mode, instead of normal piano keys, you are given colored buttons which only contain the notes belonging to a certain scale. Various European and exotic scales are available to use.

Improved harmony editing in the pitch bar

The pitch bar now displays the standard harmony symbols, instead of the Soundpool pitches. It's now also possible to use any major or minor key. An intelligent algorithm finds the right combination of pitch shifting and a selection of matching pitches from the Soundpools.

Élastique timestretch algorithm

The high-quality Élastique algorithm is now used for changing tempo (timestretching) and pitch (pitch shifting) and offers optimal results for all kinds of audio material. A light version, Élastique Efficient, is also available if your computer has trouble handling the normal version.

Improved Music Maker Jam import

On Windows 8 and up, you can now import Music Maker Jam http://www.magix.com/de/apps/music-maker-jam/ projects into MAGIX Music Maker 2016 Live for further editing. The Music Maker Jam styles and recordings are also automatically available in MAGIX Music Maker 2016 Live.

Live Pads (only in MAGIX Music Maker 2016 Live)

Perform music live and produce new songs on the fly. The Live Pads are ideal for quick music productions in realtime, live performances and sketching out new songs. The mobile concept behind Music Maker Jam http://www.magix.com/de/apps/music-maker-jam/ has been introduced to MAGIX Music Maker 2016 Live. You can control 16 matching loops, global pitches and effects via mouse, keyboard, MIDI keyboard or smartphone app.

MAGIX Audio Remote - remote control via smartphone app

With the new Audio Remote app for iOS and Android, you can operate Music Maker using your smartphone. If your computer and phone are on the same Wi-Fi network, the app and the program will connect to each other automatically. Right now, the app features transport controls, remote control of filters and reverb on Vita Solo Instruments, as well as a complete Live Pad interface (Live version only).

The Features

Multimedia Library - Soundpool

The included multimedia library provides audio and video building blocks ("samples") that can be combined in the arranger. The samples are categorized according to styles, instrument category, and pitch. In short: just about anything can be combined with anything else. The pitches match one another and the various styles of samples are adapted to the tempo. The sky's the limit to your creativity. Music Maker also comes with a range of audio and video effect templates, titles, and graphic animations for video clips.

Audio effects

MAGIX Music Maker 2016 Live provides lots of different audio effects. A short overview:

- The **Audio Effect Rack** supplies **Reverb**, **Echo**, **Equalizer**, **Compressor**, **Time Processor**, **Distortion** and **Filter** – classic effects which can be used to produce almost any sound. The reverb effect, for example, provides professional and realistic reverb algorithms to add depth and spaciousness to your material. You can correct tempo and pitch in real time using **Resampling**, **Timestretching** or **Pitchshifting**.
- You can also individually apply all of the effects of the Audio FX rack. Additionally, you can find a parametric equalizer, bit machine, gater, etc. in the effects menu.
- **Vandal SE** is a guitar amplifier from MAGIX. You can adjust all the typical settings on its realistic user interface.
- **essentialFX:** important bread-and-butter effects that are embedded like VST plug-ins.
- 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 with **Delay**. The **Filter** enables tempo-synchronous frequency filtering.

There are three ways of implementing filters:

- **Object effects**: Effects for selected objects These effects can be found in "Effects > Audio > Audio Effects" or in the context menu (right mouse click).
- **Track effects**: Effects for complete tracks These effects can be found in the track box or in the mixer channels.
- **Master effects**: Effects for the overall sound These effects can be found in the mastering area of the mixer (or in the "Effects" menu).

Import

You have the following options for using your own material:

- **Audio files** in a wide range of formats. You can also use MIDI, video and bitmaps. The files can be dragged to a track from the Media Pool with a held-down mouse key (drag & drop). You can find a list of supported formats below (view page 18).
- **Audio CDs** can be imported directly in the program. Simply place the CD into the drive and press "CD/DVD" and all the tracks are ready to be dragged & dropped into the Arranger. Whether for remixes or as sound material for your own compositions - your personal CD collection has a whole new meaning.
- Use the **recording function** to record vocals, noises, or instruments and integrate them into the project.

Song Maker

The Song Maker lets you create new projects quickly and easily and complement existing projects 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.

Own recordings

Use this recording function from MAGIX Music Maker 2016 Live to record vocals, noises, or instruments and integrate them into the project.

Audio & MIDI

The MIDI format is extremely important in modern music production. You can use MIDI files to control external devices such as synthesizers and samplers and internal software audio generators such as VST plug-ins from your computer.

With MAGIX Music Maker 2016 Live you can arrange, load, record, edit, and play MIDI files just as easily as audio files. For MIDI editing, you can use the specialized MIDI Editor with Piano Roll, Drum Editor, Velocity/Controller Editor and Event List.

VST Support

Now it is possible to use external VST instruments and effects in all MAGIX Music Maker 2016 Live versions. A wide range of DirectX and VST plug-ins are offered in retail stores or directly on the Internet, greatly expanding the possibilities of MAGIX Music Maker 2016 Live.

VST instruments and effects are external programs, which must first be installed before being used in MAGIX Music Maker 2016 Live. You can then find them in the mixer plug-in slots and in the track boxes at the start of every track. VST effects are applied to an entire track. VST instruments are controlled by MIDI objects.

Mixer

MAGIX Music Maker 2016 Live contains a professional real-time mixer with an Effect Rack and two Insert Effects per channel and for the Master, as well as additional Mastering Effects. You can group a number of faders of a specific type (for example, volume or panorama) and use them all together by holding down the Ctrl key. The quickest way to open and close the mixer is by using the M key.

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 project!

Formats and interfaces

Import: WAV, MP3, OGG Vorbis, WMA, QuickTimeTM, MIDI, CD-A (without copy protection), BMP, JPG, AVI, MXV, WMV

Export: WAV, MP3, OGG Vorbis, WMA, QuickTime, MIDI, BMP, JPG, AVI, MXV, WMV, CD-A (Live version)

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 2016 Live. Use the simple search function to find suitable pictures or MP3 files for your project.

InfoBox

Thanks to the new InfoBox, 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 infotext in the video monitor.

Note: The video monitor is preset as hidden and can be made visible with the key F3.

Sound Vision

Sound Vision is a new way of visualizing music which displays audio material at a glance in the form of a musical galaxy. Sound Vision be activated in the Media Pool.

Internet upload to many platforms

When the song is finished, it should be heard not just by your friends, but preferably the whole world. This is achieved, naturally, with the help of the web. Under "File > Export > Community upload" you will find the most impotant communities, where you can upload your songs.

Additional features of the Live version

Additional audio effects

- **Essential FX Vocal Strip**: This combination of effects is specifically designed for editing speech and vocal recordings.
- **Vocoder:** produces distorted vocals from synthesized sounds.
- **Mastering Suite:** a special effect rack for "Mastering". In this process, the mixed-down music track is "polished" using parametric equalizer, multimax, limiter and stereo enhancers. You can transfer the sound and dynamic quality of a completed piece of music to your project using the auto mastering in the mastering suite.
- **Am-Track SE**: This analog vintage compressor produces an especially warm, pumping sound. Launch it via the effects menu for selected audio objects or via the plug-in slot in the mixer.

Additional Styles & Samples

More content: The Live version comes with more styles and ca. 2,000 additional samples.

Additional instruments

- **Revolta 2:** An analog, especially variable and professional-sounding 12-tone synthesizer. Comes with a sound matrix, noise generator and nine effect types.
- **BeatBox 2 plus**: The ultimate groove tool with even more drum kits, automations and a more flexible effects section.
- **Extra Vita Solo Instruments: Folk** gives you bluegrass and folk instruments for cool crossovers, **Choir** provides angelic male and female-voiced choirs.

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 an echo in

or out 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 2016 Live provides a recording function for video from analog video sources for your own video clips.

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.

Real 5.1 Surround Sound

MAGIX Music Maker 2016 Live deluxe provides real 5.1 Surround Sound. 5.1 Surround is the preferred home cinema sound format, which is also supported in the Live version when importing, editing, and exporting. With the 5.1 Surround Editor you can move your sound around the room.

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.

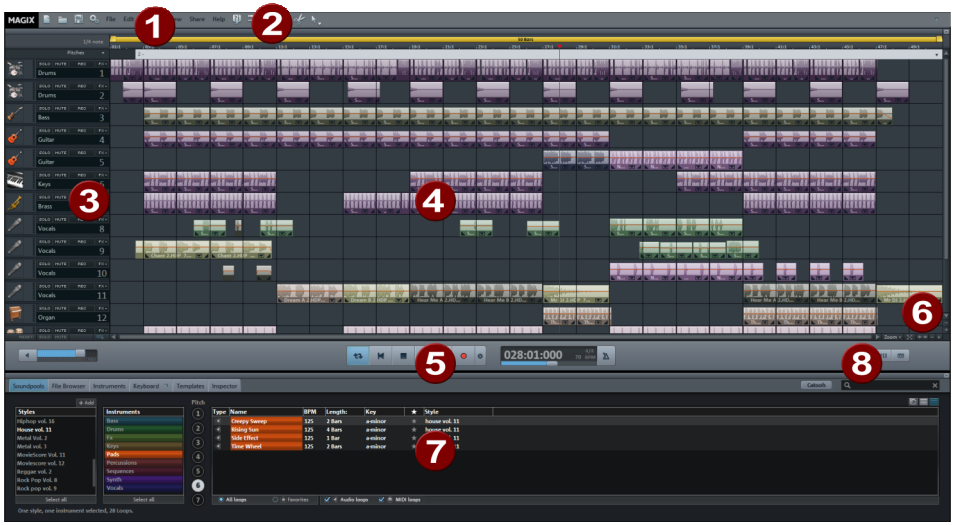
This synthesizer can create any electronic music you can imagine. The sound presets were created by sound designers for Access Virus and Rob Papens Albino, which makes Revolta 2 the number 1 choice for beginners and professionals alike.

Also in the Live version

- **Additional tracks:** The Live version offers unlimited tracks (instead of 96 - more space for even more complex projects.
- **Timecode sync:** For creating songs in teams on multiple PCs. Simply connect two notebooks to each other 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:** For embedding of other music programs. Programs such as Propellerhead Reason or Ableton Live can be controlled in MAGIX Music Maker 2016 Live like a software synthesizer using MIDI objects.

- **Video recoding:** In addition to audio recording, MAGIX Music Maker 2016 Live provides a recording function for video from analog video sources – for your own video clips. It can be found in the "File" menu under "Import > Video recording".
- **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.
- **MAGIX Music Editor:** Detailed audio editing in real time and specialist for CD burning, sound restoration, sampling and audio editing.
- **MAGIX Print Studio** for quickly creating CD covers, inlays and labels.

Overview of the program interface



1 Menu bar:	This bar provides the most important editing commands.
2 Toolbar	This contains the buttons for quick editing and the different mouse modes.
3 Track headers	Complete tracks can be turned on or off (muted) or played separately (solo). Use the FX buttons to apply track effects. Load software instruments with the button in the front.
4 Arranger	You can freely position any multimedia material on all of the arranger's tracks.
5 Transport control	In the middle you will find the volume control, the transport control for the playback functions, and the

tempo display.

6 Zoom functions	Here you can enlarge or reduce 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 using drag & drop.
8 Arranger buttons	Buttons for displaying the mixer and video monitor with peak meter.

The arranger, video monitor and Media Pool can be positioned anywhere on the screen or completely hidden. In the "View" menu (F11 key) you can reset the standard layout for Music Maker.



The maximize buttons on the arranger, the video monitor and the Media Pool let you display them on the full screen, e.g. to make positioning and editing objects in the arranger easier.

For very large projects, the video monitor can be used as an overview display (Menu -> Video monitor -> Project overview).

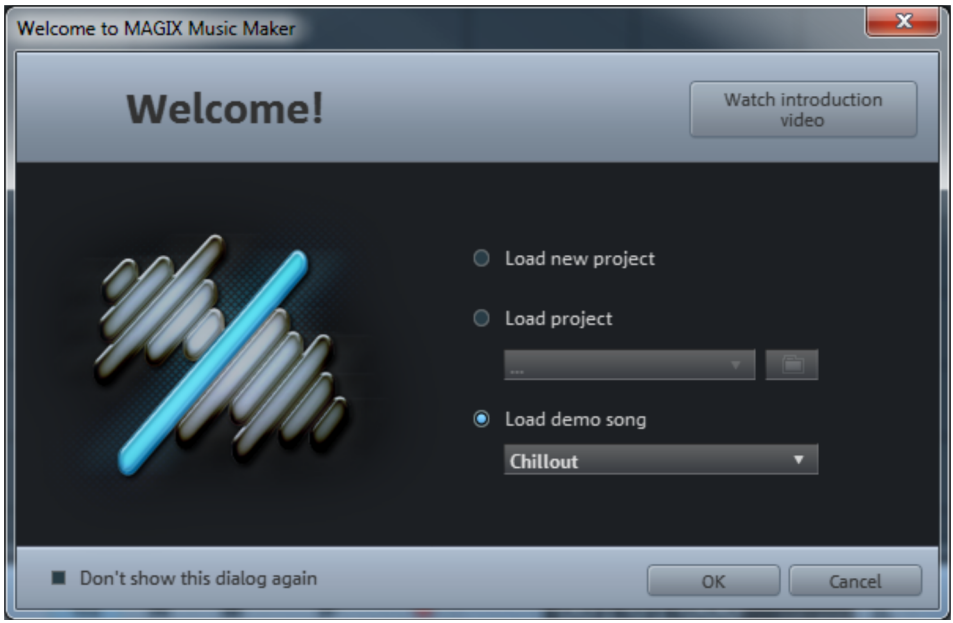
Quick start

This chapter explains the basic functions of MAGIX Music Maker 2016 Live with a step-by-step introduction. A systematic description of all program functions can be found towards the end of the manual.

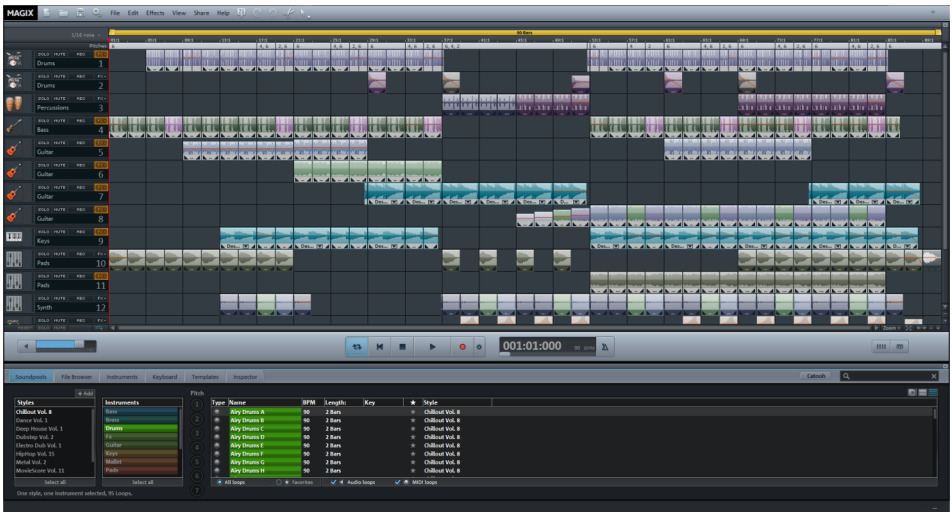
Tip: Watch the introductory videos and learn some tips and tricks from other users at magix.info http://www.magix.info/us/search/music+maker/.

Play demo project

When MAGIX Music Maker 2016 Live is started for the first time it will display a welcome screen.



To get an idea of what Music Maker can do, click on "Load demo song" and select a demo song from the menu. Once it is loaded, the Music Maker interface will be displayed.



The large area with the horizontal tracks is the arranger. The colored rectangles are objects. They represent various samples, synthesizers and other sounds. There are also objects for titles, images and video files.

Look at the individual tracks of the song in the arranger: In MAGIX Music Maker 2016 Live you can create a complete song 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.

In the middle you'll find a large volume control, the transport console (view page 40) and some buttons for opening important windows..

In the lower section of the program interface you can find the Media Pool. You can switch between the different areas. In **Soundpools** you will find the included loops that you can load into the project by drag & drop while holding the mouse key or by double-clicking.

To play the demo, click on the Play button with the mouse 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 if the correct sound card is active for playback in the Setup window (P key). Also make sure that the output of the sound card is connected to the speakers.

Previewing and loading sounds

Now you can load your first sound into the arranger.



Create another new, empty project. Simply click on this button.

- Now click on **"Soundpools"** (1) in the Media Pool.
- Various **"Styles"** (2) are shown on the left hand side of the Media Pool. Styles represent particular musical genres. Click on one of the styles to display the loops that match this genre.

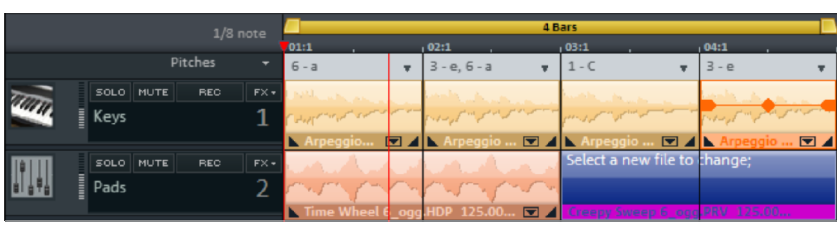


- Now, select which instrument you would like to use under **instruments** (3). On the right all of the **loops** (5) will be listed and you can select the sound you want. The selected sound will play back automatically.
- Most instruments are categorized according to pitch. Click on the **pitch** (4) to listen to the sound in the corresponding pitch. Other instruments, like drums, are not categorized according to pitch.
- To load a file into the arranger, simply press the Enter key. 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 (or MIDI object) at that position.

Create a Project

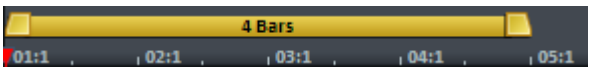
Start playback now.

To load new samples into the arranger, you do not need to interrupt playback. MAGIX Music Maker 2016 Live has a "Smart Preview" function: You can simultaneously preview new samples in the Media Pool – they always run in sync with the song in the arranger. This function considerably simplifies the search for suitable samples for a song you wish to create.



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

The pitch of the first loop is displayed in the pitch bar. When additional loops are are added underneath at the same time position, they are automatically adjusted to the same pitch.



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 (playback range). Playback is "looped" in this range which means that it repeats continuously. New loops can be added when possible.

If you want to create a new part for the song you can reposition the start marker by left-clicking on the bar ruler and the end marker by right-clicking on the bar ruler. Or you can use the right arrow key (view page 38) to move the playback area its entire length to the right.

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

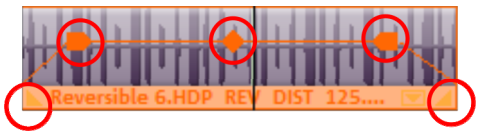
Note: There is one important limitation to the movement of objects on tracks. The Soundpools contain two different kinds of loops: audio & MIDI. You can recognize MIDI loops by their icon in the list. You can recognize MIDI loops by their corresponding icon in the list . These loops only produce a sound when combined with a software synthesizer (view page 121). This synthesizer is automatically loaded to the track where the MIDI object is placed. These objects should not be moved to other tracks once the synthesizer is loaded to a particular track.

Edit objects

Even though it's possible to make great projects with the audio building blocks provided, you will probably get to a point where you want to add your own personal touch by shortening or removing objects or adjusting the loops in specific areas.

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. If you make the object longer than it originally was, it will be played back as a loop. This way you can create rhythm tracks from short drum samples simply by stretching them.

If an object is selected, additional "handles" will appear on it.



Two fade handles are found on both top corners, which can be dragged inwards in order to fade the object in and out. The handle at the top center can be used to adjust the volume of audio objects and the transparency of video objects.

All objects can be split into multiple objects. To do so, open the "Edit" menu, click on "Object", and select the "Split objects" option. The selected object will be split at the position of the playback marker.



This can be done even faster using the special splitting mouse mode, found in the mouse mode button in the tool bar, or by pressing "Ctrl + 6".

Right-clicking on an object opens the context menu with the options available for that specific object in the Timeline mode.

Tip: You'll really notice the advantages of object-based editing when you start to use Object Effects! You can apply audio effects to each individual audio object. For example, you can cut a sample to create an object for the last beat before a pause in the project and add an echo effect. Or create some crazy drums by applying various filter effects to each beat in the loop. There's no limit to the creative possibilities!

Adding software instruments

The included audio loops in the Soundpool are of the highest quality and melodically synchronized. But sometimes it's good to have a bigger selection of beats and melodies or a way to create your own ideas. In this case you need software instruments.

While audio objects consist of pre-made recordings, the sound from software instruments (synthesizers) is created during playback on the computer. The resulting sounds are not as refined but allow for total control of every musical detail.

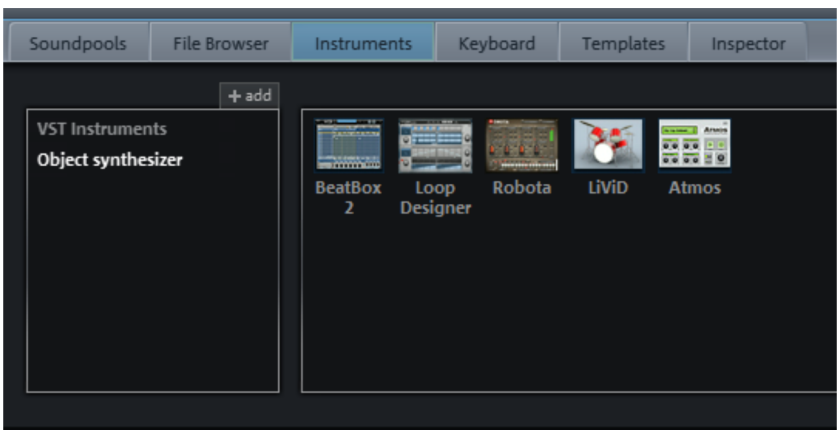
A selection of the loops included in Music Maker are intended as control files for software synthesizers (MIDI loops). The sound progressions of these loops can be edited in the MIDI Editor (view page 91). You can also record your own melodies by connecting a MIDI keyboard.

In MAGIX Music Maker 2016 Live a distinction is made between VST instruments and object synthesizers.

Object synthesizers are standalone objects in the track and can be moved, cut and arranged just like any other objects. Various object synthesizers can also be put together on one track. The control of the sound creation takes place within the object synthesizer.

VST Instruments are always loaded to one track and controlled by MIDI objects in the track. MIDI objects only contain control information (notes) that is used to create sounds in VST instruments. Various MIDI objects arranged on one track control the same synthesizer and that means a maximum of one instrument per track.

To open the folder with the software instruments in MAGIX Music Maker 2016 Live switch to the **Instruments** folder in the Media Pool.



- As with all Media Pool objects, the instrument that is selected will automatically produce a preview sound.
- Drag the desired synthesizer into an arrangement track by holding down the mouse button.
- For object synthesizers a synth object will be created and a settings dialog for the synthesizer will open. You can "program" the synth here. The resulting synth object can be moved, cut, stretched or adjusted with effects just like an audio object.
- VST instruments are loaded to a track and a preset MIDI object is added to the track. Double-clicking on it opens the MIDI Editor where you can make adjustments to the melody.
- Or you can switch to **Keyboard** view in the Media Pool. Here you can play the synthesizer using your computer keyboard. You can also record your playing by clicking on the large red record button.

Tip: You can access the sound programs of the included VST instruments with the button on the far left of the track.

Experiment with the various synthesizers in MAGIX Music Maker 2016 Live and take advantage of each of their individual strengths.

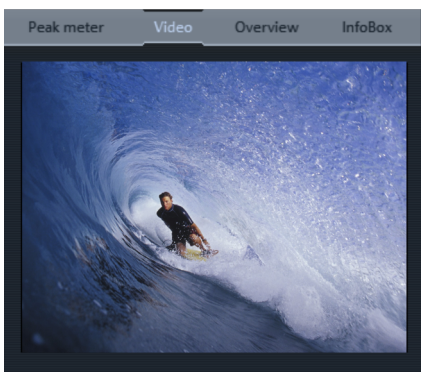
Add videos or images

Perhaps you would like to make a video clip? To do so, open a folder with video or photo files in the Media Pool under **Data Manager** and select the ones you want to use in your project.

You can activate a video monitor using the middle button on the right below the arranger.



A preview of the selected video file is shown on the video monitor.



Once you have found a matching video, use the mouse button to drag it onto any track (like previously with the audio files). You can place as many video and photo files as you like under your music.

You can adjust the length of the individual image objects with the help of object handles (view page 26).

In the Media Pool **templates** you will also find animated text templates (view page 228) (Titles), video effects (Video FX) and visualizations that you can use to spice up your videos.

Effects

You should take time to experiment with the effects. In the context menu you can select the effects for the objects. Effect modules can be opened and adjusted to get the exact sound you want.

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 test out the effects listed in **Audio FX** by clicking on them. As 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 project, simply click on it, drag it onto the object, and release the mouse button.

Tip: Use the object inspector in the Media Pool to display all important object effects.

Another option for using effects is to apply **Track Effects**. These effects influence all of the signals on a track making it a quick way to apply the same effect to several objects. They also affect the audio output of track synthesizers. There are no audio effects available for MIDI objects so object effects can't be used on them.



You can also select from a variety of useful track effect presets by clicking on the button on the corresponding track. These are organized according to the instruments and applications.

Export Project

When your project is ready, you would normally want to do something with it "out in the real world". For example, show it to friends. To do so, you must first export your work from MAGIX Music Maker 2016 Live.

You can find the most important functions in "File > Export > Common export functions".



- **Export as MP3:** You can transfer your project in MP3 format to a portable player.
- **Burn onto CD or DVD:** The classic way to present music. You can burn single songs or complete albums directly to CDs.

Tip: In the Live version, you can use the integrated CD mastering and burn program to do this. Click on "File" and select the "Export project -> Burn audio CD-R(W)" option to export your project. The project will be loaded into the CD mastering program MAGIX Music Editor and can be burned straight to disc from there.

- **Upload to the MAGIX Online Album:** When the song is finished, it should be heard not just by your friends, but preferably the whole world. The easiest way to do this is with a MAGIX Online Album of your own.
- **Publish on Facebook (YouTube/SoundCloud):** With these options you can publish directly on the popular online platforms.
- **Export in various formats:** In the "File > Export" menu you will also find all supported export formats for creating an audio or video file (for music videos) from your project.

Note: The export calculations don't affect playback performance. Even if playback on your computer begins to stutter because too much RAM is being used for videos and effects, the export file will still be calculated correctly. We recommend placing already finished passages of complex projects via the export or mixdown function into a single file to free up some processing power (and tracks). This kind of file can be reloaded into the project and edited further with the other parts.

Burn audio CD

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

- Click "File" and select the "Export project -> Audio as wave..." option.

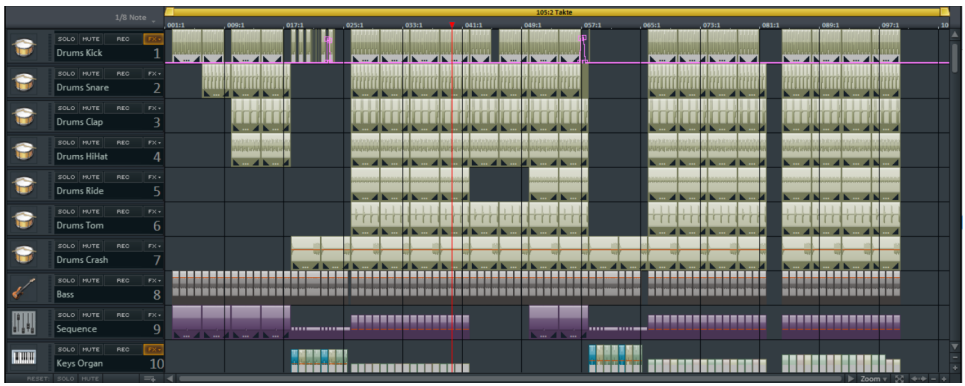
The WAV file created can be burned as an audio CD with the included burn program MAGIX Speed burnR.

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

Arranger

Tracks

The arranger is organized into tracks. Each track corresponds to a channel on the mixer (view page 235). You can use this channel to control volume, apply effects, mute or solo all of the objects in the track. The loops of the same instrument are typically grouped together on one track (bass track, vocal track, etc.) which makes it easier to edit them.



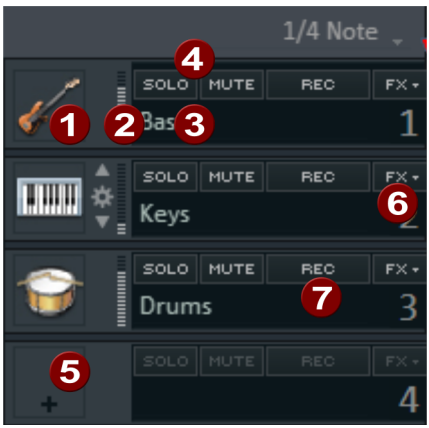
 Additional tracks can be added with the button at the bottom of the arranger or by selecting the "Add track" option in "Edit" menu (Ctrl + I)

To move a track you can open the Effects menu (view page 34) of the track and select "Move Track Up" or "Move Track Down". Tracks cannot be deleted, but those that don't have any audio objects are automatically deactivated and that means they don't use any computing power!

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

Track headers and Instrument icons

At the beginning of each track there is a **track header** with controls and displays.



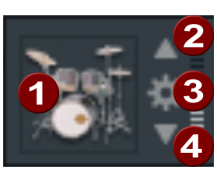
1. **Instrument icon**: When you drag & drop a MAGIX Soundpool sample onto an empty track an icon will appear in the track header. You can replace this icon by **right-clicking** on it and selecting a different one. A left-click on the icon opens the menu for the track synthesizer (see below).

2. The **Peak Meter** can be found beside the icons. Here, you can control the volume of the track and see if the track produces any audio at all.

3. The **track name** is located to the left of the track number. You can rename the track by double-clicking on the field.

4. You can use the **Mute** button to shut off the sound of a track or the **Solo** button to play only the sound from one particular track. The Solo function is not exclusive which means you can use it to play back the sound from several tracks. On the lower border of the arranger, underneath the track headers you will find the buttons **Reset Solo / Mute** which you can use to restore the previous solo and mute settings of all tracks with one click.

5.  Left-clicking on the field with the instrument icon opens a menu with the sounds from the included software synthesizer which can be loaded to the track. This software instrument will then be used by all MIDI objects in the track. You can find out more about this in the chapters Software Synthesizers (view page 121) and MIDI objects (view page 91).



The track header of a track with a loaded synthesizer has a few additional controls. With the arrows (**2, 4**) you can switch back and forth from the previous to the next sound in the software instrument and the gear icon (**3**) opens the instrument editor.

6 FX Here you can open the Track Effects menu. In it you will find presets for track effects sorted according to the instrument type.

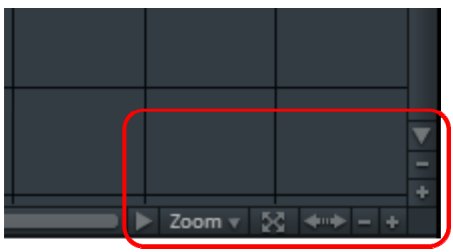
With the "Move track up/down" commands you can sort your tracks. A lit FX button indicates that the track effects are active.

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

AUDIO REC A simple click puts the track into Audio Recording mode. This also activates monitoring which means you can hear the input signal of your sound card during playback. (Find out more in the section Listening to the input signal - monitoring (view page 71)). If you start recording now (R key), the audio recording (view page 68) will start. The recorded audio material is added to this track in the playback range (view page 38).

MIDI REC 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, the MIDI Editor will open and the MIDI recording (view page 99) will begin.

Zoom



The vertical zoom function sets the number of visible tracks. On many tracks zooming is useful for selectively editing a track or an object in full view.

Use the horizontal zoom functions to set up the visible section of the project on the timeline.

Clicking and dragging on the bottom border of a track allows you to adjust the height of the display.

Move/Zoom with the scroll bar

The horizontal scroll bar can be dragged apart and pushed together at the edges in order to quickly zoom in and out of the timeline. Dragging the middle of the scroll bar moves the visible section. The vertical scroll bars correspondingly control the tracks shown.

You can tell which part of the project is being displayed by the size and position of the scroll bar. If the entire project is displayed, then the scroll bar will fill out the progress bar. Complete view may be set by double clicking the scroll bar.

A track may not be diminished without 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 by right clicking the horizontal scroll bar or by clicking the zoom menu. You can also jump to certain positions in the project here.



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



Optimize view (view page 298)



Zoom buttons: Buttons for zooming in and out

Move/Zoom with the mouse wheel

The visible section can be moved, reduced, and increased in size by using the mouse wheel.

Displayed tracks	Mouse wheel
Number of displayed tracks, increase/decrease track height	Ctrl + Mouse wheel
Moving a visible section	Shift + Mouse wheel
Enlarge or reduce the visible section (Zoom)	Ctrl + Shift + Mouse wheel

Menu "View > Arranger > Horizontal scrolling" interchanges the horizontal and vertical functions of the mouse wheel. This means you can use Shift and Ctrl+Key for zooming and scrolling the tracks instead of for the visible duration. This corresponds with the performance of the mouse wheel in the old Music Maker version.

Timeline and grid

A timeline is located at the upper edge of the arranger. It is used for orientation in the project and can be used to determine the playback range or quickly set the playback position (see below).

Snap/Grid



At top of the toolbar there is a field for entering the grid step size.

The grid ensures that the objects and the start, end & play markers only snap into place at specific positions so they can be positioned precisely according to the beat. When an object or marker is close enough to a grid snap point, it automatically jumps or "snaps" to this position. For example, if the grid has been set to "1/2 Note", the objects and markers will snap into position when they are close enough to a half beat position (1:1, 1:3, 2:1, 2:3 on the bar ruler).

Note: "Close enough" refers to the screen display, so the distance of the object from the desired position in screen pixels. If you have zoomed in to just a few bars, but have the grid set rather coarse (e.g. 1/2 notes), it is possible that objects can be moved to positions between grid positions.

This way, there won't be any gaps between the objects and beat-matched cuts are made possible. The selection ranges from full beats to 1/64 notes. Triplet values are also possible. The setting "Frames" is important for videos and allows objects to snap to single frames in video files.

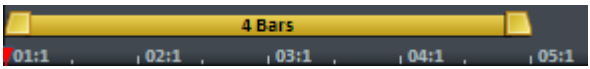
In addition to the beat grid, two consecutive objects will seamlessly snap together. This prevents undesired gaps or overlapping. This also works if they are located in different tracks.

"Only 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 pressing the shortcut **Ctrl + F12**.

With "Select time signature" you can switch the bar ruler to irregular time signatures, such as ¾ beat.

Playback area - Start and end markers

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



The length of the playback area is shown in the colored section. The number before the period indicates the number of bars, the number after the number of quarter notes. A tilde (~) in the indicator means that the playback range does not have the exact pattern length and the loop is therefore "non-circular". Double-click on the selection to set the playback range for the whole project.

This area is also the basis for the commands in the „Edit > Section" (view page 287) (Copy, Cut, Paste...).

To reposition the start marker left-click the upper half of the timeline. The end marker is always moved together with the start marker, this means that the length of the playback range remains constant. To set the end marker right-click with the mouse. The start marker will not be moved, thereby changing the length of the range. You can also drag each of the markers to the desired position with the mouse.

Move playback range with the keyboard

You can move the playback range also with the keyboard. Alt + cursor keys shift the playback range by one full length forwards or backwards. Also press "Ctrl" to shift the playback area a quarter of its length. With "Shift + Alt + cursor keys" you can halve or double the length of the playback range. With "Ctrl + Shift + Alt + cursor keys" you can extend or shorten the playback range by a beat. Use this function to the give the playback area a smooth beat length (multiples of 2).

Note: If you deactivate the option „Cursor keys move playback marker" (view page 299) in the "View" menu > "Arranger", you do not have to press the Alt key. However, it is necessary in order to move the playback marker with the cursor keys.

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!

Move playback marker

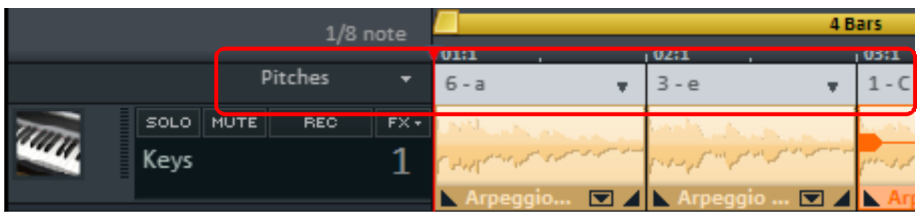
The playback marker can be moved independent of the start marker. Just click on the lower portion of the timeline. Once the playback marker reaches the end marker, playback will recommence at the position of the start marker. If the playback marker

has been set to the right, outside of the area, the project will be played to the end. The stretched out playback range will then be played as a loop.

Use the **cursor keys** to move the playback marker with the keyboard. The option "Move playback marker with cursor keys" in the "View" menu > "Arranger" (preset on) interchanges the Alt-Key function. If you deactivate this option, you can move the playback marker with Alt + cursor keys and only require the cursor keys to turn down the playback range.

Pitch Bar

A pitch bar can be found below the timeline.



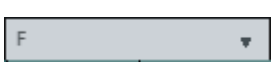
When a Soundpool sample is moved to an empty section of the project, the corresponding key will be displayed in the pitch bar (the specific key assigned to a given pitch may be different from Soundpool to Soundpool).

The pitch bar can help make sure that the same pitch is always used in order to prevent disharmonious sound combinations when adding more loops.

When the "wrong" pitch is moved into a pitch range, you will be asked to automatically adjust the pitch. The selection you make can be saved with "Do not show this message again". This means that the program will either automatically make adjustments every time from this point on or it will not make any adjustments.

Note: You can reactivate all deactivated queries with "Do not show this message again" by clicking on the tab "Reactivate notice dialog boxes" in the program settings (P key or File menu > Settings > Program settings...).

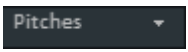
If several pitches are used within the same duration, several chords will be displayed in the pitch bar.



Clicking on the small arrow on a pitch opens a menu where you can set the same pitch for all the loops of this duration in the project.

In the "Advanced" submenu, you can find the full offering of major and minor chords. A pitch is pitch shifted (view page 172) to achieve the chord.

You can also divide a pitch range in order to assign a different chord to a single part. To do this, switch to the "split" mouse mode (view page 53) and click on the desired point in the pitch bar.



Clicking on a pitch opens a menu where you can load a preset song template. Some of these templates are typical chord progressions that can help you put loops together to form song parts. Others are complete song structures with entire song sections (e.g. verse, chorus etc.) that are defined by your chord progressions.

You can hide the pitch bar by going to View > Arranger.

Transport Bar (playback functions)

The transport bar's functions enable you to control the playback behavior of the project using the mouse.



Tip: Using the space bar on your computer's keyboard you can start and stop playback much more easily. (Overview of all keyboard shortcuts (view page 307))



Playing an endless loop (looped object) can be deactivated here. Playback will always stop when the end marker is reached.



Back to start: With this button the start marker is quickly moved to the beginning of the project. Another click on "Back to start" moves the start marker and the playback range to the beginning of the project.



Stop: The stop button stops playback. The playback marker returns to the position from which it started.



Play/Pause: This button starts continuous playback of the project. 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 it at the current position of the playback marker (Pause).



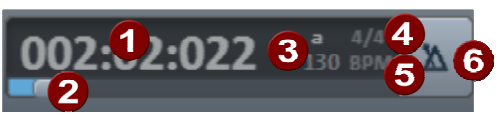
Record: Depending on the settings in the track header (view page 34) an audio (view page 68) or MIDI recording (view page 99) will be started. With the gear icon next to it you can open the dialog for recording audio (view page 69) with additional settings options.

Volume control



The volume control is to the left of the transport controller. With it, you can quickly control the overall volume of your project. To regulate the volume of individual tracks, use the mixer (view page 235). Clicking on the speaker icon mutes the entire sound output. Under the volume control there is a peak meter that displays the master signal peak level and an indicator for incoming MIDI signals.

Time Display



The time display is beside the transport console.

1. This is where the current **playback position** is displayed. By right-clicking it is also possible to switch the time display to show the remaining time (relative to the end of the project) or to choose various units of measurement, e.g. hh:mm:ss or frames.
2. With the **position slider** you can quickly move the playback marker within the visible range.
3. The **current pitch** is displayed at the top and below it the project tempo in BPM (beats per minute). The **tempo** is determined by the first sample used in the project. To enter a new tempo, click on the number and enter a BPM value in the field. Finalize the entry by pressing the Enter key. The objects in the arrangement are adapted using time stretching.
4. **Time Signature:** Here there are various time signatures such as 3/4-, 4/4- or 5/4 which can be selected for the project.
5. Click on **BPM** to open the **Tap Tempo Dialog** where you can set the tempo by "tapping" it out. Simply click the tap button at your desired tempo or press the T key. The tempo is measured and displayed in the dialog. Apply the tempo by clicking on "OK".
6. **Metronome:** This button activates a click track that is played back during recording. This helps with maintaining the right beat and tempo when recording instruments or vocals.

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.



Opens the mixer (view page 235) where tracks can be mixed by adjusting volume, setting the position in the stereo panorama and adding effects.



Opens or closes the video monitor (view page 226). The video monitor displays the video and images files that have been loaded into Music Maker. It can also be used as a peak meter, overview of the project or as an info box for help text.



Opens the Live Pads (view page 242).

Multi-touch

In Windows 8, Music Maker can also be easily used with a touchscreen. Provided that you have a multi-touch enabled screen, you can also perform all of the normal mouse-click actions and dragging actions with a finger on the screen.

To facilitate the touch control, MAGIX Music Maker 2016 Live also has a special display mode in which the loops in the media pool, the keys of the virtual keyboard, and the menu entries are enlarged. Turn on this mode with the tab key or with the special buttons in the relevant mediapool tab.

Pressing and holding is interpreted as a right-click and opens the relevant context menu.

You can scroll in the arranger and the mediapool with two fingers. To do this, touch the screen with two fingers and move them together in the desired direction.

In addition, you can zoom in the arranger with the familiar "pinch" gesture used on smartphones. Touch the screen with two fingers and decrease the distance between the fingers to zoom out Increase the distance between the fingers to zoom in. The zoom always functions in both directions, that is, it changes both the track height (and thus the number of tracks displayed) and the duration displayed.

Media Pool

The Media Pool in MAGIX Music Maker 2016 Live lets you search for, preview, and load all supported media types, e.g. the audio and MIDI loops included, tracks from audio CDs, MP3 files, software instruments or effects.

The upper edge of the Media Pool contains buttons that display the Media Pool in various ways:

- **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 from the hard drive.
- **Instruments** displays a list of the available software instruments (view page 121).
- Under **Templates** (view page 52) you can find the presets for all types of audio, video and title effects.
- The **Keyboard** enables software synthesizers to be played and recorded directly via the on-screen keyboard.
- The object **Inspector** offers quick access to properties of objects, e.g. audio effects for audio objects. For MIDI objects (view page 91), a smaller version of the MIDI Editor is shown, which allows you to edit the selected object.
- **More Sounds** connects directly to Catooh.

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 project plays on, you can experiment with sounds from the Media Pool (see Smart Preview (view page 68)).

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

Soundpools

This view in the Media Pool is used to control the Soundpools. You can access the included Soundpools through the clearly laid out database view that lets you arrange the display of the loops according to styles, instruments and pitch.

While installing Music Maker, if you no longer have the Soundpools installed on your hard drive, insert the installation DVD into the DVD drive. The contents of the Soundpool media will now be imported into the database. Other Soundpool media are automatically recognized and added to the media database.

Note: Under program settings -> General (view page 276), you will find different options for maintaining and displaying the Soundpool database.



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

Soundpools from previous versions of Music Maker or additional Soundpool collections that you have purchased can also be integrated into the Media Pool this way.

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 effects sounds).



All of the styles that are available in the database are displayed in the first column. The second column lists the instruments.

The list of samples found is created after entry selection in the first two columns. With "Ctrl + click" you can reduce or expand a selection. No selection ("Ctrl + click" on a single selected element) or clicking on "Select all" 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.

Simply clicking on the loop starts the preview. Clicking on the numbers 1 to 7 changes the pitch. The pitch for that loop is set when you click on a different loop.

You can sort the list according to criteria (Type, Name, BPM, Length in bars, Favorite, Style) by clicking on the column header.

The list can also be filtered:



Clicking on the star in the sample list marks the loop as a favorite. You can use the filter "Favorites" to display only the loops that you have marked as favorites.



You can display only audio loops, MIDI loops or both. For the difference between audio and MIDI loops see below.

An entry field for full text search is located above the match list.



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.



Displays the loops larger to improve the touch control.

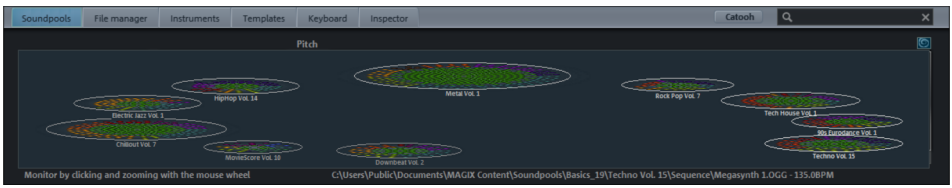
Audio Loops and MIDI Loops

In Music Maker a distinction is made between audio and MIDI loops. Audio loops are normal audio files that have a specific number of bars (1, 2, or 4) and can be played back as loops. MIDI loops consist of a MIDI Take (view page 62) that contains the notes (MIDI file) and the sound settings for a particular software instrument. Both types of loop have advantages and disadvantages:

	Icon	Advantages	Disadvantages
Audio		• Recordings made on professional studio equipment with top quality instruments and expensive synthesizers. • They require less computer power than sounds reproduced in realtime.	• If the original tempo of the loop is changed with timestretching (view page 172) the sound quality can be negatively affected. • The melody and rhythm are already set in the recording and can only be adjusted with complicated pitchshifting.

MIDI		• Pitch and tempo changes don't require additional computer power and don't affect the sound quality. • You can use the MIDI Editor to change the melody of the loop any way you want.	• Software instruments process the sound in realtime and therefore require more computer power. • Even the most high-quality samples don't sound quite as natural as real instruments.

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.

File Manager

The file manager works very similarly to Windows Explorer. It can be used to access and load media files of all kinds: Videos, photos, MP3 files, audio CD tracks, and 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.

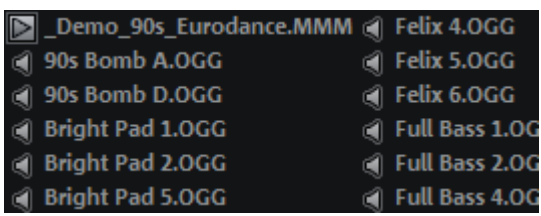
All supported multimedia files and subfolders of the currently selected folder are displayed in the file list. All entries can be loaded into the arranger tracks by double clicking or via drag & drop.

Navigation buttons

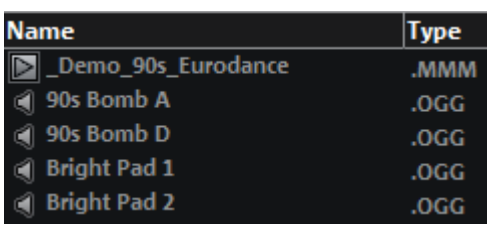
Forwards/Back		The "Back" button always returns you to the folder where you were previously.
Up		The "Up" button brings you to the next highest folder level.
View		These buttons switch the file view list between icons, lists, or details.

Various file list view modes

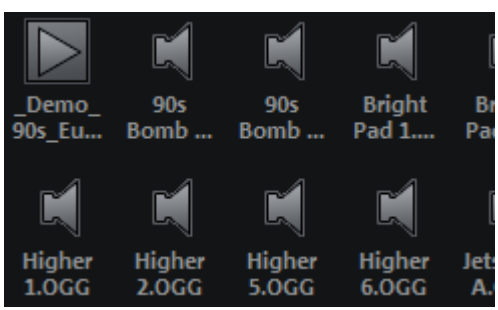
The **file list** displays all supported multimedia files and subfolders of the currently selected folder. Three different views (list, detail, large symbols) can be set by right clicking on the options or Media Pool's context menu.



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



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 a project can be collected in a separate folder beforehand.

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

Navigation area

Using the entries in the navigation area, you can jump directly to frequently used folders. You can add additional entries, for example, for your photo or video folders or for sound libraries from third-party providers. Switch **to** the folder which you would like to create an entry, right-click and select the option "Create link" from the context menu.

The following folders are preset:

Computer: The top level of the file system to control all drivers.

Soundpool: Quick access to the location of the Soundpool. Navigating the Soundpools and loading loops is much more comfortable in the Soundpools view. This shortcut is used to organize soundpools using the file manager by, for example, deleting files that are never used.

My Files: This displays the contents of the "My Files" folder. This is normally the save location of videos, pictures, music, etc. (in the corresponding subfolders).

My Media: This entry includes two subentries, **My Projects** and My MP3s

- **My Projects:** This button opens the Project folder. The folder "My Documents\MAGIX\MAGIX Music Maker 2016 Live" is preset and is created automatically when the program is installed. All new recordings and projects are saved here automatically as a preset, and finished projects are exported here. All audio recordings are saved in the subfolder **Recordings**.
- **My MP3s:** This allows quick access to your own MP3 collection. When this button is pressed for the first time, you can select the folder where your MP3 files are saved.

Note: You can change the saving locations for Soundpools, My Projects, My MP3s, Recordings and more in the "Program Settings" (the P key or in the "File" menu > "Settings" > "Program settings").

Database

Note: This feature is only available if you have installed a corresponding photo or music management program from MAGIX (e.g. MP3 deluxe or Photo Manager deluxe).



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.

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:

	Database column	Condition	Comparison item
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.

Instrument settings

This button opens the folder containing your software instruments. You can read more on this in the Software Instruments (view page 121) chapter.

Keyboard

The keyboard enables software synthesizers to be played and recorded directly via the on-screen keyboard.



If a track synthesizer is not present, then a new track will be added and a new synthesizer plug-in will be added when the view is switched to "Keyboard" (Vita with Sound Acoustic Bar Piano).

The keyboard always controls the synthesizer in the track for which MIDI recording has been activated.

You can click the keyboard with the mouse to play the instrument. The closer to the bottom edge you click on the "virtual keys", the louder the sound will play. Of course, you can't seriously play music by clicking with the mouse (this function is more suitable for testing out sounds quickly). That's why you can also play the keyboard with the keys on your computer's own keyboard.

Note: This works only after you first click once on the keyboard using your mouse. Otherwise, pressing the computer keys will function as keyboard shortcuts (view page 307) for the different functions in Music Maker. If the computer keys control the program's keyboard, then the piano keys will display the corresponding keyboard characters.



Use the vertical arrow buttons to move the octave range that the keyboard can be played in.



You can use the horizontal arrow keys to select the next or previous sound of the synthesizer or they can be selected directly in the list field on the side.

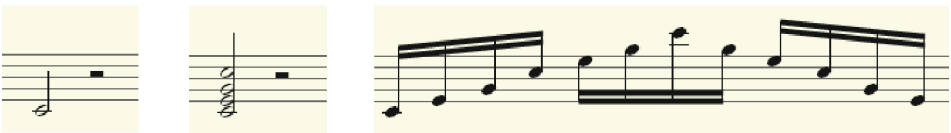


This button opens the editor window for the synthesizer for fine tuning the sound.

Arpeggiator



The arpeggiator is a special function that can be used to create full chords or broken chords (arpeggios, i.e. the notes of a chord played in quick succession) by pressing a single key.



C note *C major chord* *C major arpeggio with 1/16 notes*



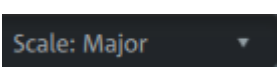
1. This button activates the arpeggiator.
2. This switch determines whether the played note will generate no chord, a major chord (Dur) or a minor chord (Moll).
3. This switch determines the type of arpeggio. When set to the far right, a normal chord is played. The other positions are up, down or up and down. The figures are repeated as long as the note is played.
4. The tempo of the arpeggio is set here and can range from 1/4 notes (slow) up to 1/32 notes (very fast).

Scale

With the "scale" feature you'll never hit the wrong note! The keys of the screen keyboard are replaced with a list of playing areas where you can only play notes from the scale that has been selected.



This button activates the scale feature.



Choose between various scales by clicking on the arrow.



The keyboard in scale mode.

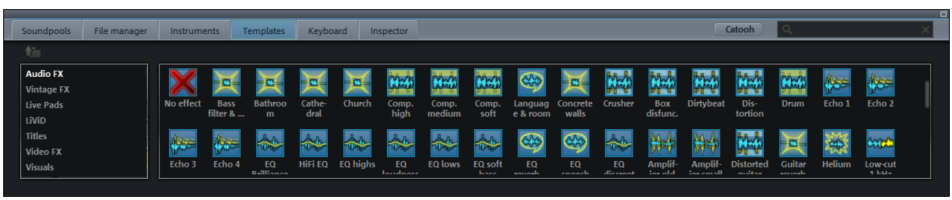
The circles on the playing areas will guide you. The doubled circles indicate the tonic, which is the note that the scale begins with. The following scales are available:

Major	C, D, E, F, G, A, H
Harmonic Minor	A, H, C, D, E, F, G$^{\#}$, A
Pentatonic	C, D, E, G, A
Major Blues (Major)	C, D, D$^{\#}$, E, G, A
Major Blues (Minor)	C, D$^{\#}$, F, F$^{\#}$, G, B$^{\flat}$
Indian	C, C$^{\#}$, E, F, G, G$^{\#}$, H
Japanese	C, C$^{\#}$, F, G, G$^{\#}$

Tip: The scale feature also works with the MIDI keyboard. The scale is played on the white keys and the black keys play the same note as the white key directly below it.

Templates

The folders for installed effects presets will be opened. Even saved audio and video effect presets as well as title templates end up in these folders, so that over time, a complete library of your own presets will be created.



The buttons to the left open the folders for audio effects ("Audio FX"), presets for the Vintage Effects Suite ("Vintage FX"), the LiViD drums synthesizer, title templates ("Titles"), video effects ("Video FX"), and animations ("Visuals").

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

Tip: When an audio effect lands on the audio objects by right-clicking the context menu, the dialog for the particular audio effect (view page 163) will open and you can adjust it more precisely!

Object inspector

The object inspector offers quick access to properties of objects. It can be displayed in two different ways depending on whether you select an audio object (view page 67) or a MIDI object (view page 91).

For audio objects, the object effects rack (view page 166) is shown. For MIDI objects, a smaller version of the MIDI Editor is shown, which allows you to edit the selected object.

Note: The MIDI editor in the object inspector operates in the same way as the "bigger" version in its own window, but the menu and several playback and recording settings are not available. For more information, please read the section MIDI Editor in the "MIDI objects" chapter!

More sounds

You can preview additional sounds from Catooh , load them into the project and edit them further.

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

Mouse modes

MAGIX Music Maker 2016 Live 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. Left clicking selects an object. 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" (view page 57)

chapter. 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 (only available in the Live version of Music Maker), the curve handles can be selected and moved. Double clicking on the curve creates new handles.

Shortcut: Ctrl + 1, number key 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.

Shortcut: Ctrl + 2, number key 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.

Shortcut: Ctrl + 3, number key 3

Automation



This mouse mode is used for drawing the volume and effect curves (view page 250).

When active, a new curve can be drawn on an object or track using the left mouse button.



Activate the corresponding effects curve in the "Effects" menu in the track box to enable track automation.

For the object, use the "Automation of this object" command form the "Effects > Automation" menu (Key: Ctrl + H) and select the corresponding curve in the dialog. Clicking on an object without an activated effects curve activates the volume object curve for this object.

Note: In this mode, the object curves will always be edited, even if a track curve is also displayed. If you would like to edit the track curve at this position, then you will need to temporarily move the object somewhere else.

Individual automation points on a curve may also be created in the normal "Move" mouse mode (see above) by double clicking the corresponding curve.

For more information about automation curves, please read the chapter Automation curves (view page 250)!

Shortkey: Ctrl + 4, number key 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 (view page 61)" in the chapter "Arranging objects".

Shortcut: Ctrl + 5, number key 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.

Shortcut: Ctrl + 6, number key 6

Stretch



This special mode is for customizing the length of objects.

Objects can be on the lower handles stretched or compressed. Audio material is therefore lengthened via timestretching without changing the pitch itself The middle object handles allow the object's pitch to be changed using pitchshifting in the range of -7... +7.

Shortcut: Ctrl + 7, number key 7

Preview audio



In this mode you can individually preview audio objects in the project. By clicking on the audio object it will be played back from the start to the end of the solo

for the entire duration and independent of the start and end markers in the timeline. The objects are protected against inadvertent moving in this mode.

Shortcut: Ctrl + 8, number key 8

Scrubbing



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

The playback marker follows the mouse movements. This mode is especially suited to searching for specific parts of a project.

Shortcut: Ctrl + 9, number key 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!

Shortcut: Ctrl + 0, number key 0

Context help



This mouse mode allows you to open the corresponding "Help" section by clicking on any area of the MAGIX Music Maker 2016 Live screen.

Shortcut: Alt + F1

Arranging Objects

In MAGIX Music Maker 2016 Live 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/load projects

"Project" refers to all objects found in the arranger (audio, video, MIDI, songs, graphics, synthesizers) along with all their positions, fades, lengths, volumes, brightness settings, and effects.

Projects can be saved via the menu **"File"**as an MMM file and loaded again.

When loading projects you must ensure that all media files used (audio, video, image files) are available in their respective folders. To save projects completely, to archive them, or to edit them using a different computer, use the function **" Save project and used media..."** from the menu "File" > "Backup". The entire project along with the media files will then be saved in one folder.

Multimedia files and objects

All multimedia files supported by MAGIX Music Maker 2016 Live can be previewed or listened to in the Media Pool by clicking on the file name and dragging it into the arranger with the mouse held down (Drag & Drop). The files are displayed as objects in the tracks after the mouse is released.

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, effect allocations and so on, apply to all selected objects together.

To visually highlight the current selection, the object handles (see below (view page 60)) of the selected objects are displayed.

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. Simply select the objects you want to mute and press Ctrl + M (or use the corresponding command from the context menu).

Build or split object groups

Several objects can be combined to make up a group and avoid the objects being unintentionally moved out of relation to each other. To create a group, select the respective objects and the command "Edit Menu > Object > Group > Form group" (Keyboard shortcut: Ctrl + G).

Once they are combined, clicking on one object of a group will select the entire group, allowing you to move, copy, or delete the group as a whole. To ungroup objects, use the corresponding command in the "Edit" menu or the keyboard shortcut Ctrl + U.

Split objects

All objects can be split. This way, two new independent objects are created. To do this select the object and move the playback marker to the position where you want to cut by clicking on the timeline.



Click on this button in the upper toolbar (view page 307) or click on "Edit" > "Object" and select the option "Split objects" or press the **"T" key**. It's even easier with the mouse mode "Split objects (view page 56)".

The two new objects keep all object effects (view page 163). For example, you can then design a loop in a more varied manner by first overlaying an object as a whole with an effect before cutting it into several parts and then varying the effect parameters in the individual parts.

You cannot easily combine two such object parts again. But you can edit them together by joining them together in a group. To do this you can select the individual parts and select the command "Group" (Ctrl+G).

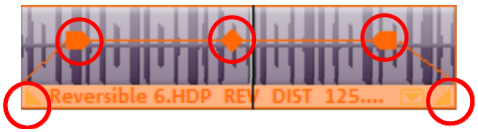
Duplicate objects

To duplicate objects select the object(s) and select in the "Edit" menu > "Object" > "Duplicate objects" (Ctrl + D). A copy of the object appears right beside the original which can be moved to any position with the mouse.

Tip: Speed up this process by clicking on the object to be copied with the mouse while holding down the Ctrl-key. This generates a copy, which you can immediately drag to the desired position.

Another way to duplicate is by using the copy/edit commands from the "Edit" menu > "Object" or "Section". For the latter, all objects will be copied in the playback range (view page 38).

Object Handles



You can fine tune the object start, end, and volume as well as the fade-in and fade-out with the object handles for each object.

Shorten or loop objects

Objects can be shortened by dragging the lower right corner to the left. During this process the mouse pointer turns into a double arrow. An object can be shortened from the start in the same way, e.g. if too much silence was recorded before the actual audio began. To do this, simply use the handle in the lower left corner. This can be used to shorten samples or recordings without having to cut them.

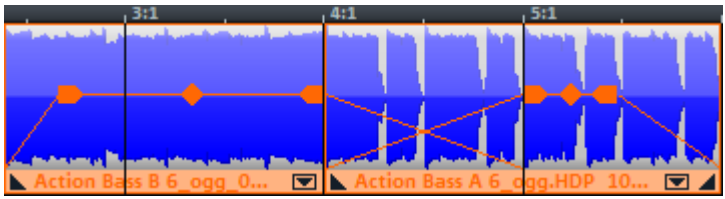
To extend the object again, drag the object boarder outwards. If you drag the object beyond its original boundaries, it will loop (i.e. repeat) until the end of the object is reached. This allows you to create, for example, a complete drum track from a short drum loop, or a long video from a short video sequence.

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 in the "Edit" menu > "Object" > "Loop section" > "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.

Fading Objects

An object can be faded in or out with the handles to the left and right upper corners of the object. The length of the fade can be adjusted with the handles.

If an object on a track is moved to a position where it overlaps with another object, the length of the overlap will automatically become a crossfade. This means that the first object is faded out while the subsequent object is faded in simultaneously. The duration of the fade-out is equal to the duration of the fade-in but can be adjusted using the upper handles.

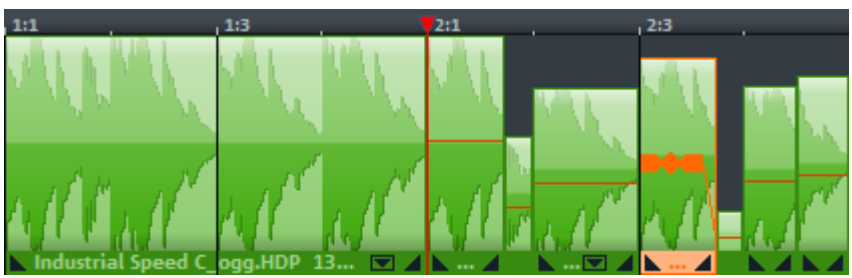


Crossfade

Setting object volume

Using the volume handle located centrally at the top of the object, you can set the volume of individual audio, synthesizer, or MIDI objects.

In connection with the ability to cut objects (see above), this makes it possible to edit the volume progression in detail.



The drum loop in the first bar was cut into individual parts in the second bar and the volume varied.

You can adjust the overall volume of a track or the volume performance between the tracks more conveniently in the Mixer (view page 235).

Note: The handle serves the transparency settings for videos, images, and title objects.

"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 software instrument).

Takes are saved as "TAK" (*.tak) files and take up virtually no space on the hard disk. This means 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 2016 Live projects. Instead of repeatedly saving the original sample, only the object and effect settings are saved. You can also save Synth objects as takes which creates your own preset libraries for the synthesizer.



The MIDI loops included with MAGIX Music Maker 2016 Live (you'll recognize them in the Media Pool by this icon) are also takes because the MIDI files (view page 91) only sound the way they were intended when combined with the right synthesizer sound.

Attention: When loading takes, the audio or video file for which the take was added must be in the original folder.

Keyboard shortcut: Alt + Shift + S

Live Arranger

The Live Arranger lets you generate arrangements live. To do this, you need to define areas of your project as song parts (intro, verse, bridge...). You can then play these parts back exactly according to the beat. You can experiment with different arrangements and song structures. You can then record this live performance or program it using the sequencer. Afterwards, the result can be transformed into a finished arrangement.

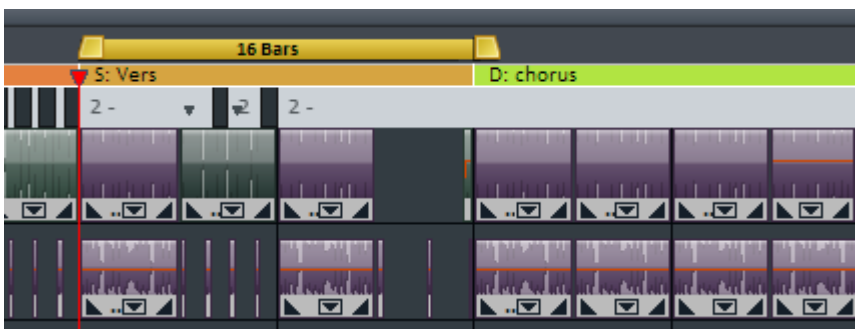
Open the Live Arranger via the menu "View > Mix > Live Arranger"

Define ranges

To play your arrangement with Live Arranger, you must frame individual area in the project and define them as a section in the Live Arranger.

Open the Live Arranger, define a playback range (view page 38) 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 Arranger



If this symbol is active, the Live Arranger 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 project 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 or 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 (view page 64), for example for temporarily undefined breaks.

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).

Load and save Live Arranger sequence



This button transforms the programmed or recorded Live Arranger sequence into an arrangement.

A new project will be created, which corresponds exactly to the sequence. This means that the defined ranges will be copied one after the other according to the order and length defined in the sequencer. Your current project will be lost.

But the Live Arranger ranges will be applied to the new project. This means that you can continue using the Live Arranger in your new project, or you can close it and further edit the finished project.

Loading and saving Live Arranger sequences



With the load and save buttons next to the sequencer, you can save and later load recorded or programmed Live Arranger sequences.

Here's a use scenario: Let's assume that you've defined various ranges in a project and have 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 project and the sequence.

If you would like to change a certain sample or transition later in your "finished" song, you don't have to do this at each point where the sample is used. Simply load your output project, change the respective spots, load the sequence and create your song anew. You can quickly create variations on a single piece in this fashion.

Live Arranger recordings

 This button starts the Live Arranger recording.

This will record all range switches in your timeline made with the Live Arranger. As opposed to programmed sequences, ranges can be played back only partially. The recording matches your performance exactly.

The precise length of such "partial" ranges can not be changed later in the sequencer. You can remove them from the sequence, but you cannot insert them into it. You can only create them with a Live Arranger recording.

If, for instance, the button for playing the sequence is activated when the Live Arranger is active, the Live Arranger will automatically switch to Sequencer Mode and the recording will be stopped.

Record audio output

You can record the complete audio output of MAGIX Music Maker 2016 Live directly into a WAV file. The option "Write real-time audio in WAV file" can be found for this in he "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 project will be recorded live. With the next stop you can save your recording and load it for immediate editing in the project. Use different names to save your single sessions, ensuring that no recording will be mistakenly erased.

Mixdown audio

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 project 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 2016 Live 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 working with the mix-down object. To create the finished end version of the song or video it is recommended to select the "Export project" function in the "File" menu instead of the "Mixdown" function.

Shortcut: Ctrl + Shift + G

Audio Objects

Audio formats

MAGIX Music Maker 2016 Live can load audio files in the formats Wave (.wav), Ogg Vorbis (.ogg), Windows Media Audio (.wma), MP3 (.mp3), AIFF (.aif), FLAC (.flac) and CDA (audio CD tracks). The audio data of a file are displayed as an object in the arranger of MAGIX Music Maker 2016 Live. The material will be displayed as a waveform, optically representing the sound to make editing easier. MAGIX Music Maker 2016 Live can export files in all formats listed above.

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

Load and edit audio files

All importable audio files can be accessed from the Media Pool and previewed (as sound) by clicking the file name. Any file can be moved into the Arranger using Drag & Drop. Tracks from audio CDs can also be integrated into the project using drag & drop.

Edits, fine positioning, volume settings, and fading in and out may all be adjusted directly in the Arranger using the object handles. See chapter "Arrange objects".

Smart preview for the included samples.

The included samples can be previewed while the project is being played. They are always played in time with the song. This means that if you combine loops from different styles that have different tempos they will automatically be adjusted to the current project tempo even in the preview.

You can compose a song in realtime by loading different samples and searching for suitable new building blocks during playback.

Start the playback and select a loop by simply clicking the mouse. The loop will be used as a preview on the next available track and played back together with the pre-existing audio material. Update the preview by selecting another loop. You can then try out the all of the soundpool samples in the context.

As a preview, the loop will always be extended to the entire length of the playback range. The result is therefore immediately audible, even if the loop is originally shorter than the selected playback range. If you adopt the loop in the project (double-click or press the Enter key), it will be introduced in its original length at the beginning of the playback range.

Tip: You can also use key commands to quickly change the playback area (view page 38) by using the arrow keys. This will let you add loops to your project with more precision.

Audio recording

Your own sounds like vocals, speech, noises, or instruments can be easily recorded in MAGIX Music Maker 2016 Live using the audio recording function.



Click the **REC** button in the track box to specify the track for the recording.

The display in the track box will change 

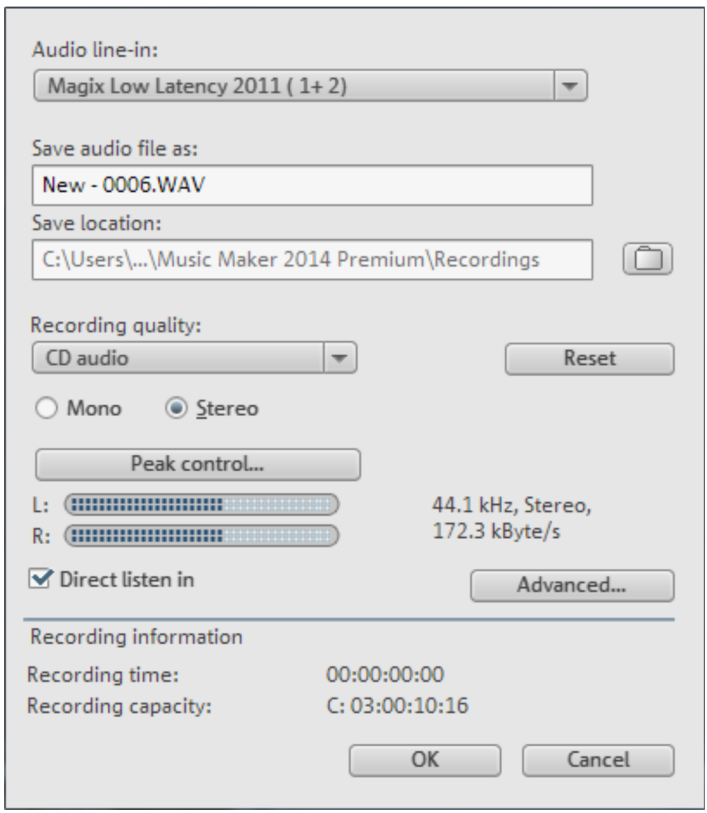
The input signal will be played back featuring all track effects (if there are any) (live monitoring (view page 71)).

Live monitoring requires the use of ASIO drivers (view page 278).



Click the red button on the transport bar to start the actual recording. Click on the gear icon next to it to open the dialog box "Audio recording" (view page 69) with various settings options. This dialog box can also be opened after starting the recording.

Audio recording dialog



Audio Input: Selects the sound card for the recording.

Save audio file as/storage location: 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 AM Tuner, FM Radio, CD Audio, and DAT (Digital Audio Tape).

Mono/Stereo: The recording can be made in mono or stereo. Mono recordings are recommended for song and instrument recordings made using only one standard mono microphone. This reduces the required memory space in half.

Peak control: This opens the Windows system dialog for the selected sound card drivers. There you can customize the input level and deactivate the system monitoring (view page 71).

Level indicator (L/R): Use the level indicator (peak meter) to monitor the strength of the input signal. Please read more on this in the section 'Adjusting levels'.

Direct monitoring: Select this option to switch the live monitoring on and off. Please read more on this in the section Listening to the input signal - monitoring (view page 71).

Advanced: Use this button to open a window containing a selection of three special functions.

Advanced settings

- **Normalize after recording:** This option raises your material to the correct volume level after recording is completed. In order to achieve good audio results, you should try to record the source as loud as possible without overmodulating it. The Peak Meter display here helps in the recording dialog.
- **Realtime adaptation of the sample rate:** This automatically adapts the sample rate if the file you wish to record to the sample rate of the current project.
- **"Ducking" (reducing the sound volume):** This is a function for video dubbing. 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 project during the recording session ("ducking"). This is achieved using an automatically configured volume curve: Before and after the recording other tracks will be faded in or out, resulting in a homogeneous total volume level. (Lowering of volume level during spoken comments is also called "Ducking".)

Adjusting the signal level

Adjusting the signal level to the sound card is also recommended to get the best sound quality when recording digitally.

Once a recording source is connected to the sound card, the small gear wheel button next to 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 record dialog.

If the adjustment is set too high, distortion occurs and the incoming signal must be reduced. If you have linked the sound source directly with the sound card without a mixer, this can only be done via the Windows system settings "Sound". You can access this directly from within the recording dialog via the “Recording level” button. You will see which sound card input is already being used with the amplitude in the small peak meter in the settings dialog. Double-click on this and change in the tab "Level",

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 yardstick for the optimal level setting is the loudest part of the material. The loudest part should be adjusted to the maximum.

Note: Not all sound card drives fully support the Windows system mixer; this functionality can also potentially fail. Some sound cards also come with its own mixer application in which you can control the input level. If both fail, you need to match the level to the analog source.

Listening to the input signal - monitoring

You usually want to listen when you record something. This is called monitoring. There are different ways of monitoring in Music Maker.

Live monitoring

This is the preset method and allows you to listen to the input signal via the audio processing of Music Maker, that is, with all effects, i.e., the track effects as well as the AUX send effects and master effects.

You can therefore hear your vocals or guitar recordings with the necessary effects while recording or jam live to a finished project.

An ASIO driver is needed for monitoring. Professional soundcards come with such drivers. For any soundcards that don't have this there is the MAGIX Low-Latency driver, which provides any sound card or on-board sound chip that is fitted with WDM drivers with an ASIO driver. For more information see the Menu "File" > "Settings" "Program Settings" > "Audio/MIDI" (view page 278)section.

There will be a short delay (latency) caused by processing the audio signal. This delay amounts to just a few milliseconds with modern sound cards. You can deactivate this option should it still disturb you. To do this, uncheck the "Direct monitoring" box in the recoding settings dialog.

System monitoring

You may already hear your input signal or two input signals with live monitoring before you have activated the track for recording. This is due to the fact that the line-in input is configured so that its signal is directly routed to the output. This is a feature of the Windows operating system and not of Music Maker. The purpose of this is to allow you to connect external audio sources, such as MP3 players, via the input and listen directly through the computer speakers.

To disable this unwanted "monitoring", click on "Peak control" in the "Audio recording" dialog box, double-click on the input used (identifiable on the peak meter amplitude), and change the tab "monitor" in the subsequent settings dialog. There you can deactivate the option "Use this device as playback source".

On the other hand, you can also use this type of monitoring if the live monitoring is not suitable, because the ASIO driver does not function in a stable way. Or if you don't want to use the live monitoring because you find a small latency disturbing. However you then cannot listen to the Music Maker effects.

Note: Not all sound card drives fully support the Windows system mixer; this functionality can also potentially fail. Some sound cards also come with its own mixer application that provides monitoring.

External monitoring with a mixer

You can also monitor without using the computer with an external mixer. Small mixers with a USB connection that are both mixers and sound cards are suitable for this. It is the same as with the system monitoring (no latency but also no effects). But it has the advantage that you have direct access to the input level and monitoring level in the mixer. The external mixer enables you to use the in-program live monitoring. But you must be careful not to create any feedback loops, thus avoiding a repeat recording of the output signal.

Import audio CD

Entire music tracks from audio CDs can be imported into the project through the Media Pool in the same way as importing files from the hard drive.

1. Insert an audio CD into the CD/DVD drive of the PC
2. Go to your CD/DVD drive in the Media Pool (File Manager, Computer). The individual CD titles appear in the file list.
3. A simple mouse click starts the playback of the CD title for sampling purposes
4. Drag & drop the track from the CD into a track of the current project and it will be digitally scanned and copied to the hard drive. The files will be saved in the import folder (may be specified in "File" > "Settings" > "Program..." > "Folder" (More information can be found in the section "Folders" on page 281)).

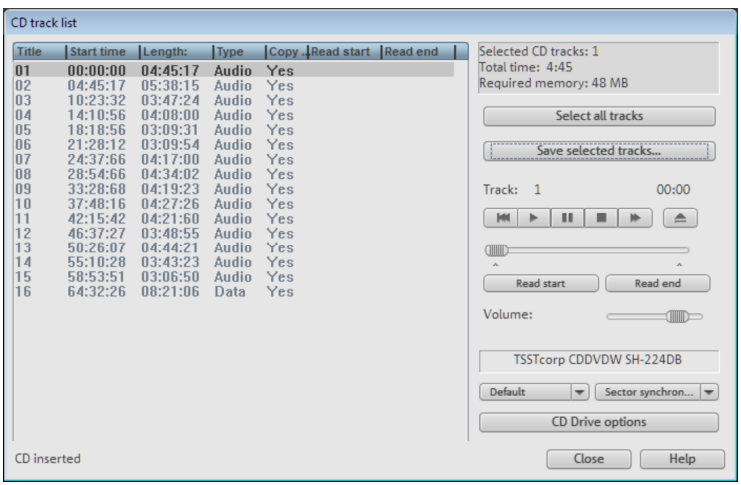
5. The CD track appears in the track as an audio object and can be played back or edited immediately.

Use the CD import dialog for more advanced control of the import process, e. g. importing sections from music tracks. You can access this dialog box via "File" > "Import" > "Import audio CD track(s)..." (Keyboard shortcut: C)

CD import dialog

In the CD import dialog box you can select tracks from audio CDs and partially or fully import them into the project. You can also select and configure the used drive if you have more than one drive. The data is imported digitally which eliminates any loss in sound quality. The CD tracks are imported into the project as wave files. The files are saved in the import folder. (File menu > Properties > Program settings > System > Path settings (More information can be found in the section "Folders" on page 281))

To import audio CD tracks, insert an audio CD into the drive and select "Import > 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 .



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 the "Shift" key + mouse clicking; "Ctrl + mouse-click" selects several individual tracks. By clicking on "Select all tracks", all audio tracks will be selected, e.g. for copying the complete CD.

Now click on "**Save selected tracks...**" This will open the "Save audio to..." dialog, where you can specify the name and target address of the audio files. The audio files are subsequently numbered depending on their names (name -> name_1.wav, name_1.wav...). "Save" starts the audio copying process. A progress bar is displayed. Once ripping is complete, the dialog will be closed and the tracks are inserted into the project as individual objects.

In the top right field, details on the total length and the memory capacity of the selected track/section are displayed.



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

With the faders below it you can go to a specific position in a track. To import just a specific section of a CD track, choose "**Start selection**" at the beginning of the section and "**End selection**" at the end.

Use the small "Volume" faders to control the preview volume. The chosen drive appears below it. 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).

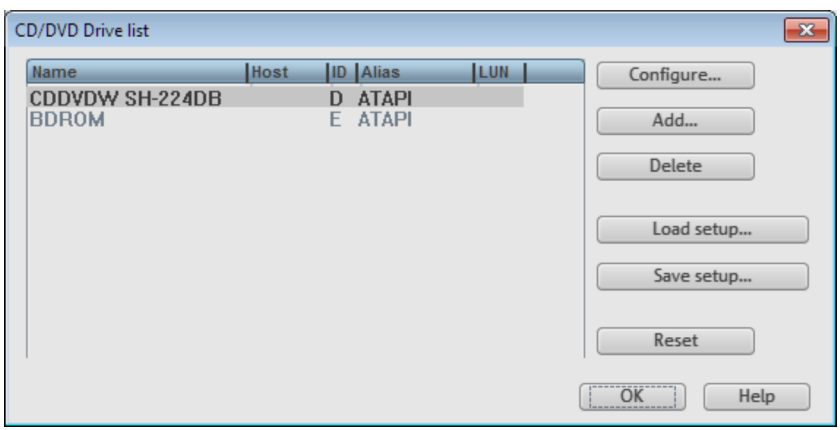
CD drive options: Here you can change the settings and select the drive for importing the CD if you have installed several CD drives (see also CD-ROM drive dialog).

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 - even if it's a copy-protection CD. The problem is, however, that you cannot create a copy from copy-protected CDs, as they cannot be read with 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.

Keyboard shortcut: C

CD/DVD drive list



Configuration: This button opens the configuration dialog, where various special settings can be made.

Reset: sets drive settings back to default.

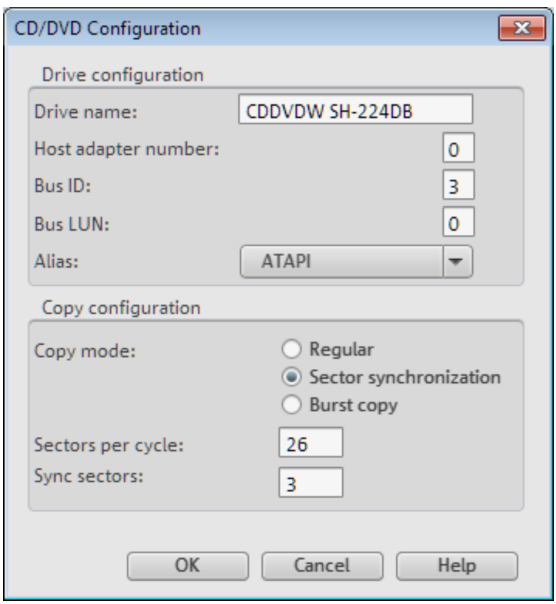
Add: Creates a new drive in the list, which first requires special settings.

Delete: Deletes selected drive from the list.

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

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

CD/DVD-ROM configuration



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

Host Adapter Number: Lets you specify the number of your SCSI adapter - normally 0.

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

Bus LUN: sets the LUN parameter, normally 0.

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

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

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

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

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

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

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 project's tempo, plus advanced tools like the Remix Agent and the Time Processor (view page 172).

Automatic tempo adjustment when loading

In general, MAGIX Music Maker 2016 Live automatically adjusts audio files to the project tempo. In normal cases, you won't need to worry about the different tempos 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 project (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 tempos, 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. In this case you can try to manually adjust the sample.

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 project or the project to the sample.

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

In the dialog Program settings ("Y" key) -> Import, you can deactivate the automatic tempo adjustment or limit it to patched samples. In the dialog Program settings (view page 277) ("Y" key) -> Import, you can deactivate the automatic tempo adjustment or limit it to patched samples.

Changing the tempo or pitch of individual objects manually

You can change the pitch and the tempo of selected audio objects. You can access these tools via the effects menu or the object effects rack.

The playback tempo can be quickly changed via the stretch 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.

For example, to fit a "non-circular" loop with the stretch mouse mode (view page 53) in a current project, proceed as follows:

1. Load the sample. Music Maker will try to fit it into an even number or bars. Set the appropriate track to solo and place the playback range exactly above the sample.
2. Select it and click on "Enlarge Object" at the bottom left of the arranger window . The object will be displayed at the maximum size.
3. Turn off the grid (in the list field at the top right of the arranger or with Ctrl+F12)
4. Now start playback and move the end marker of the playback range to the right until the loop runs smoothly. You can rely on your hearing and not just on the waveform display.
5. Now shorten the object to the playback range length.
6. Deactivate "Enlarge Object" and turn the grid back on.
7. Switch to the stretch mouse mode (Ctrl+7) and stretch or compress the object into an even number of bars.
8. Deactivate "Solo", set an even playback range, and start playback. The loop should run perfectly in time. To set the object as a loop, select "Edit > Object > Loop section > Set custom loop".

To match the pitch of the loop to the current project, you can also change the pitch using the mid handles on the object in the stretch mouse mode.

Change project tempo

The tempo setting in the transport controller (view page 41) allows the project's tempo to be changed retroactively. All audio objects contained in the project will be altered via timestretching to match the new tempo. In some circumstances this can lead to an increased demand on the system and dropping out during playback.

If this occurs, use the Combine audio (view page 286) feature.

Another option is to use the "Èlastique Efficient" timestretching algorithm, which provides a slight decrease in sound quality, but uses less computing power.

Choose a couple objects which are not so important. Open the Inspector by double clicking on Tempo Pitch/Resample (SHIFT + P) and then click the "Setup" button. You can switch to Èlastique Efficient here. If the pitch still isn't being retained (drums, percussion, FX sounds), you can switch to Resampling, which uses even less computing power.

Remix Agent

To create a remix, elements from a completed song or components of a song are added and removed creating a new song. In order to combine your own loops and beats with a given song, it is important to know the exact tempo (in BPM - beats per minute) of the song. The Remix Agent in Music Maker allows you to define the tempo of MP3s or imported tracks from a CD.

Once the tempo has been determined, you can optionally match the tempo of the project to the tempo of a song, the tempo of a song to the tempo of an existing project, or divide a song into individual beats (remix objects), which can then be rearranged as desired.

Requirements for using the Remix Agent

- The song must be longer than 15 seconds.
- The songs have to contain "rhythmic" music.
- The track must be in stereo.

Note: If one of the above requirements is not fulfilled, the Loop Finder can be used.

If audio files longer than 15 seconds are dragged into the project, the Remix Agent is started automatically.

Workflow of Remix Agent

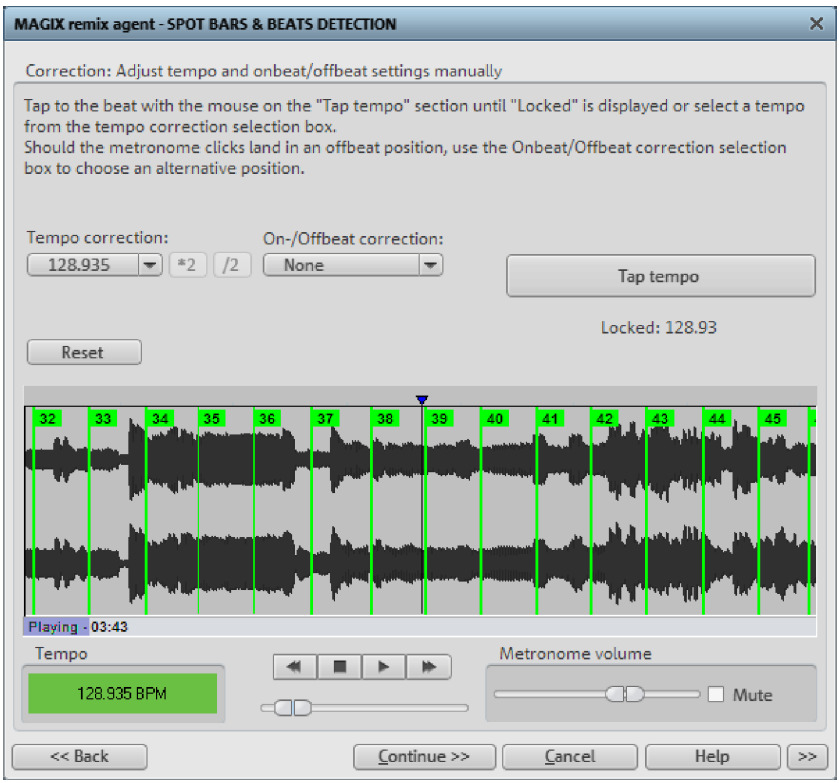
The Remix Agent works in 4 steps:

Step 1: Checking the start marker

Step 2: Tempo recognition

Step 3: Specifying beat starts

Step 4: Application of BPM and beat recognition



Step 1: Checking the start marker

Place the play cursor at the position where detection should start in the object by clicking the timeline. If the object contains a longer intro without beats but rather calm synthesizer pads, you should position the start marker after the intro.

Furthermore, the start marker should always be positioned just before a beat hit, even better, just before a beat at the start of the bar.

Step 2: Checking the automatic tempo recognition

After opening the Remix Agent by pressing the "Continue" button, it will begin to analyze the audio material and try to determine the tempo. The object is played back while a metronome click relative to the event can be heard and numbered green beat lines appear in the waveform.

The following will be indicated:

- Position of the start of the measure (one): red lines.
- Position of the other quarter notes (two, three or four): green lines.
- Reliably recognized positions: thick lines.
- Unreliably recognized positions: thin lines.
- Tapping is indicated by additional blue lines.

Note: If the tempo or bar information of the object you wish to analyze is already available, these are displayed as dots at the respective positions above the display of the wave shape.

Under the waveform on the left side the established tempo is displayed in BPM. There is a small transport console in the middle to make navigating easier. The slider serves as a position controller. To set the metronome volume, an additional fader and mute button are provided on the right-hand side.

Change beat positions and tempo

The automatic tempo recognition doesn't always work right away. If you don't hear the metronome clicking in time with the music, click the "No" button in the upper section of the dialog in order to access the manual tempo input dialog.

To correct the metronome speed and any timeshift that may occur between the metronome clicks you can use the tempo correction as well as the "Tap tempo" button:

Tempo correction: The Remix Agent provides various speed settings – the speed the Remix Agent determined as the most probable is preset. If this tempo isn't correct, you can choose another one from the list. The next time you play back the song it should be in sync with the metronome.

On/Off beat correction: Now it may happen that the tempo is right, but the beats have been displaced. "On/off beat correction" provides a number of alternatives for moving the beats according to the complexity of the rhythm. Try out various alternatives until the metronome clicks are in sync with the beat.

Tap tempo: Instead of selecting the tempo under "Change Tempo", you can click rhythmically on the "Tap tempo" button or press the **"T" key**. Additional blue lines are displayed in the wave display. After at least four taps, the Remix Agent attempts to select the correct tempo from the list in "Tempo correction". The display next to the "Tap tempo" button displays the current status. Keep tapping until the red display showing "Unlocked" changes to the green "Locked" setting.

Use the **"0" key** to manually set the quarter beats while the music plays. Surrounding markers will automatically be removed to ensure that the set tempo remains intact.

You can move the markers with the mouse. If you hold down the "Ctrl" key simultaneously, the subsequent markers are also moved. If the metronome clicks now correspond with the music, you can continue to the next step.

Step 3: Determining the start of a bar:

Next you can set the time signature. The default setting is 4/4 but you can adjust this if necessary. The beat at the start of the bar should coincide with the high sound of the metronome, or the red line in the waveform display.

It can now be corrected in just one step: If the start of the bar can be heard, click on **"Tap One"** once using the mouse or press the**"T" key** on the keyboard. Alternatively, select how many quarter notes the "One" is to be moved back. Use the **"0" key** to manually tap the position of the beginnings of the bars during playback. This allows you to correct the beginnings of the bars in longer sections.

Continue to the last step if the starts of the bars are now correct.

Step 4: Applying BPM and bar recognition

This lets you determine what you want to do with the analyzed audio material. The following option is available:

- Create remix objects from the analyzed audio material
- Adjust the project tempo to that of the analyzed audio material and vice-versa.
- Save only the tempo and beat information in the audio file for possible editing later on.

Following this, you can also start the Remix Maker (view page 84) and the Harmony Agent (view page 87).

Create remix objects

The song is split bars into individual objects according to beats. The following uses are possible:

- **Create loops** from complete songs which you can then use with your own material. Important: Not all remix objects are suitable for loops. Less complex material such as drums from an intro are ideal.
- To **remix songs**, that is, change the order of the objects, cut and duplicate individual parts or beats of the song, or enhance the song with various other loops or synth objects. Why don't you try placing a techno beat under your favorite tune?
- For **mixing 2 songs:** The beat and tempo match perfectly so you can fade without "side effects".

You also can activate this function from the "Object" menu only if the tempo information has been saved.

Audio quantization: The new objects are precisely fitted into the bar grid of the project.

There are slight tempo variations in “hand-made” music, so that different bar lengths can occur. To make sure the objects fit into the bar grid of the project, the **time processor** is automatically activated and object-timestretching used so that the difference in length is corrected.

Use resampling for small corrections: If the required corrections are not too significant, you can use higher-quality resampling instead of time-stretching. You should then no longer change the master tempo as this may result in considerable pitch changes.

Remix objects in loop mode: New objects are put into loop mode. When extending the length of the object using the right object mouse handle, the object is continuously played back in original length.

Set project tempo to object tempo: (See "Adjust tempo”)

Note: The time correction allocated to the objects can be undone later if the time processor is opened and edited (menu item: Timestretch/Resample Object Menu).

Cancel: The dialog will be closed.

Adapt tempo

Set object tempo to project tempo

Adjusts the object length to the existing project. There are three different options: Time stretching, resampling or audio quantization.

- Use **Time stretching:** The pitch of the song remains constant in time-stretching; however, the sound quality may suffer.
- **Resampling** changes the pitch (similar to changing the speed of a record player), but retains most of the sound quality.
- During **Audio quantization** the tempo adjustments are calculated into the audio file in such a way that it appears as if remix objects were created and then immediately compiled into a new audio file (see below). If recognition is unreliable, the result can show extreme tempo variations. In this case, it is particularly important to set the playback marker at such a position (before opening the Remix Agent) that the tempo can be reliably recognized. The advantage of audio quantization is that smaller tempo variations can be balanced in the music. The beat starts of the music always correspond with the beat starts of the project. They do not slowly drift apart.

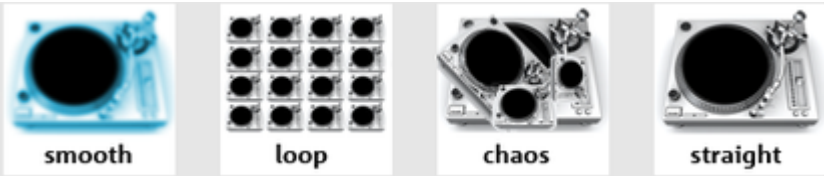
Set project tempo to object tempo

The project assumes the found BPM value. If you would like to use the cut-up song as the basis for a new composition like with remixes this option should be active.

Save tempo and bar info

Only the information will be saved in the Wave file. This makes sense if manual correction is required for defining the bar/tempo. Once the information has been saved the tempo and bar adjustment will no longer be required for future tempo or bar adjustments or when creating remix objects.

Remix Maker



The Remix Maker can be run directly following the Remix Agent.

Use the Remix Maker to automatically create remixes. Here, the remix objects created by the Remix Agent are moved, copied, and newly compiled according to specific criteria. You can select one of four DJs who each represent different styles and specify the length of the remix and the form of the compilation.

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 project 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 a project 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 is 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.

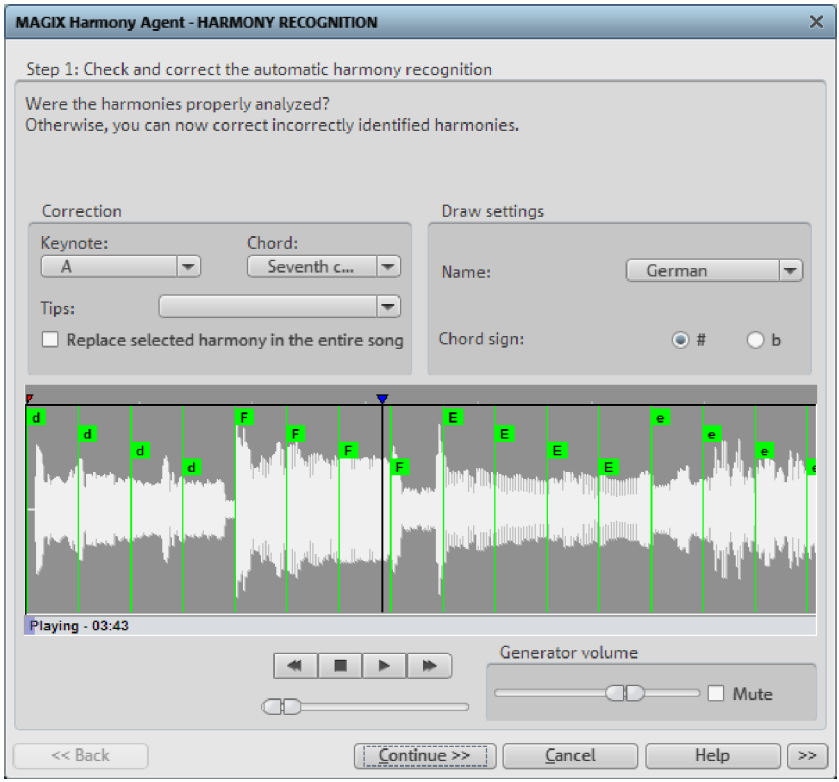
Use randomly: Different kinds of fills are used in a random order.

Loop Finder

The Loop Finder has been developed to find the BPM in short rhythmic passages, to integrate short loops in an existing project, 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. To select a chord left click on the respective harmony symbol in the waveform display. Hold the key if you want to mark several subsequent harmonies.

Recommended alternatives to the recognized chords are displayed in the section "**Correction**" under the menu **Suggestions**. The initially recognized harmony is marked with an *. If none of the alternatives apply, you can select the correct "**Root**" or "**Chord**" from the menu. Use the option "**Replace marked harmony in the entire song**" if you are sure that the incorrectly recognized harmony is not included in the entire song. Usually, major and minor keys have been mixed up.

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

Use harmony recognition

You can apply the information from the Harmony Agent here. There are different ways to output harmonies:

Generate chords in arrangement: In the project two tracks are created, one that contains the chords symbolized as guitar chords, the other contains other title objects with the respective chord symbols. You can graphically display harmonies in the video monitor in sync to the music.

Save information about harmonies from the audio file: This also ensures that the harmonies are available later. For instance, to display the harmony information in the timeline (Edit -> Show object marker -> Harmony marker).

Display: You can choose between different displays of the harmony symbols. You can choose between German, English or Roman symbols to **"name"** the tones. Furthermore, you can set **"Predraw"** to force single harmony interpretation. **"#"** shows all notes as "sharps" (C#, D#, F#,...), and **"b"** displays them as flats.

Song Maker

With the help of the Song Maker, you can automatically arrange multiple audio objects (loops) using included samples for songs or song parts without having to drag them individually from the Media Pool into the corresponding tracks. Considering the relatively random selection of loops that are combined you shouldn't expect the Song Maker to produce a chart-topping hit, but it can be very helpful as a basis for making your own adjustments and additions to create a cool project.

Activate the Song Maker by pressing the “Song Maker” button or from the Effects menu.



1. Select a music style.
2. Select the instruments that you want to use. If, for example, you only want a rhythm section with drums and bass, deactivate the other instruments with a mouse-click.
3. Select the song part or parts that you want to create. The parts differ in their harmonic structure and instrument density, for example verses have fewer instruments than refrains, while there are accompaniment variations between the 1st and 2nd verses as well as in the refrains. The pitch sequence from verse to verse remains the same. If you activate all parts, Song Maker creates a complete song in the typical structure of a classic pop song, i.e. intro-verse-chorus-verse-chorus-bridge-(transition or solo)-chorus-outro.
4. Use the sliders to the right to set the speed and the length of your song.
5. "Chaos" draws a different loop of the corresponding instrument for each new object. Normally, the same loop is continuously used in various pitches for each element of the song such as verse, chorus etc. If you use "Automatic", a new song in a randomly generated style will be created automatically, as soon as a song has been played.
6. Now click on "Create Song". Song Maker automatically compiles a project. The following is only a suggestion.
7. Use the play button to preview the song maker's suggestion. If you don't like the results, you can repeat the process. Before you do this, right-click on the instruments you want to keep in the project to prevent them from being overwritten. You can return to a previous status anytime by clicking on "Undo" or "Redo".
8. Once you're happy with Song Maker's suggestion, click on "Apply". The building blocks are only now added to the arranger. A click on “Cancel” closes Song Maker and returns to the original project status.

Tip: If you start the Song Maker for a project that already has audio material in it, this material will not be affected. This means you can apply the Song Maker repeatedly saving only the parts you like until you have a final project. You can also create song parts one after the other. The results from the Song Maker are always added at the start marker position. If you decide you want to replace the chorus you can simply set the start marker (view page 38) at that position.

Keyboard shortcut: W

Text to speech

In this dialog under the "Effects" menu > "Audio", you can make the computer "talk" by typing in text. You can choose from a range of different types of voices. You can change the speed and volume of the spoken passages. Once you've settled on a suitable voice, a WAV file will be created. This can of course be used in the arranger like any other audio object.

Load text: Here you can load a text file in the formats: *.txt or *.rtf.

Save text: Your entered text can be saved.

Test: After entering your text, you can preview the result.

Voice: If additional voice packages (TTS engines) have been installed, you can select a different voice here.

Speed: Playback speed can be regulated with this controller.

Volume: Output volume is regulated with this control.

Format: Here you can determine the quality of the created wave file (.wav).

File: Path selection for the wave file to be created.

MAGIX Music Editor

During installation of MAGIX Music Maker 2016 Live Producer Edition, the audio recording and audio editing program "MAGIX Music Editor" will also be installed.

MAGIX Music Editor offers a recording function, many additional effects, various ways to eliminate noise and professional editing options for audio material of any type.

To edit an audio object in MAGIX Music Editor, right-click on the object and select the option "Additional options > Edit 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 > Audio").

See the "Help" file for more details concerning MAGIX Music Editor!

MIDI objects

MIDI objects do not contain audio material. They are used to control synthesizers that then create corresponding sounds. They are comparable to notes that still have to be brought to life by a musician.

MIDI is a standardized command language that helps control synthesizers. In addition to the command to play a note (Note On, Note Off), there are control commands (Ctrl Ch) for internal parameters of the synthesizer (volume, panorama, the pedal for piano, filter settings and others), program change commands (Prg Ch) to activate saved sound programs, and others. These commands are called MIDI events. A MIDI object contains a series of events and the times at which they occur.

You can create MIDI objects by loading MIDI files, playing and recording with an external MIDI keyboard, or by drawing notes in an empty MIDI object with the MIDI editor.

Arrange MIDI objects

MIDI objects can 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" individual MIDI loops so that they easily fit onto a whole track.

Pay attention to the following:

- Volume changes in MIDI objects (mid handles or fades in/out) are controlled by adjusting the velocity (MIDI Note On velocity). Many synthesizers do not change the volume, but rather the sound in relation to the velocity level. If you do not want that, adjust the volume in the mixer instead or by using a controller curve (view page 106) (usually controller 7).
- MIDI objects always control a single synthesizer per track. If you move a MIDI object onto another track, then a different synthesizer will be controlled and the sound of the project changes accordingly.
- Self-recorded MIDI objects are not available as a loop.

Transpose MIDI

Using this function from the "Effects" menu, the pitch of MIDI objects can be altered. You can find this function in the "Effects" menu > "Audio > Pitch & Tempo > MIDI transposition..." Just enter the number of half steps to transpose all the notes in the MIDI object up or down!

Note: For drums each note corresponds to a different percussion instrument (kick drum, snare, toms, etc.). Transposition of a drum track is therefore not recommended. Instead, directly adjust the pitch of the respective synthesizer.

Load and save MIDI files

The file format with file extension *.mid is used to save and load MIDI data. Many pop hits are online free to download as MIDI edits. They may serve as a good springboard for your first musical experiments or cover versions.

You can save the content of a MIDI object as a file in the MIDI editor. In the "File" menu of the MIDI editor use the command "Export MIDI".

Preview of MIDI files

Like audio files, MIDI files are loaded by using the Media Pool. A simple click will start the preview.

Since the number of possible sounds is virtually unlimited and because such files should be universally applicable, they are usually arranged so that they require certain standard sounds. This number of standard sounds is called General MIDI (GM) or in an expanded form General Standard (abbreviated GS). To preview a MIDI file in the Media Pool MAGIX Music Maker 2016 Live uses "Microsoft GS Wavetable SW Synth", this is a software synthesizer that is part of the Windows operating system and contains these sound programs.

Its sound quality is rather modest compared to "proper" software synthesizers. For further work with imported MIDI data, we recommend using the software synthesizer supplied. And due to another reason: "Microsoft GS Wavetable SW Synth" is not part of MAGIX Music Maker 2016 Live and the sounds it produces are therefore not included in a finished song that has been exported.

Note: MIDI data that contain a complete arrangement should be copied onto multiple tracks and filtered by MIDI channels with help from the MIDI channel filter (view page 102).

Problem solving preview in Media Pool

If the preview in the Media Pool does not work:

- Check the output device for MIDI in the "Program settings" window in the "Audio/MIDI" tab (P key or via "File" menu > Settings > Program settings"). "Microsoft GS Wavetable SW Synth" should be selected here!
- The sound card synthesizer's volume is set via the the sound card mixer. Double click the small loudspeaker icon in the notification area and find the controller for the SW synthesizer.
- Several sound cards cannot use the SW synth simultaneously with ASIO drivers.

Connect MIDI Keyboards

You can use MAGIX Music Maker 2016 Live in conjunction with a MIDI keyboard to play and record the included synthesizer plug-ins or VST plug-ins. You can also control sound generation from external devices using MIDI objects in the project of Music Maker.

Basics of MIDI interfaces and cabling

MIDI interfaces are system devices that enable communication between the computer and an external MIDI device. They provide music programs one or more so-called MIDI ports. The music software (in our case MAGIX Music Maker 2016 Live) sends and receives MIDI data via this port, everything else is handled by the drivers and operating system. You can set the ports for MIDI input and output in Music Maker in the Program settings (view page 278) (key P, tab "Audio").

MIDI interfaces can be integrated into the computer system in different ways. It can be part of the sound card built into the computer or externally connected via USB or Firewire.



MIDI connectors

In this case, two MIDI jacks MIDI IN and MIDI OUT are located on the sound card. With older sound cards an additional adapter cable must be connected, which provides the typical 5-pin DIN jacks.



MIDI connection cable

Connect your MIDI keyboard to the MIDI In (MIDI input) via its MIDI Out jack using a MIDI cable on your MIDI interface on your computer. If your MIDI keyboard can generate its own sounds and you would like to use this, connect also the computer's MIDI Out jack to the keyboard's MIDI In jack.

With **USB MIDI keyboards** the MIDI interface is part of the external hardware. USB MIDI keyboards are a separate class of devices designed to control software synthesizers. They usually no longer produce any of their own sound, but only consist of a keyboard, various controllers and a USB MIDI interface. They are connected via USB to the computer, in this case, no MIDI connection cables are required.

Note: Even on "proper" keyboards and other synthesizers you can now find a USB MIDI interface alongside traditional MIDI connectors.

Normally for these keyboards no special drivers are needed. All you have to do is connect them. Make sure that the device is switched on and is able to be detected prior to starting MAGIX Music Maker 2016 Live, since the available MIDI ports are only able to be discovered during program launch!

Under some circumstances, you may have to select the port for the device as the MIDI input device via the Program settings ("Audio" tab) (view page 278). This is usually called "USB audio device"

Note: Some older devices do not function in some cases in Windows XP. Even though the device has been detected, the corresponding MIDI drivers do not appear in the list. In this case, please contact MAGIX customer support!

In the event that your external device does not have a USB port and the sound card does not have MIDI connectors, you will need to purchase an additional USB to MIDI interface.

MIDI Local Off: If the MIDI keyboard has an internal sound source, it must be shut off when you use its keyboard for recording. This enables you to play the software instruments without hearing the sound of your keyboard at the same time. This function is referred to as "Local OFF" and can be directly set on your keyboard. If necessary, refer to the user manual for your keyboard to find out exactly how to do this.

External synthesizers

MIDI objects can also be played back over a MIDI interface onto external synthesizers, sound modules, etc. Set as default, the "pure" MIDI output (i.e. without using software synthesizer plug-ins) is sent to the system software synthesizers (Microsoft GS Wavetable SW Synth). This is required to preview (view page 92) MIDI files.

If you set the MIDI port of an external synthesizer as the MIDI output device (see previous section), the content of each MIDI object will be output in this manner.

Note: If the MIDI object is in a track containing a software synthesizer, the object will control this synthesizer. To output MIDI via an external sound synthesizer, select "no VSTi" from the list of software synthesizers.

Convert MIDI objects into audio files

By using VST instruments, you do not need to convert these MIDI objects into audio files before exporting your entire arrangement as they create sound and are processed by your computer. All MIDI objects that control external synthesizers via a MIDI interface (view page 95) 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.

The output of the MIDI sound generator (e.g. the synthesizer) must be connected to the input of the sound card. The MIDI data can now 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.

Playing and recording MIDI synthesizer

MAGIX Music Maker 2016 Live allows you to play and record software synthesizers or external MIDI devices from the arranger. The MIDI editor does not have to be open.

Presuming that the MIDI input and output devices are set correctly (see above), you should be able to play software synthesizers with the MIDI keyboard.



MIDI recording mode must be activated in the corresponding track by clicking "Rec" twice in the track box. Now, all of the notes that you play via the keyboard will be played back through the synthesizer.

If a software instrument is loaded via the track box or opened via the MIDI Editor, then MIDI recording mode is activated automatically.

Tip: You can also play a synthesizer live without an external MIDI keyboard. The Media Pool features an On-screen keyboard that may also be operated via the computer keyboard.

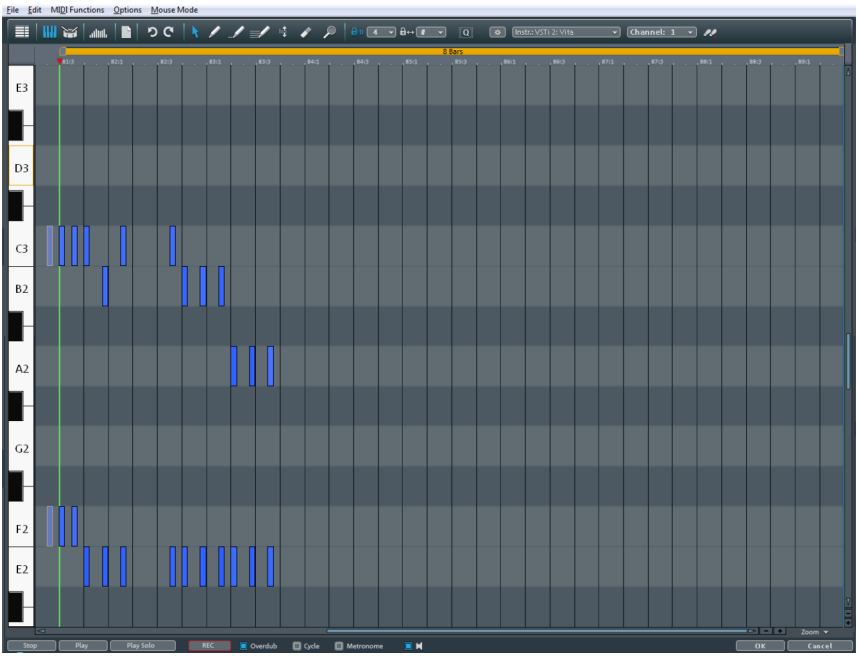


In order to record a new MIDI object, simply click the red "Record" button in the transport bar

MIDI editor

The MIDI Editor makes it possible for you to edit MIDI objects. The MIDI Editor provides different sub-editors, views, areas, and aids to do this. Double clicking a MIDI object opens the MIDI Piano roll editor for advanced recording/editing of MIDI objects.

Tip: The Media Pool features a smaller version of the MIDI Editor. Select the MIDI object you would like to edit and then click the Settings Object Inspector button. This MIDI Editor may be operated identically to the "larger" version that features its own window; however, the menu and various play and recording settings will not be available.



In the center you'll find the Piano Roll Editor (view page 103), 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 (view page 108). In this list you can view all MIDI data of a MIDI object, including those that cannot be edited in the piano roll or controller editor. You can use the event list to remove unwanted switch program commands included with imported MIDI files.



Use this button to switch to Drum Editor (view page 110) mode.



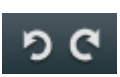
You can use this to leave the Drum Editor and return to the Piano Roll section.



Clicking on this button opens the Controller Editor (view page 106) in the bottom area. This allows you to edit features such as the note velocity, pitchwheel, and controller data.



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



Of course, "Undo/Redo" is also available for all changes you make in the MIDI Editor.

Along the top edge, you will also find buttons for selecting the editing tools (view page 103), for the Piano Roll, quantization (More information can be found in the section "Quantization settings" on page 115), for the output (view page 98) used by the MIDI object (MIDI out or VST instrument), and for step recording (view page 100).

The MIDI editing window features its own menu (view page 118) with its own keyboard shortcuts (view page 119).

Select sounds

The sound of virtual instruments (VST plug-ins), is produced by the synthesizer chip of the sound card or by external MIDI synthesizers. Each MIDI object can produce as many sounds as the corresponding synthesizer offers. The sounds themselves can be specified in the instrument – regardless whether its 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 adjusted in the "Program settings" window in the "Audio/MIDI" tab (P key or via "File" menu > Settings > Program settings"



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 (view page 153). You can open the instrument editor with a right-click on the VSTi name or a left mouse click on the cogwheel symbol.

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)**.

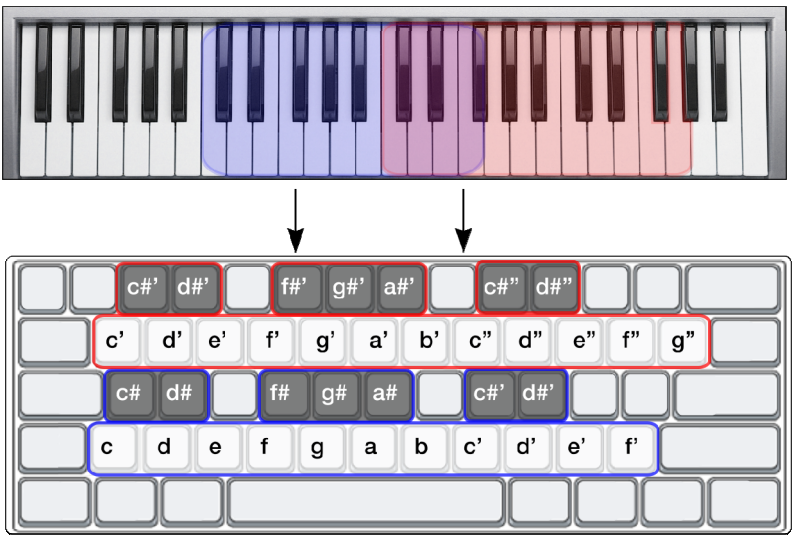
Play/ PlaySolo

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 project.

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.

MIDI Record options

You may also begin MIDI recording directly in the MIDI Editor. To do so, simply click the red "REC" button. Compared to the simple "Record" featured directly in the "Arranger", this version features several additional options for you to select

Overdub: Normally, existing notes are deleted with each new recording. "Overdub" simply adds new MIDI notes to the existing MIDI recording. "Overdub" allows you to create a completely new MIDI song step-by-step (or take-for-take).

Cycle: This plays the MIDI object in a loop during recording. This enables you to let the object play through a few times before you get started recording your own melody.

Metronome: In order to play back the proper tempo, you can activate the MIDI metronome to provide the beats. This is only for orientation while you play and is not recorded.



Play project during recording: If this option is active, then the project will play during recording.

Step Recording with a Keyboard or Controller Keyboard

In the MIDI editor, you can also carry out so-called "Step recording" using the computer keyboard or MIDI keyboard. Step Recording means you can enter the notes with the computer keyboard or another keyboard but you do not have to enter them in realtime. You can allow for as much time as you like between notes.

The notes are added with a predetermined length and after each entry the playback marker moves one step farther. Step length and note length can be specified by the grid and length quantization values. The note lengths cannot, however, exceed the step lengths.

 Activate Step Recording with this button.

The play cursor shows the scope of the current octave in which the following entries take place. Now you can enter MIDI notes step-by-step. Push multiple keys simultaneously to enter chords. The most important keyboard shortcuts for entering MIDI notes using step recording:

TAB	One step forwards (set pause)
Shift + Tab	One step backwards
Page up/Page down	Enter octave upwards/downwards
<YXCVBNM... (the precise keys depend on the type of keyboard you have)	Enter notes in current octave (see Playing instruments with the keyboard (view page 99))

Edit MIDI events

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

- Piano Roll (view page 101)
- Controller Editor (view page 106)
- List Editor (view page 108)

Here various tools are available, for example, pencil or eraser and editing functions, such as quantize or thin controller.

With few exceptions, editing such as moving or deleting notes always apply to all selected MIDI events. Changes to the selection in a range always apply to every other range as well. You can, for example, select a group of notes in the Piano Roll and then change the velocity for this group of notes using the Controller Editor, modifying all selected notes simultaneously.

Selecting MIDI events

Selection of MIDI events is generally the same in all three editing areas (Piano Roll, Controller Editor, List Editor). The differences are visible in the table:

Selection	Mouse action
Select event	Left-click on event
Add/Remove event from selection	Ctrl + left-click on event
Select current event, deselect all other events	Double-click on event
Marquee selection	Left-click on a free space and click and drag selection. (Selection tool in Piano Roll and Controller Editor)
Clear selection	Left-click on a free space (only in selection mode, not in the List Editor)
Set or change current events within multiple selection.	Left-click on selected event
Selection of section of events	Left-click on first event, Shift + left-click on last event (only in list editor)
Selection of all notes of a pitch	Double-click on a free space with this pitch or press the appropriate key on the keyboard (only Piano Roll)
Selection of all events	Ctrl + A, depending on the editing section, includes the selection of notes (Piano Roll), Controller events (Controller Editor), or all events (List Editor).
Select next or preceding note	Arrow left/right (only Piano Roll)

Meaning of the colors in the Piano Roll and Controller Editor

Notes which are not selected within the editor are displayed in blue. The intensity of the color represents the velocity: With increasing velocity the color will become darker/stronger.

Selected notes: Multiple selected notes are displayed in yellow. Here too, a more intense color symbolizes increased velocity.

Alternatively, the color in the Piano Roll can symbolize the MIDI channel of a note. Select in the "Options" menu "Use MIDI channel colors"

Current event: Appears with an orange border. If an event is selected with the mouse, it turns into the current event.

Filtered Events: Events filtered with the MIDI channel filter (view page 102) appear in gray.

Muted Notes: For test purposes you can mute notes (Menu "MIDI Functions (view page 117)"), which then for selected and unselected events will be displayed with a fainted color.

Events outside of the object borders: Events in front of or behind the beginning/end of the object – recognizable by the blue lines in the Editor – also appear fainter and have a white border.

MIDI channel filter

You can control multiple instruments with one MIDI output via the MIDI channels. A MIDI object can contain events in up to 16 **channels**.

Events in one object from all channels or only from selected channels can be played back with the MIDI channel filter in the MIDI editor. To play back or edit events only from certain channels, select the appropriate channels in the "Options" menu > MIDI channel filter". Events in channels that are not selected will be filtered out. "Play back all" deactivates the channel filter.

Events that have been filtered out appear in gray and can be edited using the selection tool. They can be hidden with the command "Hide filtered MIDI data" in the "Options" menu.

Note: The list editor (view page 108) provides additional filters (such as filter by event type, controller number, Note Off events) that only function within the list.

Using the MIDI channel filter

Completed songs in MIDI files as you would find them on the Internet usually contain a complete arrangement in which various instruments are played on different channels simultaneously. The standard software synthesizer for Windows that is used to preview MIDI files (view page 92) can receive MIDI on multiple channels and play several different sounds at the same time. This is called a multi-timbral synthesizer.

If you load a MIDI file, it will load as a MIDI object on a single track. However, MAGIX Music Maker 2016 Live can only control one software synthesizer per track, and most software synthesizers, also those available in MAGIX Music Maker 2016 Live, can only play back one instrument at the same time and are thus not multitimbral.

For this reason, duplicate your MIDI one beneath the other as often as there are different instruments involved and set the corresponding Channel filters (view page 102) in the MIDI objects ("Options" menu in the MIDI Editor) so that each object only plays the notes for a single channel. Next, assign software instruments for the individual channels via the Track (view page 34) menu.

Piano Roll

For notes inside the Piano Roll, various editing tools, so-called mouse modes, are available.

When **clicking existing notes** all tools generally act in the same manner: You can select notes simply by clicking on them (see Selecting MIDI events (view page 101)) and by clicking and dragging notes, whose start time, pitch or note length you are editing (see Editing notes (view page 104)). There are two exceptions: The eraser tool deletes notes by clicking on them and with the velocity tool, notes are not moved but rather their velocity is adjusted (see below).

The mouse modes display their special functions by **clicking or clicking and dragging into empty sections** of the Piano Roll:



Selection (Ctrl + 1)

Simple click: Clear existing selection. Click + Drag: Draw out a rectangular selection frame. For additional selection options see Selecting MIDI events (view page 101).



Draw (Ctrl + 2)

Draw note. The start position and the length snap respectively to the current quantization settings. Draw mode can be activated in all modes by pressing the **Shift key** .



Draw Pencil (Ctrl + 3)

Draw sequence of notes. The lengths and distances of the notes are set according to the current quantize settings.

If H is pressed while drawing, the pitch of the first note will be applied to all subsequently drawn notes. Moving backwards with the mouse when drawing removes notes already drawn.



Pattern Pencil (Ctrl + 4)

Draw note pattern. A selection of existing notes can be saved as a pattern (phrase) and then drawn in different pitches.

To create a new pattern select the respective notes and press Ctrl + W or select in the "Edit" menu > MIDI/Drum Editor > "Create pattern from selection".

Draw the pattern at the position of the deepest note of the pattern. This makes an original pitch sound. You can, of course, draw in different pitches. If H is pressed when drawing, the basic tone pitch from the beginning will be retained.

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



Velocity mode (Ctrl + 5)

Click an empty section like in selection mode. Left-clicking on notes and dragging them vertically alters the velocity of the notes. The velocity of notes can be edited directly in the Piano Roll and the Controller Editor remains free for other outputs.



Delete (Ctrl + 6)

Left-click: Delete note. Clicking one selected note deletes all selected notes when multiple notes are selected. Click and drag: Delete all notes that come into contact with the eraser.

The Delete mode can be activated anytime by clicking with the right mouse button. You can add new notes with the Drawing pencil by using a left-click and remove existing notes with a right-click, without having to change the tool.



Magnifying Glass (Ctrl + 7)

Left mouse button: Zoom in

Right mouse button: Zoom out

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

Edit notes with the mouse

Edit existing notes by clicking and dragging. Depending on where you click on the note bars several options are available, which are visible by different mouse pointers.

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

 Change note length: Grab note bar at end

 + Shift Set fixed note length for multi-selection: Hold Shift key and drag current reference note longer/shorter. This sets all selected notes to the same length.

 + Ctrl Scale note length for multi-selection: Hold Ctrl key and drag current reference note longer. All notes will be lengthened by the same factor.

 Move note freely, pitch and start time change

 If Alt is also pressed in Move mode, the note will only be moved horizontally, retaining the pitch.

 If Shift is pressed while in Freehand Draw mode, only the pitch can be changed, the position will remain the same.

 If the setting "Ranges for limited movement" is activated in the "Options" menu, clicking and dragging the first half of the note results in a change to the position, while clicking the end half changes the pitch.

Pressing the **Alt key** while moving the mouse temporarily deactivates the quantization grid.

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
Alt + mouse wheel:	Scroll vertically
Shift + mouse wheel:	Zoom vertically
Ctrl + mouse wheel:	Zoom horizontally

Controller Editor

The Controller Editor is a graphic editor that allows you to edit the velocity of notes in the Piano Roll and Controller events. A Continuous Controller abbreviated as CC or simply referred to as the Controller allows you to transfer control values such as for filter, volume and panorama position.

Tip: All control elements for MAGIX Vita Solo Instruments and MAGIX Vita can be controlled via the MIDI controller (view page 159).

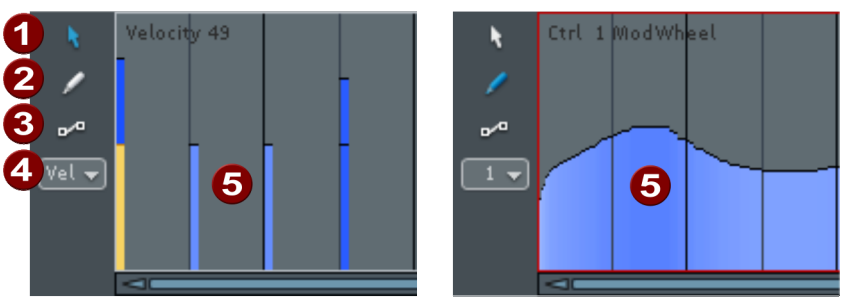


The Controller Editor is preset as hidden. Unhide it by clicking the button below the Piano Roll or with the key shortcut "Alt + V".

The velocity values of note 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 respective notes.

The values of other controllers are shown as bars. The width of the bar extends to the next event. Because the controllers typically change in small time intervals more or less continuously - regardless of note events -, they appear as ascending or descending ramps. In this case, the height of the ramps and their color intensity also represent the last defined value of an event. Selected controller events also appear in yellow.

Tools



Controller Editor for editing the velocity of existing notes (left) or controller values (right)

1  **Selection tool:** Specifically select existing controller events or notes and adjust their values.

2  **Freehand drawing tool:** Freely draw new controller values or a gradient.

3  **Draw line:** Use the line function to quickly insert a straight controller gradient (ramp).

4 

Controller Selection. Select a controller to edit by clicking the menu. Controllers, whose data is already available for the MIDI object, are marked by an asterisk.

5 Velocity values are only available at time positions of the corresponding notes and in the case of multiple notes occuring simultaneously, several appear on top of each other (view page 108). Controllers are independent of the notes.

Selection tool

Select multiple controller bars by clicking and dragging a range in the Controller Editor; individual values can be selected by single-clicking within the bar. When selecting a velocity bar, the corresponding notes will also be selected.

By clicking and dragging the upper edge of a velocity or controller bar, you can immediately change its value. For multiple selection, the following rules apply: Each controller is increased or decreased by the same absolute value. Holding **Ctrl** while dragging changes the values relative to each other.

For example: Two controller values are selected; the first is 30 and the second 60. If you drag the end of the larger bar up by 30, then the values will change to 60 (30 + 30) and 90 (60 + 30). If you increase the larger bar with relative values (by holding Ctrl) by 30, it will result in an increase of 50%. The smaller bar will also increase by 50%, meaning a increase by 15 (50% of 30), resulting in a final value of 45. If you instead drag the smaller bar (+ Ctrl) and move it from 30 to 60, it will result in an increase of 100%. The larger bar will accordingly be increased to 120. In other words: The relation between the selected values will remain the same when they are relatively changed.

If you hold **Shift** while changing the value of a multiple selection, all of the selected events will be set to the same new value.

Drawing tool

With the **Freehand drawing tool** (Mouse pointer: pencil) you can draw any number of controller curves. With the Line drawing tool (Mouse pointer: crosshairs) you can create a linear controller gradient (ramp). By dragging backwards, you can delete your curve during drawing. You can temporarily activate the Freehand drawing tool with the Selection tool by additionally pressing the **Alt key** before clicking. The **Shift key** temporarily activates the Line drawing mode when using the Selection tool as well as the Freehand drawing tool.

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

Tips for editing velocity

In polyphonic events, meaning when multiple notes are played simultaneously, the bars appear on top of each other, making it difficult to edit the end of a particular bar. To edit only notes of a certain pitch, e.g. all C1 notes in the Controller Editor, click on the respective key on the keyboard to the left of the Piano Roll. The key and the background of the selected pitch are highlighted. Now only the velocity values of notes of this pitch are displayed in the controller editor.

This also works for several pitches. You can add additional notes with Ctrl + click or space between two notes with Shift + click on a second note. These are simply view options of the Velocity Editor. Multiple note selection is also possible using double-click

A further possibility is to selectively edit velocity bars located on top of each other, which is based on the fact that the bar of the currently selected note is selected/edited using the mouse. Therefore, first click on the note within the Piano Roll, or click on the bars located on top of each other and then select the required note using the cursor keys. Then change the controller value by dragging the highlighted (current) bar.

Besides directly changing the velocity values of a selected note, you can change several velocity values at once by clicking in a free space and dragging the mouse over several velocity values while holding down the key. You can then also create sequences by moving the mouse in a curve. A previous (multi-)selection is ignored. For example, you can easily create a crescendo or decrescendo effect.

Quantize controller events

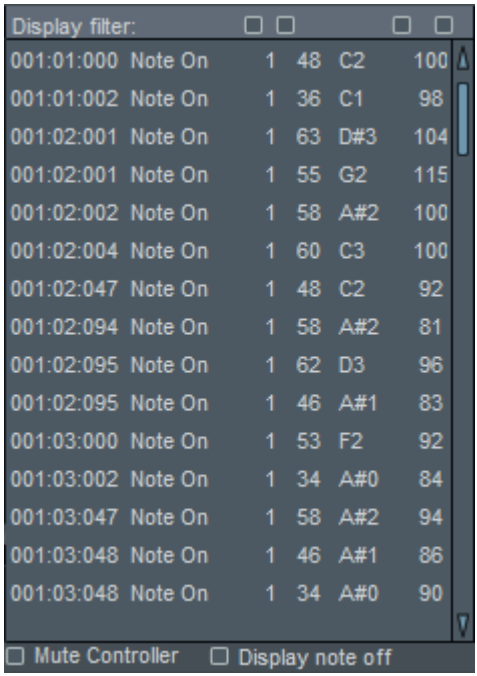
MIDI controller events can be quantized and thinned out; select the "MIDI functions" menu and the "Quantize/Thin out controller" command to do this. Quantization occurs according to the quantization settings (view page 115).

List Editor

In addition to note and controller events, which can be edited with the Piano Roll or Controller Editor, MIDI objects usually contain other types of events, e.g. program change commands (Prog Ch) to change the sounds in the software synthesizers. The MIDI editor has an integrated display of all events in list format. Here, you can edit MIDI data in detail.



This List Editor is opened either with a click on this button or by using the shortcut "Alt+L".



The List Editor lists all MIDI events in tabular form. The time position in beat: quarter note: tick is at the very front. Ticks are the 192 subdivisions of a quarter note. After that is the event type, the MIDI channel, and depending on the event type one or two data fields.

When the List Editor is opened and activated for editing it has a narrow red border. This makes it clear that certain functions, for example, select next/previous event (cursor keys) or the command "Select All" (Ctrl+A), only refer to the list.

Mute Controller: MIDI controller commands can be filtered during playback.

Show Note Off: Each note contains a "Note On" and a "Note Off" event, which are always selected and edited together, therefore, Note Off is preset as hidden. Use this check box to see Note Off events.

Display filter: To edit specific events only, the List Editor provides a view filter for each column. These are small check boxes above the list editor columns.

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

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



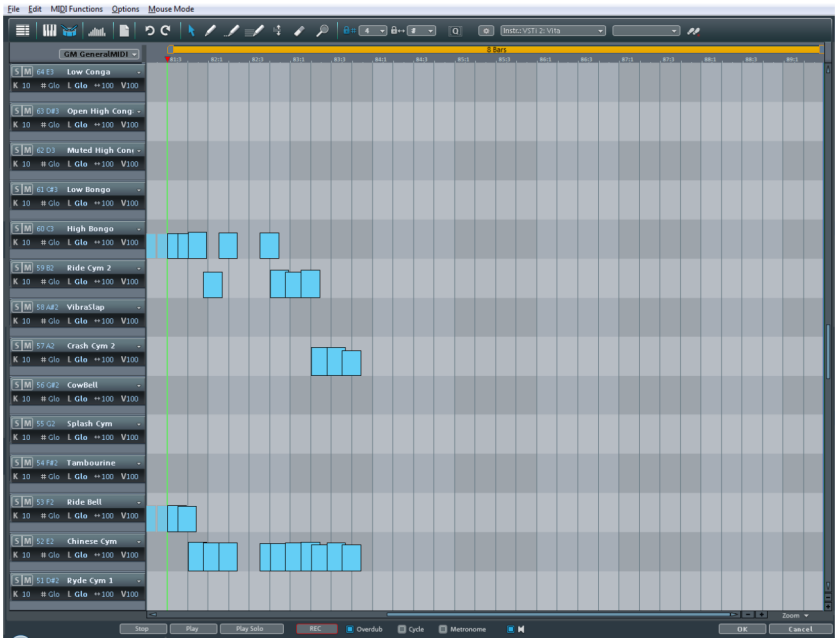
To add special events use the button below the List Editor.

Select an event type in the list field on the left and click "Insert". The event will then be added with preset parameters, which can be adjusted in the List Editor.

Drum Editor



Clicking this button switches the MIDI editor to Drum Editor mode.



The same content of a MIDI object can be edited with the Drum editor like in the "normal" MIDI editor. The same tools are available. The "Piano Roll" here is specially adapted to edit drum sequences:

- For each pitch there is a **Drum editor track header** instead of simple piano keys. Here, you can assign a name to each drum instrument or rather to each pitch, as well as set the output note and channel, grid and quantization settings, and velocity scaling in %.
- Cell mode (view page 111) is used. The display width for each drum event in a cell can be individually set for each instrument as well as in the respective track header.
- All individual settings for each note can be edited as a whole in a drum map.

Important: When you switch from Drum Editor mode back to the normal Piano Roll, you will be asked if you wish to apply mapping (view page 112) or not. If you **add mapping**, all mapping settings will be applied to the MIDI object. For example: You changed the output value for an instrument with a pitch of 35 ("Bass drum 1" in GM Standard) to 36 ("Bass drum 2"). If mapping is applied, these notes will be replaced by corresponding "real" notes with a pitch of 36.

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 (view page 147)).

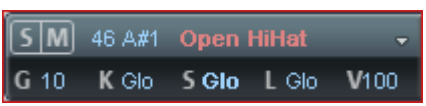
The set quantization grid can be read from the width of cells. "Swing" and "Offset" settings of the quantization options are also made clearer thanks to cells of various widths and by repositioning.

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 (view page 115), 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 information can be found in the section "Quantization settings" on page 115)

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 synthesizers usually respond to notes with different pitches and different sounds. You are then able to control an entire drum kit and an array of other percussion instruments via one MIDI channel. Assigning a MIDI note to a particular drum sound is called "mapping". 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 must adjust the mapping. The settings for individual instruments can be specified in the track header (the number/note value next to the solo/mute buttons).

For more extensive changes we recommend using the Drum Map Edito (see below). 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 if can be shown in the menu. You can edit the individual Drum Maps in the Drum Map Editor.



The Drum Map can be set in the Drum Editor by clicking on the list field above.

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 (view page 115).

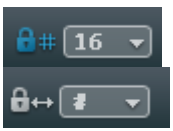
Instrument, grid, length... apply to all: This applies the corresponding setting of the selected instrument to all other instruments.

Quantize

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



Clicking on the **Quantize** button shifts all selected notes to a customizable quantization grid. All notes are quantized without previous selection. Right-clicking on the symbol opens the quantize settings (view page 115).



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 performs standard quantization (the note's start point and length are preset). In the menu MIDI functions (view page 117) > Advanced quantization provides other quantization modes (e.g. length only or Soft Q).

The quantization options enable the type and scope of the 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.

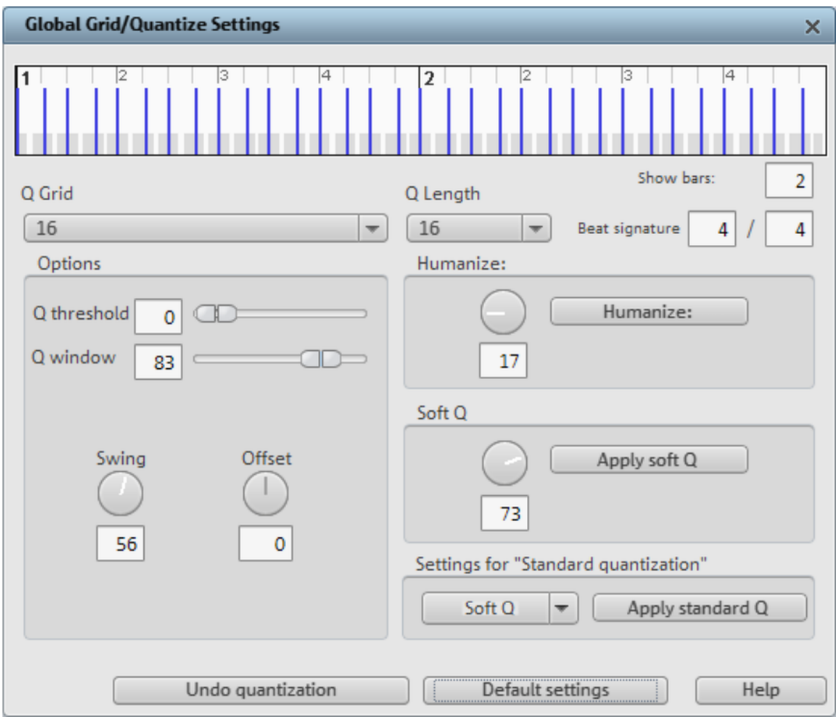
The snap positions are displayed within the Piano Roll as a matrix. A swing quantization is displayed by the different intervals of the vertical partitions in the Piano Roll. The grid can be hidden with the "Show Quantization Grid" command in the options menu (Ctrl + G).

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

Keyboard shortcut: Ctrl + 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 the target points within the bar on which the note start points or lengths move. (See above)

Q threshold/Q window: With the parameters Q threshold/Q window you can restrict the quantization to certain notes in order to retain the genuineness of an MIDI recording. The parameter "Q threshold" can be used to exclude notes from quantization that are very close to the next snap point. Only notes that are far enough from the raster will be quantized. Conversely, by reducing the "Q Window" notes that deviate too much from the raster can be excluded from the quantization. It is therefore possible, for example, to quantize quarter and eighth notes and retain the sixteenth notes that lie between by reducing the appropriate window.

In summary this means: Events less than the "threshold"-distance or more than the "window"-distance from the grid point will not be quantized. The time range affected by the quantization is 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 halfway 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. backward in time. The maximum of 100 corresponds with an offset distance of half the grid width.

Presentation of blue grid points in the dialog as well as of 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 specified value thus regulates the maximum possible spacing of the quantized notes at 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, i.e. quantization off

The command "Soft Q" 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 hard quantization without having to adjust the quantization options every time.

Standard quantization settings: Select the quantization action from the list (see MIDI functions (view page 117)) to be performed by clicking the "Quantization" button.

Reset quantization: All notes will be reset to their original positions.

Standard settings: Restores the default values.

MIDI Functions

The "MIDI functions" menu contains advanced quantization (More information can be found in the section "Quantization settings" on page 115) and editing functions for MIDI notes. The commands in the "MIDI functions" menu always affect the selected events. If nothing has been selected, the functions are applied to all events.

Legato: If necessary, notes may be lengthened until the next note to be played in legato.

Quantize notes (default): A standard quantization will be used on all selected notes. If no notes are selected, all notes will be quantized. The standard action can be defined in the Quantization Settings Dialog (view page 115). "Quantize notes (start and length)" is set as default. 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 (Quantization approximation) :** This 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 hard 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.
- **Undo quantization**: Use this command to reverse all completed quantization steps. This works even after the project has been saved.
- **Quantization settings**: Opens the dialog for the Quantization settings (view page 115).

Quantize controller events: Allows you to quantize controller events (view page 108) to reduce their number.

Humanize: Use the Humanize function to make quantized notes sound more "human" meaning less perfect. Notes will be moved to a random value. See Quantization settings (view page 115).

Mute notes (Mute): Mutes and unmutes notes.

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

Remove overlaps (monophonic): Notes are 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 "Pedal released" event (CC64 < 64), and the pedal events removed.

Menu reference MIDI editor

File

- **Import MIDI:** Load a standard MIDI file (*.mid) to the MIDI object. See Load and save MIDI files (view page 92).
- **Export MIDI:** Export the content of a MIDI object as a standard MIDI file (*.mid).
- **New (Delete all MIDI data):** Deletes all MIDI data in the object

Edit

- **Undo/Redo:** The last editing function is undone or restored.
- **Copy/Cut/Paste:** Depending on the editor area, the copy actions can be used for notes (Piano Roll), controller events (Controller Editor), or all events (List Editor). You can copy and paste within one MIDI object or between different ones. Events are inserted at the position of the playback marker.
- **Duplicating:** If the grid is activated, the notes selected in the Piano Roll are copied and inserted from the next grid point following the selection. They are otherwise inserted immediately after the selection.
- **Select all:** Select all events in the MIDI object. Depending on the editor area, the selection includes notes (Piano Roll), controller events (Controller Editor), or all events (List Editor).
- **Reverse selection:** All non-selected MIDI events are selected and selected events will be deselected.
- **Create pattern from selection:** Selected MIDI notes are saved as a pattern. The length of the pattern is quantized when the grid is active. Afterwards, the pattern can be drawn in the Piano Roll in Draw pattern mode (view page 103).
- **Delete selected MIDI data:** Selected MIDI data are deleted.
- **Delete all MIDI data** = File > New
- **MIDI recording:** Same as the REC key and starts the MIDI recording (view page 99).

MIDI Functions

see MIDI Functions (view page 117)

Options

- **Hide MIDI channel filter/filtered MIDI data** (view page 102)
- **Use velocity colors/Use MIDI channel colors:** Changes the colors of the MIDI notes from a graduated representation of the velocity values to different colors for each MIDI channel.
- **Scoll mode/Soft scroll mode:** In Scroll mode (preset) the displayed section of the MIDI object follows the playback marker. In Soft scroll mode, this is done continuously, meaning the section moves behind a fixed playback marker.
- **Show event list/Show Matrix Editor (Piano Roll)/Drum Editor/Velocity/Controller Editor:** Shows or hides the elements of the MIDI editor. (corresponds to the functions of the buttons above in the MIDI editor)
- **Step input** (view page 100)
- **Play notes that have been clicked:** Deactivates the playback of notes that have been clicked or the piano keys on the left
- **Zones with restricted movement for notes:** If active, the notes react differently to the movements of the mouse, depending on where you click on the bar in the Piano Roll, see Edit notes with the mouse (view page 104).
- **Quantization grid active:** Activates/deactivates the quantization grid (view page 113).
- **Show quantization grid:** Shows/hides the quantization grid.
- **Automatically quantize selection:** If active, quantization takes place automatically after recording.
- **MIDI Panic (End all notes):** In rare cases, after a Note On event the corresponding Note Off event may not be sent to the synthesizer and the notes "freeze". Use this command to send Note Off events to all channels in all pitches.

Mouse Mode

Mouse mode for editing events, see Piano Roll (view page 103).

MIDI Editor shortcuts

Playback/Stop	Space
Stop at position	'0' (Number block)
Delete all selected events	Ctrl + Del
Delete selected MIDI notes	Del
Select all non display-filtered notes (piano roll) or events (list)	Ctrl + A
Mute notes	Ctrl + M
Create pattern from selection	Ctrl+W
MIDI recordings	Ctrl+R
Undo (Undo)	Ctrl + Z
Restore (Redo)	Ctrl + Y
Cut	Ctrl+X
Copy	Ctrl+C
Insert	Ctrl+V
duplicating	Ctrl+D
Imported standard MIDI file	Ctrl+I
Exported standard MIDI file	Ctrl + E
Fade in/Out Event Editor	Ctrl+L
Fade Velocity In/Out	Ctrl + T
Show Quantization grid	Ctrl+K
Mode selection	Ctrl + 1
Drawing mode	Ctrl + 2
Drum (Draw Mode)	Ctrl + 3
Pattern (Drawing) Mode	Ctrl + 4
Change velocity	Ctrl + 5
Delete Mode	Ctrl + 6
Zoom Tool	Ctrl + 7

Quantize	Ctrl + Q
Quantization options	Alt + Q
Select previous Note/Event	Up/Left arrow
Select next Note/Event	Tight/Down arrow
Play selected notes	Ctrl+N
End all notes	Ctrl+P
Grid on/off	Ctrl+G
Auto-scrolling during playback	Ctrl+F
Vertical zoom in	Ctrl + Up arrow
Vertical zoom out	Ctrl + Down arrow
Horizontal zoom in	Ctrl + Left arrow
Horizontal zoom out	Ctrl + Right arrow
Horizontal scrolling	Mouse wheel
Vertical scrolling	Shift + Mouse wheel
Zooming	Ctrl + Mouse wheel

Software Instruments

MAGIX Music Maker 2016 Live has many software synthesizers and synthesizer plug-ins (VST instruments) for creating your own sound material. The synthesizers are either VST plug-ins that are controlled by MIDI objects or Synth objects that can be arranged with other objects in the tracks.

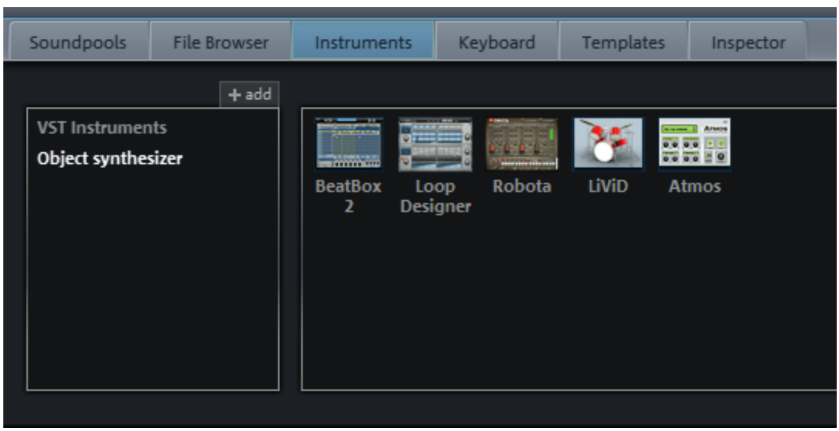
Here's an overview:

Synthesizers	Type	Use scenario
Atmos	Synth object	Background noise
BeatBox 2 or BeatBox 2 Plus (Live version)	Synth object	Nature and electronic beats
Loop Designer	Synth object	Breakbeats, bass lines
Livid	Synth object	acoustic drums (complete song parts)
Robota	Synth object	electronic drums
DN-e1	VST Plug-in	Synthesizer leads, pads, sequence

		figures
Revolta 2 (only Live version)	VST Plug-in	Synthesizer leads, pads, sequence figures
Vita	VST Plug-in	Nature instruments, guitar, bass, acoustic drums, piano, strings, horns
Vita Solo instruments	VST Plug-in	Instruments based on the Vita Engine
VST plug-ins	VST Plug-in	depends on plug-ins installed

Opening the synthesizers

The software synthesizers can be loaded just like any other objects in MAGIX Music Maker 2016 Live through the Media Pool. To do this open the **Instruments** settings for the Media Pool.



You can choose links between the categories VST Instruments and Object Synthesizer. You will find icons for all available software synthesizers to the right.



You can add VST plugins to the list with "Add" This opens a file selection dialog where you can specify a folder containing the VST plugins.



On the far right the indicator can be switched between being displayed as an icon or in a list.



The overview is quickly lost for a large number of installed plugin, so you can also use the full text search.

Synth objects

MAGIX Music Maker 2016 Live 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 project 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 project 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 (view page 163), 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

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.
2. **Next/Previous preset**
4. **Save preset:** The preset includes the drum kit in use, the pattern, and any possible automations (view page 129).
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

1. **Drum kit:** This section loads drum kits (collections of different drum instruments) and the individual drum instruments.

2 **Selected drum instrument:** The settings in the synthesis section (6) and velocity/automation (5) always affect the selected drum instrument.

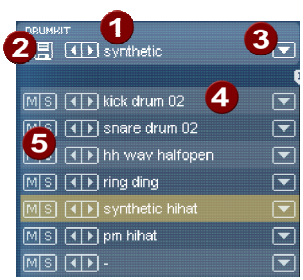
2 **Pattern editor:** Programs the beat sequence. In the top part, different patterns (sequences) can be loaded and saved as well as different settings for the view and function of the pattern editor. The matrix is where the beat is programmed: One line corresponds to a drum instrument, and a column 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.

4 **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).

5 **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.

2 **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.

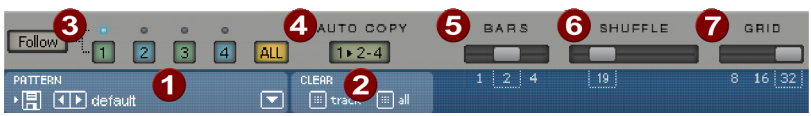
New drum or effect sounds can by added to the current drum kit by **drag & drop** from Windows Explorer. Drag a wave file to a drum instrument to create a new drum sound based on this sample. BeatBox 2 copies the sample into the sample folder to make sure that the instrument or kit created can be used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

2. **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.

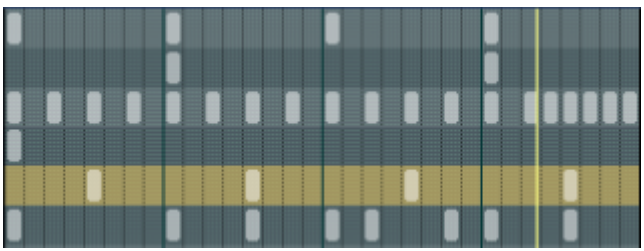
4. "**1>2-4**" **Auto copy:** If more than one bar is set as the pattern length, "Auto copy" mode makes sure that the drum notes set in the first bar are automatically placed into the next bars. This also makes it easy to create a continuous beat, even with a loop length of four bars. Notes set in the 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 (view page 130) (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.

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

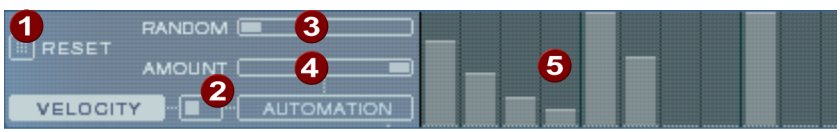
Many functions in BeatBox 2 can be controlled with the keyboard, for example a beat can be triggered with the "Enter" key live in a running pattern. Here's a complete list of the keyboard commands:

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 (view page 129).
2. **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 (view page 130).

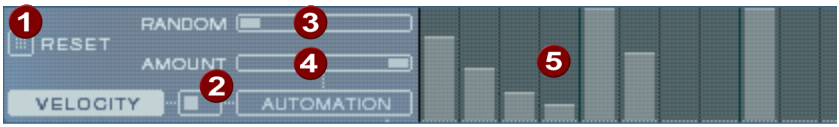
Automation

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 (view page 132) section.



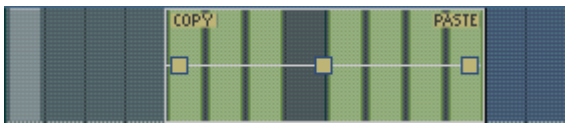
1. **Reset:** Sets all automation values for the selected parameter. 0.
2. **Mode switcher:** Switches the section between velocity control (view page 129) and automation switched. This happens automatically during selection of parameters.
2. **Random:** The random parameter adds random variations to 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

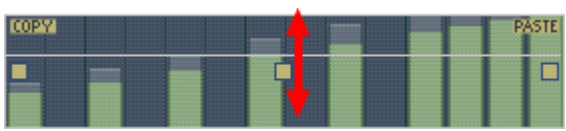
Hold down "Shift" and select any number of columns for velocity or automation with the mouse. Two special commands are available for selection:

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

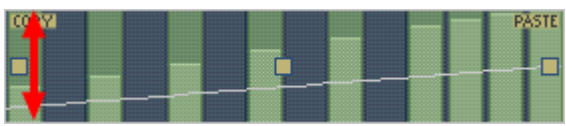


The "Copy" button copies the selection to the clipboard. If you select this or that track in another editor, then you can paste the notes there now from the clipboard. If the target selection is larger than the contents of the clipboard, then it will be inserted again. This lets you quickly add a short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

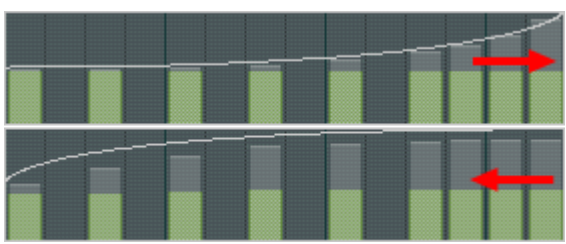
The three handles allow the velocity or automation values to be edited together.



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 (view page 136).



1. **Preview drum instrument**
2. **Save drum instrument**
2. **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 (view page 129).

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.
2. **Automation:** This selects the controller's parameter for the automation (view page 129).
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

is 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 placed. 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 absorbtion 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 synthesizes 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.

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 on 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

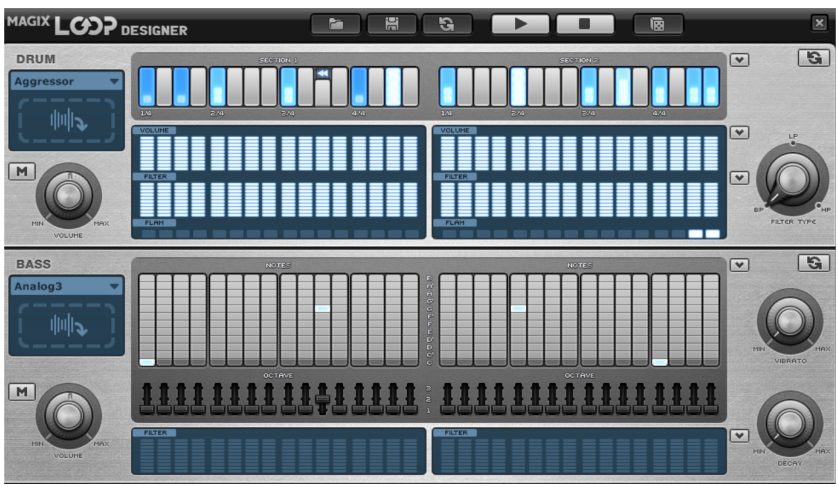
Following the samplers and synthesizers, an inverse filter (multi-mode filter) is added to add the last bit of polish to the drum sound. The envelope generator controls all time-dependent processes in the synthesizer and sampler.

Loop Designer

The loop designer unites both stellar design elements of drum'n'bass style in a "device": turned-up beats and rumbling bass lines. With the Loop Designer you can create authentic drum'n'bass sounds without any specialized knowledge.

Tip: Drum'n'bass tracks usually have between 160 and 180 BPMs. The Drum&Bass Machine can also be used for other music styles. e.g. for BigBeat (120 BPM) or TripHop (80-90 BPM).

Loop Designer: overview



The top half of the synthesizer controls the rhythm section, the lower half - the bass section. You can mute both sections using the M symbol on the left border. This way you can, for example, turn off the bass section in order to take only the drum section into the project. Only the drum section will then be added to the mixdown file when mixing down the project. Next to this are the volume controls, which control the volume of both sections.

You can preview and stop your drum'n'bass creations using the "play" and "stop" buttons.

Additional buttons:



Loads a saved pattern with all settings.



Saves a pattern.



Undo for all settings made in all sections.



Makes random settings changes in both sections. You can change settings later as you wish.

Drum section (top half)

Here complex, authentic-sounding Jungle-Breakbeats can be put together easily. In professional recording studios Jungle-breakbeats are made by chopping up arbitrary drum loops and putting them back together in a different order. These laborious work steps are significantly simplified by Loop Designer.

The new sequence is determined in the top row, the so-called "step" row. The grey cells represent the individual sections ("counts") into which the loop is separated.

Pick a different note or playback by left-clicking a grey cell. Various notes will be represented with a light bar which "grows" toward the top with each mouse click. This way, each time you click on the grey cell, the bar expands by one step.



1 of 4: Play Drum Loop starting from the first note.



2 of 4: Play Drum Loop starting from the second note.



3 of 4: Play Drum Loop starting from the third note.



Full bar: Play Drum Loop starting from the fourth note.



Reverse icon: Play backwards from this position



Stop icon: Stop playback

The right mouse key deletes settings of a step bar and the Drum Loop is played in its original order.



Pressing the double-arrow button generates a random step sequence. You can change this rhythm as you like.



Clicking into the blue field in the left part of the drum section opens a pop-up menu where you can pick the sound of the Drum Loop. When you select another drum loop it will load and be played in the way you programmed it.

Tip: You can also send a loop from Soundpool or a wave file to Loop Designer. To do so, select the desired loop or file and drag it into the field while holding down the mouse key ("drag & drop").

In the field under the "steps" row the sound of the loops is defined. The intensity of the settings is determined with a control similar to a peakmeter. The higher the bar, the stronger the influence on the loop is. With the help of the left mouse key, values can be smoothly adjusted. "Volume" controls the loudness (full = loud, empty = quiet), "filter" the filter strength (full = clear, empty = muffled). In the "Flam" row you have the option to make the note repeat itself twice in quick succession. This is how to program rolls and fill ins.

Using the top arrow buttons at the right edge you can load pre-defined pattern settings. The originally set loop will not be changed. The two lower arrow buttons offer presets in the form of standard curves for "volume" and "filter".



The "Filter type" controller selects the type of the filter sound: "BP" stands for "bandpass", "LP" for "low pass" and "HP" for "high pass".

Bass section (lower pane)

The bass section produces suitable bass lines.

- The first row of the "Notes" row, determines the order of the sounds i.e. the series of notes. Select a cell with the left mouse click, where the lowermost represents the lowest note and the topmost - the highest. A right mouse click deletes a cell.
- In the "Octave" row you can specify the octave of the bass. The slide control positions represent the various octave values. If the controller is down, a deep sound is produced, if it is in the top position, you will get a high tone. If the controller is in the middle, the pitch will be balanced.

Just like in the drum section, here you will also find arrow buttons on the right side for opening pre-defined patterns and and a double-arrow button for setting arrows. The filter can be set analogously to the drum section. The arrow button next to the filter area select presets in the form of standard curves.

You can determine the bass sound in the blue selection field at the left side. You can drag loops and WAV sounds into the field using drag & drop just like in the drum section.

Additionally, there are two slide controllers for sound changes to the right:



The "Vibrato" slider makes the bass tone's pitch change. When the control is to the far right, the sound vibrates more, if it's to the far left pitch isn't changed at all.



The slider "Decay" determines how long should it take to for the sound to subside. Set to the far right the sound is very fast (about 1 / 4 of a second), on the far left the sound lasts longer.

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 (view page 144).



With **select** choose the instrument for editing in the step sequencer.



"**M**" mutes the instrument, "**S**" makes it solo

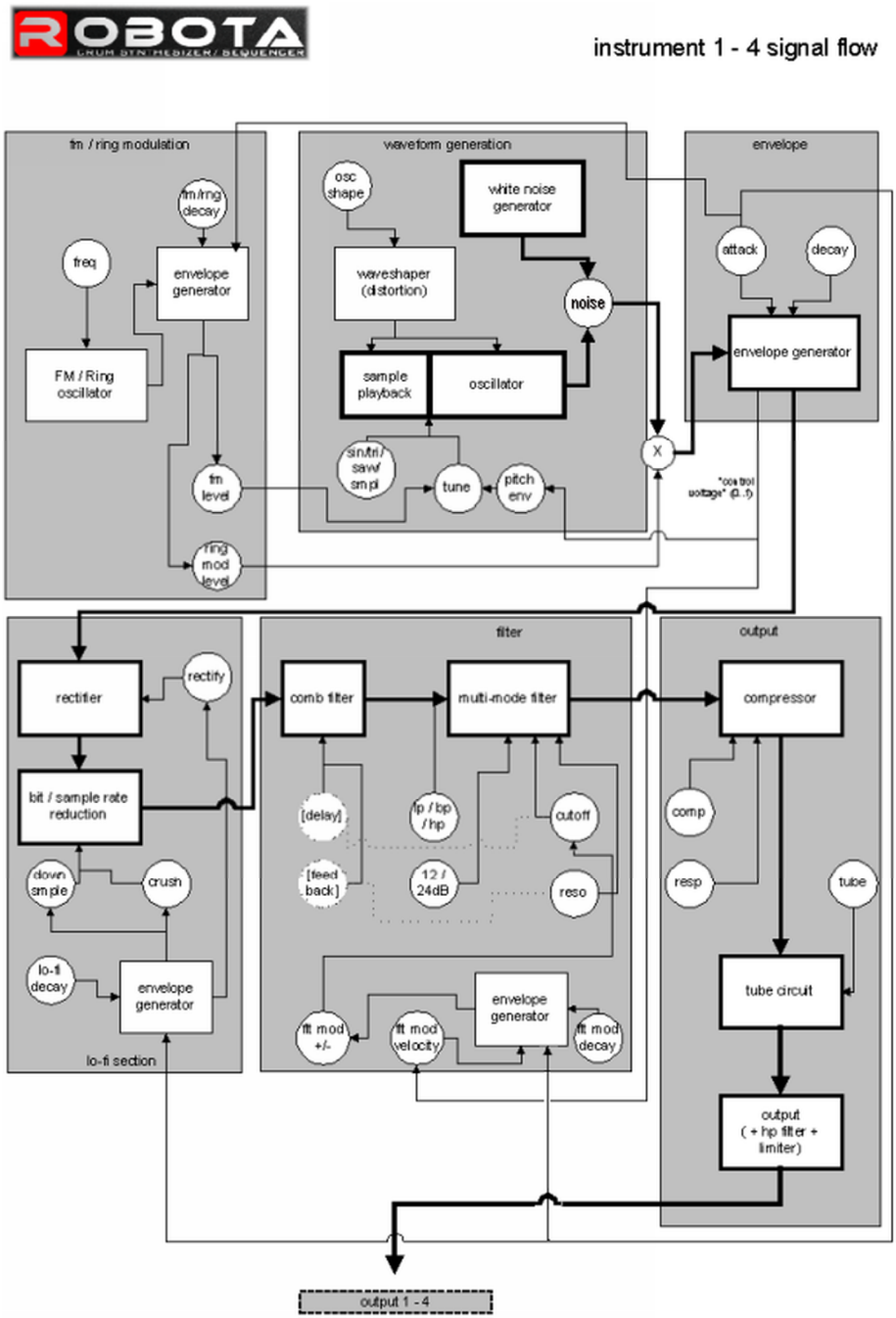


The **loudspeaker** button allows you to hear a preview.

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



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 fo 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:

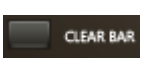
- Select the pattern length with the fader.



- 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.

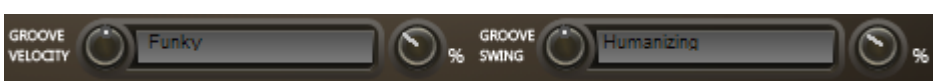


- Using the arrow keys, you can jump between the individual snapshots during stopped playback.

- Press "**on**" to activate snapshot automation.

Groove Control

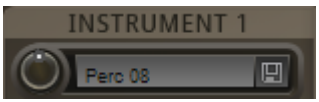
The secret behind "groove" beats lies in delay. That is, individual beats are either anticipated or delayed according to patterns. For example house beats use the "shuffle" whereby straight 1/16s are delayed at certain times.



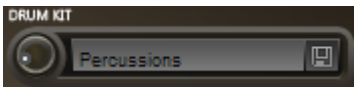
In the Robota there are **groove velocity** and **groove swing** presets. Groove velocity presets contain for each step of a beat a certain offset to increase or reduce the

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.

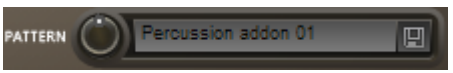
Setups, drum kits, presets, and patterns



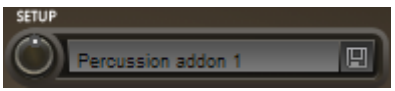
A single instrument sound is saved as a preset.



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 project normally, the complete current status (synthesizer + sequencer) of the Robota is always stored and correctly loaded later with the project.

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 2016 Live also includes software synthesizers that are based on the VST plug-in technology. Compared with the synthesizers that are addressed via synth- objects, these feature several differences:

- Generally, VST instrument plug-ins (VSTi) do not feature sequencers of their own and are controlled via MIDI objects.
- VST instruments are always loaded to a specific track. All MIDI objects on this track then control this VST instrument. The MIDI objects cannot be freely moved between tracks like synth objects.
- Effects may be only applied at the track level.

Nevertheless, these are much more easier to manipulate in MAGIX Music Maker 2016 Live due to MIDI control.

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.

Using VST instruments

The VST instruments are loaded from the Media Pool. These appear in the area above the "Object Synthesizer" setting (VST Instruments).

If you have just installed MAGIX Music Maker 2016 Live, you will not see any additional synthesizers here at first. If you want to add more instruments, you first have to specify the folder where Music Maker should search for the VST instruments. VST plug-ins can be installed in any folder on your hard drive.

Click on „**Add**" and search for your VST folder. 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. You can add another extra folder at any time in case you you have

installed additional plug-ins in another folder; plug-ins that have already been "identified" will always be located regardless of the path set. Pressing **OK** causes Music Maker to scan the folder for usable plug-ins that are available in the Media Pool.



The included plug-ins each have their own icon in the Media Pool, all other VST instruments have the same standardized icon. To use VST instruments, drag the VSTi Synth into a free track in the arranger.

A preset MIDI object will appear in the track and the MIDI Editor will open.

In the instrument menu that can be opened by clicking on the instrument icon  in the track header you can select from the preset sounds for the VST software instrument.

To use the MIDI objects and the MIDI Editor, please read the chapter MIDI Objects (view page 91).

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.

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

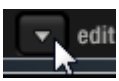
Note: The following is only a short description of the Revolta 2 interface.



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.

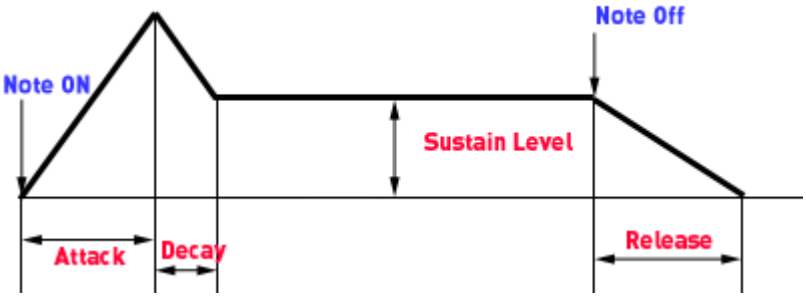
The Vita interface



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:** Here the volume, panorama position, pitch characteristics ("transpose") and the fundamental frequency ("master tune") can be set.

3. **AMP:** This is the volume envelope. With this you can control the timing of a sound'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 fade out.



4. FILTER: Here you can switch on a filter which influences the sound. With FILTER TYPE you can select the kind of filter you want to use. Cutoff controls the filter frequency and "Resonance" controls the strength of the emphasized filter frequency. "Velocity" indicates how much the velocity influences the filter frequency, using "Gain" you can balance the volume. The filter envelope (ADSR slider) influences the filter frequency depending on the time.

5. DELAY: Here you can switch on an echo effect. "Time" controls the delay time and "Level" controls the strength of the echo sound.

6. REVERB: Here you can switch on a reverb effect. "Time" controls the delay time and "Level" controls the strength of the echo sound.

7. TUBE DISTORTION: This is a tube distortion effect like those found in guitar amplifiers. This is normally used for electric guitars but you can also get creative and use it for other things. "Drive" controls the strength of the distortion. "High-cut" and "Low-cut" filter out the high and low frequencies.

8. VALUE DISPLAY: This always displays the exact values of the parameter that was just adjusted.

9. DYNAMIC RANGE: Usually the relationship between the created volume and the MIDI velocity is proportional. You can compensate for the fact that some MIDI keyboards need to be pressed forcefully to produce loud sounds (or conversely produce loud sounds with a soft touch) using the "MIDI Input Curve". Using "Dynamic and "Dynamic curve" you can manipulate the dynamics of a sound, i.e. the relationship between the loudest and quietest sounds.

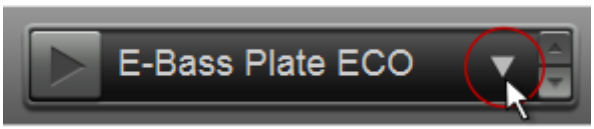
10. Voices: Here you can control the number of voices played simultaneously. If notes are no longer played, as is the case in some fast passages, you can increase the number of voices at the expense of performance.

11. Keyboard: Here you can preview the Vita sounds. This only works during playback or recording. **12.** lets you hide the keyboard.

Additional Vita Solo Instruments

Additional software included in MAGIX Music Maker 2016 Live such as the Rock Drums or String Ensemble are sampler, whose sounds are prerecorded. The advantage to the virtual synthesizers such as Robota is that the sounds don't have to be recalculated each time, which frees up a lot of computation capacity. They are "simply" called up, instead of being created anew. The disadvantage, however, is that the finished sounds don't sound as "professional" as those produced with virtual "sound magic".

The basic controls are identical for all synthesizers.



One click on the arrow symbol opens a fold-out menu where you can determine the general sound of the instrument. If "ECO" appears in the description, this refers to especially performance-improving settings which may not sound so "smooth". In addition, you can also save your settings and add them to a favorites list for later use.



You can control the overall loudness of the instrument.



You can turn the instrument keyboard on or off with this controller.

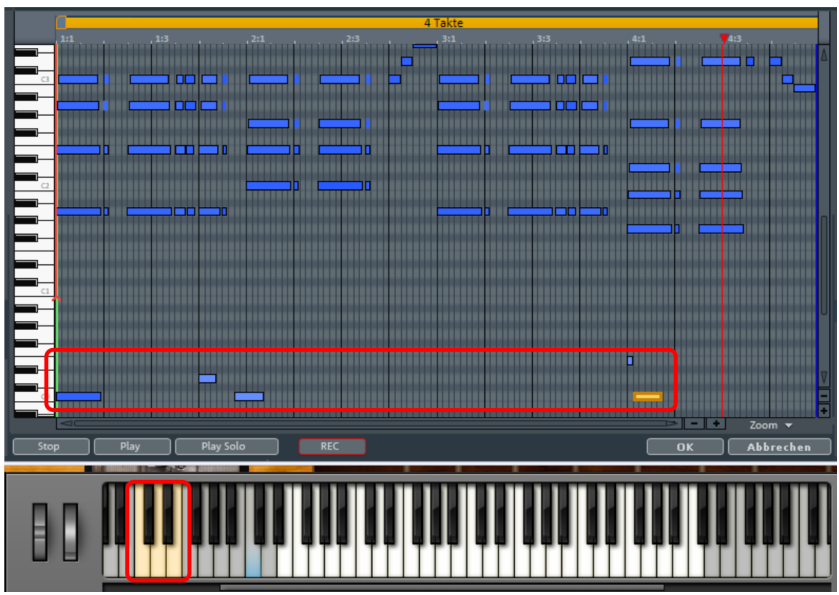
Because these samplers are enhanced for each instrument by tuned effects, the rest of controls function analogously to the already familiar synthesizers such as Vita. If you would like to know which result certain effects have, you will find explanations in the Essential FX (view page 193), Vintage Effects (view page 209), Reverb and Distorsion & Filter chapters.

Additional information is also available in the Synthesizer plug-ins (view page 151) chapter.

Articulation

Some Vita Solo Instruments have a special feature: In a bass octave (on the keyboard (C0-H0), there are special notes, which let you control the playing style (articulation). An alternative sample set is loaded, which lets the bass sound even more realistic using various playing styles such as note bending and flageolet.

Articulation is switched on and continues until normal articulation is switched on again through the corresponding note (C0).

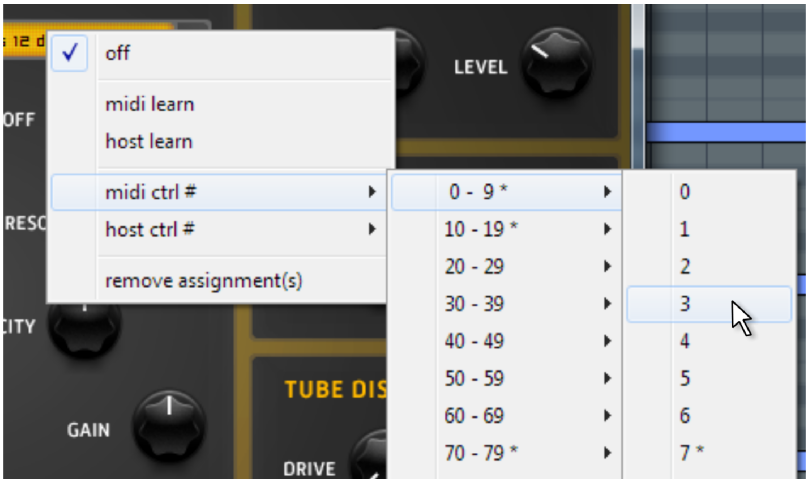


On the keyboard at the bottom of the synthesizer interface are the buttons to switch articulation, displayed in different colors. In the MIDI Editor appearing above, you can watch a practical application of articulation. The notes on 1:4 and 4:1 will be played back with varying articulation. Before the next "right" note, normal articulation will be switched on again through C0.

Automation of Vita and Vita Solo instruments

In MAGIX Music Maker 2016 Live it is possible to automate Vita Solo instruments. This allows you to change a specific value during playback using an automation curve automatically. Below we describe how to work using an automation curve.

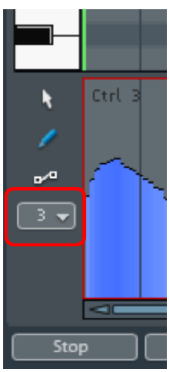
1. Right-click on an effect knob. This opens a context menu where you can select a MIDI controller number for the automation using "midi ctrl #". A few standard controller settings are preset, e.g. 7 for volume, 10 for panorama, 91 for reverb.



2. Open the MIDI Editor (Y key) and switch into the "Velocity/Controller Editor".



3. At the bottom right you can now select the pre-selected controller number in the MIDI controller selection field.



4. You can now draw the desired automation curve.

Additional information can be found in the Controller Editor - Select and edit events (view page 106).

Tip: If you are using an external controller, you can also use it to control and automate values. To do so, select "Learn MIDI" in the Vita Solo Instruments context menu. Also read the Using external equipment (view page 93) chapter.

DN-e1

The DN-e1 is a virtual analog synthesizer that is suitable for all conceivable styles and application areas. It works in a subtractive way, i. e. first a basic sound is selected that is then filtered with the aid of a filter curve.

The DN-e1 is played with a MIDI keyboard or with the aid of MIDI objects. You can use the keyboard in the program to set the sounds.



Sound selection

Select the sounds and sound configurations at the top.

Bank: Here you can switch between three banks with various complete configurations.

Category: Here you can select a sound category.

Rndm (Random): Here you can activate a random selection of the parameter settings in order to experiment with the sound.

Patches/Name: Here you can select a sound that will then be modulated.

Output

The end of the signal chain is edited in this area.

Volume: Sets the total volume.

Voices: Controls the number of voices generated (polyphony).

Glide: Controls the glide function. You can access sliding pitch transitions between the individual notes.

Unisono: Switches to monophonic, but generates a number of slightly varied voices for "thickening" the sound.

Filter en.

In this area the filter curve used to filter the output sound is modulated.

Attack: Sets the time duration that the filter curve requires in order to reach its maximum.

Decay: Sets the time duration that the filter curve requires in order to go from its maximum to the sustain level.

Sustain: Here you can set the degree of filtering that should take place after the decay phase. This filtering remains the same until the key on the keyboard is released; in contrast to the other three parameters, it does not also control a time duration, but a specific level.

Release: Sets the time duration which the filter curve requires in order to go from the sustain level to the zero point after the key is released.

Reverb

An additional reverb effect can be set here.

Type: Sets the sound coloration of the reverb effect.

Pre Del: Sets the time that passes between the direct signal and the arrival of the early reflections. The reverberation time comes only after this time span.

Damp: The corner frequency at which a damping of the highs should be implemented for each delay is defined here. This is useful, for example, for making the delays reverberate more naturally or for creating special effects (reggae/dub-style effects).

Decay: Sets the complete reverb time.

Low Cut: Sets the filter frequency of a high-pass filter. All signal components below this frequency will be filtered out.

Amount: Here you can set the mixing ratio between the effect and the pure sound, i.e. the original sound without any effect applied.

Delay

An additional echo effect can be set here.

Type: Different types of echo can be selected here: normal echo, ping-pong echo (where the sound swings through the stereo panorama) and various other forms.

Color: Sets the sound coloration of the echo.

Feedback: Sets the number of echo repeats.

L Rate: Sets the time duration for individual echoes for the left channel.

R Rate: Sets the time duration for individual echoes for the right channel.

Amount: Sets the mixing ratio between the effect and the pure sound, that is to say, the original sound without any effect applied.

Audio effects

MAGIX Music Maker 2016 Live offers a variety of progressive, intuitive and adjustable audio effects.

The following effects are available in Music Maker:

- For editing the sound spectrum, there is a graphic 10-band EQ and a parametric EQ (view page 175) with 6 bands.
- The stereo processor (view page 173) lets you correct stereo width and direction.
- Reverb (view page 177) provides an artificial room sound.
- Delay (view page 181) creates an artificial echo.
- The compressor lets you compress volume levels.
- Filter (view page 184) and distortion (view page 184) let you add subtle to drastic levels of distortion.
- The Tempo-Pitch/Resample (view page 172) effect can be used to change the tempo and pitch of objects. Vocal Tune (view page 168) can be used to fix the melodies from recorded instruments and vocals (autotune).
- The Vocoder (Live version only) can transfer the sound sequence from one audio signal to another. You can use this to teach synthesizers to talk or to create ghost voices.

Effects from third-party developers in VST format can also be used for effects editing. Some of the included effects are plug-ins.

For introductory information about plug-ins, please read the section Synthesizer Plug-ins in the chapter "Software Instruments".

Music Maker contains the following plug-ins:

- Vintage FX Suite (view page 209): Includes tiny guitar effects (also known as "stomp boxes") and recreated standard effects, including Analog Delay, Flanger, Chorus, Vintage Filter, Vintage Distortion and Bit Machine (Live version only).
- Essential FX: A collection of "bread and butter effects". Includes efx_StereoDelay, efx_Phaser, efx_ChorusFlanger und efx_VocalStrip (Live only).
- VandalSE (view page 220): The light version of MAGIX Vandal, a guitar amp simulator.
- Am-Track SE (Live version only): This analog vintage compressor produces an especially warm, powerful sound.

Using audio effects

Audio effects can be added at different positions in the project, to individual objects, to a complete track, or to the master (i.e. everything you hear).

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 project only use up processing power at that particular point.

To activate an effect for an audio object, double click on the audio object or select the object and switch to the "Inspector" view in the Media Pool. The object effects rack (view page 166) will be displayed.

The most essential effects are already listed here. Clicking on the +- icon will provide you with a menu with additional effects you can select.

Right clicking on an audio object or going to "Effects > Audio" opens individual audio effects which can be activate via menu commands.

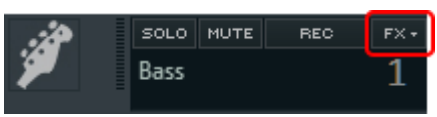
Tip: The most important effects have keyboard shortcuts (view page 310). If you favorite effect doesn't have one, you can assign (view page 281) one to it!

Track effects

Besides the object audio effects, a separate track effects rack with an equalizer, reverb/echo, compressor and the Vintage Effects Suite plug-ins can be used.



You can open the track audio effects rack with the FX button in the mixer. A lit FX track button signifies that effects are active in the track.



You can also open the track effects rack by going to the track effects menu in the Arranger track header (view page 34).

Track effects always apply to the entire audio output of a track. They are used when software synthesizers (view page 121) serve as audio source, instead of audio objects.

Note: The Vocal Tune, Tempo-Pitch/Resample and Vocoder effects (Live version only) cannot be used as track effects!

Master effects

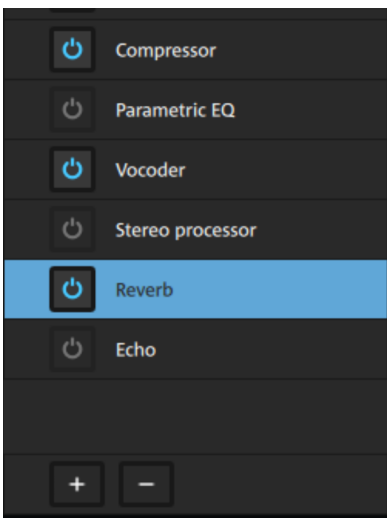
Master effects influence the mixed sum of all audio tracks.

FX The master effects rack is opened in the mixer window by using the FX button up and to the right over the master volume control. A lit FX track button signifies that effects are active in the track.

The controls work similarly to the object and track effects racks. The Live version includes the MAGIX Mastering Suite for perfect sound.

Effects rack

The audio effects rack for objects can be opened by double-clicking an audio object. It is displayed in the Inspector in the Media Pool. The audio effects rack for individual tracks or for the entire sound ("master effect") can be opened using the FX buttons in the mixer window ("M" key).



The effects rack comes equipped with the most frequently used effects. At first, they are deactivated and won't use up any computing power. Clicking on the effect name opens the effect's interface.

Once you have selected an effect preset (view page 167) or have set the parameters manually, the effect will be activated.

You can tell an effect is active if the on/off button is lit.



You can also use this button to temporarily bypass effects without losing their settings.


Clicking this button lets you activate additional effects.


This button removes effects from the rack. Since deactivated effects don't use up any computing power, this option is used mostly for maintaining an overview.

The effects unit interfaces are controlled by using slider controls, knobs and buttons. The individual effect descriptions provide more detailed information. Several effects contain two special features:



Sensor fields: Sensor fields allow you to control two parameters at the same time by moving a circle around on a flat surface. The horizontal and vertical positions correspond to the parameters.



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

Effects presets

Presets are useful because they prevent you from having to change effects settings every time you use an effect. If you need to find fitting setting quickly, presets can be very helpful.

Presets for individual effects

Each rack effect has a range of presets that can be easily loaded by clicking on them. You can scroll through the list with the mouse wheel. Some lists also contain subfolders. Each list contains the "Reset" subfolder, which in turn contains the entries "Standard setting" and "Settings before opening the dialog". You can use these to completely reset the effect or reset it to its last value.



The list can be hidden using the arrow to the right.

Tip: Presets often contain more effect parameters than are normally accessible through the control elements of each effect. It's worth spending some time turning the knobs and trying out the available presets.

Object effect and track effect presets

The "Audio FX" and "Vintage FX" folders can be found in the **"Templates"** tab in the Media Pool. These contain a range of presets for the most important effects and effect combinations. The presets have a preview feature, which lets you here an example of the effect when you click on it. You can drag & drop presets into audio objects in the Arranger.

The current settings for each applied effects device in the **object effects** rack can be saved together as an effect preset, e. g. so that it can be used for other objects. To save your own effect preset, go to "Effects" > "Audio" > "Save Audio Effects". Your own templates will also be available to you in the Media Pool (Templates > Audio FX).



You can find presets for **track effects** sorted according to the instrument type in the track effect menu in the Arranger track box (view page 34).

In this menu you can also save and load your own effect settings or completely reset the track effects.

Effect curves

Many effects can be adjusted 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 in the track and affect all of the objects the track.

To learn more about editing effect curves you can refer to the chapter „Effect curves“ (view page 250).

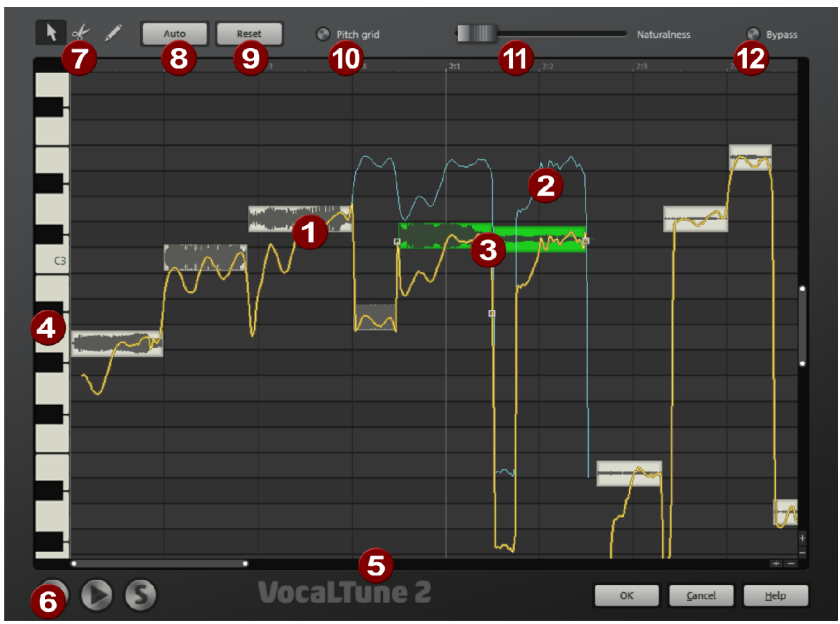
Vocal Tune

The Vocal Tune effect can be used to edit the pitch progression of an audio object. On the one hand, it is possible to rebalance "distorted" vocal passages. Depending on what you want, this can be as inaudible as possible or even drastically distorted (see Automatic pitch correction (view page 171)). On the other hand, however, the melodic line like in a piano roll can also be completely changed (see MIDI Editor).

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 audio material like

solo vocals, solo instruments, and speech. Polyphonic material, effects such as reverb or chorus and background noises do not provide good analysis results.

The analysis function starts automatically when the vocal tuner is opened. For larger objects, the analysis can take longer. After the analysis the audio object is divided into individual slice objects according to the detected pitches; a slice object corresponds more or less to a sung note. If the pitch deviations within a note are too large or the audio material contains noisy components that interfere with the analysis, this also results in two or three slice objects per note.



1. **Slice Object:** The mid pitch of a slice object determines its position in the graphic independent of the set progression of the pitch inside the slice object.
2. **Pitch Curves:** The resulting pitch progression is displayed with a yellow pitch curve. The original pitch progression is displayed as a blue curve.
3. **Selected Slice Objects** can be edited with the Move Tool. (see below)
4. The vertical axis is the pitch, the corresponding notes are displayed as a **piano keyboard** on the left border. Individual keys can be removed from the pitch grid (see below) by clicking on them (displayed in gray).
5. Similar to the arranger (view page 35), the displayed time section or the pitch range can be controlled with the **+/- buttons** and the **scroll bar**.
6. The **play and stop buttons** at the bottom left can be used to start and stop the playback of the project. **S** causes the audio object to play solo in the Vocal Tuner.

7. **Tools** for editing pitch (see below)
8. „**Auto**" Automatic pitch correction
9. „**Reset**" removes all edits and returns all settings to their original status.
10. Activates the **pitch grid** for automatic pitch correction.
11. The **Naturalness** slider sets the intensity of the automatic pitch correction
12. „**Bypass**" temporarily deactivates the effect

Editing Pitch

There are three tools available for editing pitch:



Move tool: You can use this tool to select slice objects for the editing by simply clicking on them.

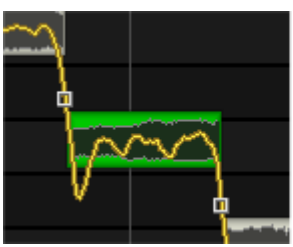
Ctrl+click enables the multiple selection of individual slices. Clicking on an empty area of the editing window and dragging a selection frame is another method for selecting several slice objects simultaneously. Selected slices can then be moved vertically, i.e. moving the pitch.

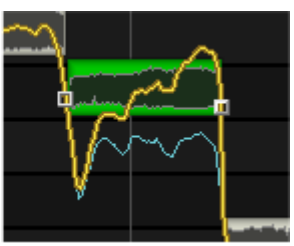
If "pitch grid" is active, the slice objects always snap precisely to the semitones of the chromatic scale.



To limit the snap function to specific keys (e.g. G minor) individual notes on the piano keyboard can be deactivated by clicking on them. The slice objects will then snap to the next "allowed" semitone.

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 while retaining the small changes in the basic frequency (vibrato).





The handle at the end has been moved up to create a rising pitch progression. The small pitch fluctuations remain intact.

Double-clicking on an individual pitch slice makes it possible to enter the pitch more precisely in a +/- cent deviation from the corresponding semitone.



Cut Tool: You can use this tool to cut slice objects and create two slice objects that can be edited separately. This does not affect the pitch of the slice object.

It is possible, however, that a slice moves when cutting because the pitch of a slice displayed is only ever an average value across the total pitch progression within the slice.



Draw Tool: This tool can be used to directly draw the pitch curve. If you hold the **Shift** key while drawing, a straight line will be drawn between the start position of the drawn curve and the current mouse position.

If a pitch curve extends beyond the borders of a slice object, the two slice objects will be joined together.

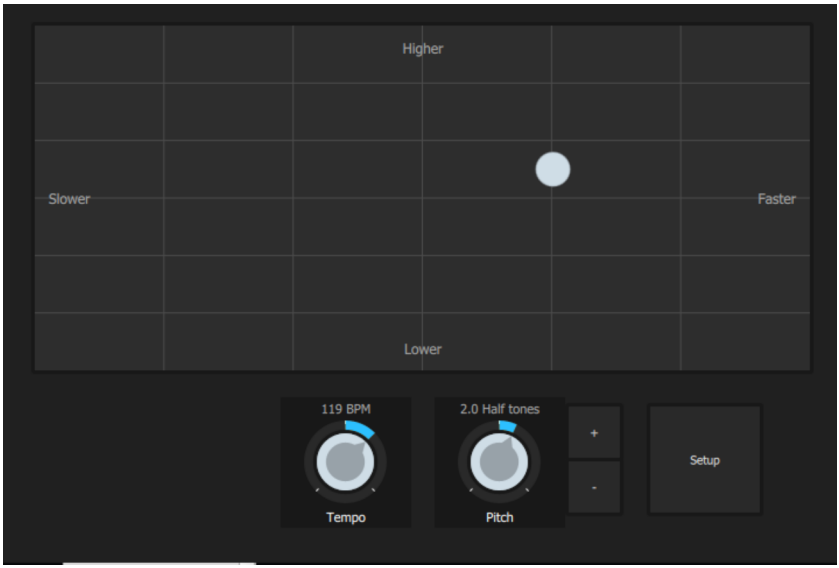
Automatic Pitch Correction

The "Auto" function for automatic pitch correction can be found beside the draw pitch function. The "Auto" button moves all selected slice objects to the next semitone.

Single notes can be deactivated by clicking on their respective keys on the piano keyboard. The will result in the note being moved to the next available semitone during the correction process. This makes it possible to limit the automatic correction to specific notes in a key.

The "Naturalness" slider determines how much the original pitch progression is retained. With small values, the natural vibrato of the voice is radically "flattened" and the famous "Cher effect" results.

Tempo pitch/resample



This effect device changes the object's speed and/or pitch.

Note: This effect may start automatically if you use loops with different original tempos in a project or when you make changes to the project tempo at a later stage. This effect is also used when you use the stretch mouse mode (view page 56). You can find more information about this in the audio object chapter, Change the playback tempo or pitch (view page 77).

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.

Pitch: This control changes the pitch independent of the object's speed ("pitch-shifting").

+/- buttons: With this function you can change the pitch in semitones.

Setup: This button opens a settings dialog where you can set the algorithm for tempo and pitch correction.

- **Élastique Pro:**This algorithm is used by default and provides optimal results for most audio material.
- **Élastique Efficient:** This is a version of the algorithm that saves computer power and has reduced sound quality as a result.

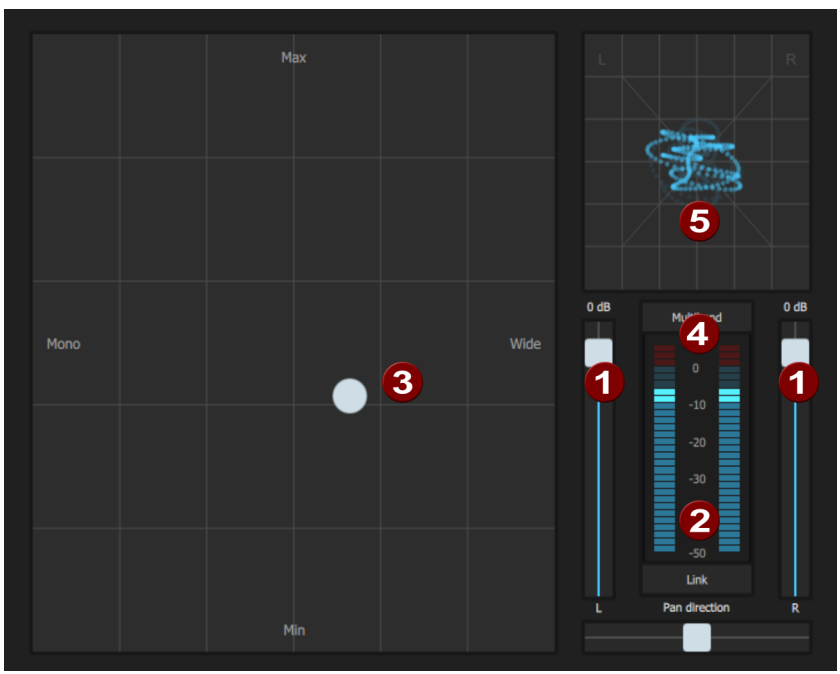
- **Monophonic voice:** This is a special algorithm for vocal solos, speech or solo instruments. It is also used for the Vocal Tune (view page 168) effect.
- **Resampling:** This effect corresponds with faster or slower playback of records or tapes. Every change in tempo results in a simultaneous change in pitch. This function requires very little processing time and is a popular design element for "Mickey Mouse" voice effects or drum loops, for example.

Note: Other algorithms (e.g beat marker stretching) are available for older soundpool samples. These ensure that older Music Maker projects sound exactly the same as before in the new version of Movie Edit Pro. However, these algorithms cannot be used once the sample has been changed to the default Élastique algorithm and the settings dialog has been closed.

Stereo processor

With the stereo processor, you can determine the positioning of the audio material in the stereo panorama. If the stereo recordings sound unfocused and undifferentiated, an extension of the stereo base-width can often provide better transparency.

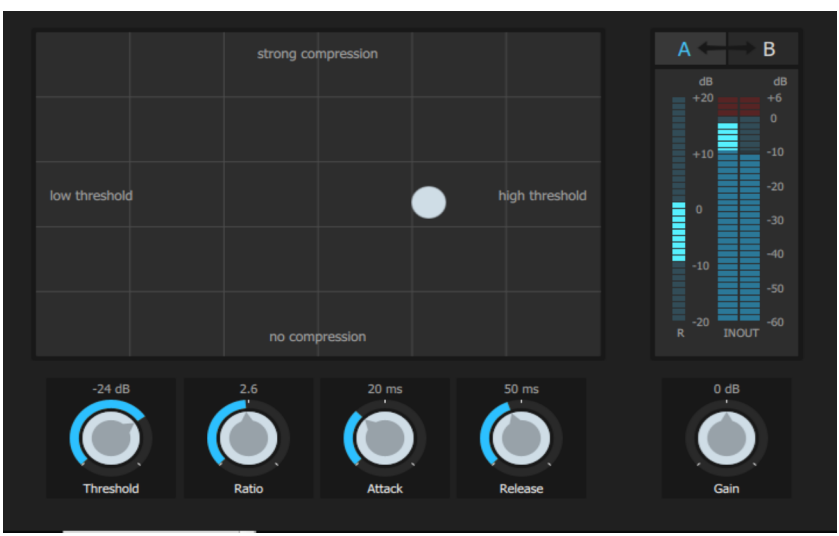
Use the maximize feature to move the echo (e.g. into the foreground) and improve the stereo picture.



1. **Volume controller:** Adjusts the volume of every single channel, thereby adjusting the entire panorama. The reduction of left and right levels is displayed under the control buttons.
2. **Panorama:** Use this controller to move the sound source from the middle into stereo panorama. The signals at the outer edges of the sound picture remain unchanged.
3. **Bandwidth/maximize sensor field**: Adjusts the base width between mono (extreme left), unchanged base width (normal stereo), and maximum base width (wide, extreme right). Raising the base width (values over 100) diminishes the mono compatibility. This means that recordings edited this way sound hollow when listened to in mono.

   Maximize strengthens the spatial component of the recording, which also increases the stereo transparency without influencing the mono compatibility.
4. **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.
5. **Stereo meter (correlation gauge)**: This provides a graphical display of the phasing of the audio signal. You can use it to check the alignment of the signal in the stereo panorama and the effect of the stereo enhancer. To maintain mono-compatibility, the "cloud" shown should always be higher than it is wide.

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.

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.

Threshold: Sets the volume threshold. Compression will be applied above and below the threshold.

Ratio: This parameter controls the amount of compression.

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.

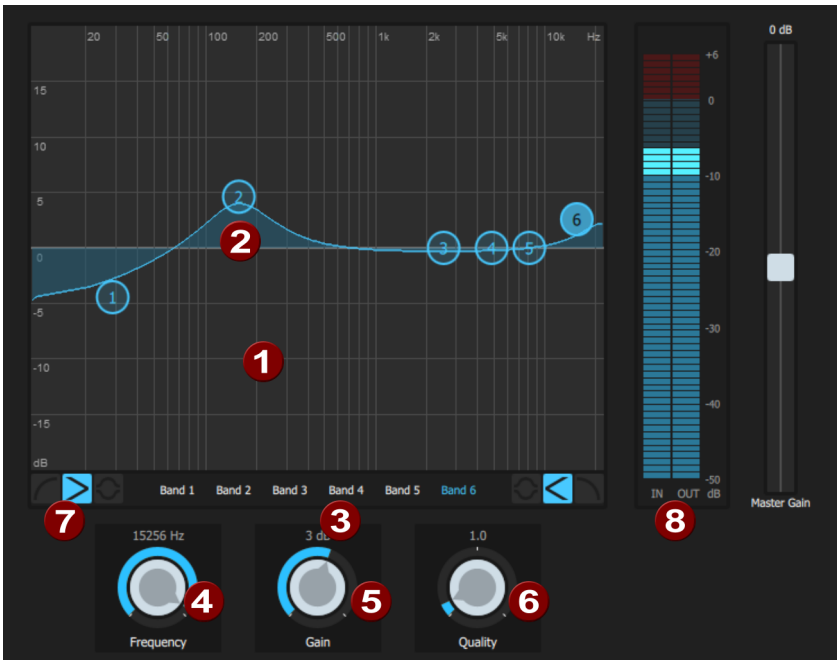
Gain: The gain controller amplifies the compressed signal.

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

Parametric EQ

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

You can influence the basic sound of the mix by boosting or cutting specific frequency ranges (low Q value) to give it more "depth" (lower mids 200-600 Hz) or more "air" (Highs 10 Khz). You can also decrease very specific frequencies (high Q-value) to remove unwanted noise.



1. **Sensor field:** The sensor field displays the resulting frequency response of the equalizer. The frequency is displayed horizontally and the increase or decrease of the respective frequency is displayed vertically.
2. Bullets 1-6 symbolize the six frequency bands. You can move them around with the mouse until you find the frequency response you want. The bandwidth (Q value) can be adjusted using the mouse wheel.
3. The faders under the filter graphic display the parameters of the currently selected band. You can use the knobs to set the values for each band more precisely:
4. **Frequency:** The center frequency of the individual bands can be set between 10 Hz and 24 kHz with the frequency controller. Freely choosing the frequency enables multiple filters to be set to the same frequency in order to have a greater effect.
5. **Gain:** This controller allows you to raise or lower the filter. Setting the controller to 0 deactivates the frequency band so it does not use any processing time.
6. **Q factor:** Here the Q factor (bandwidth) of the individual filters can be set.

7 Band 1 and 6 are special in that they can be operated using three different filter curves.



Peaking: This is the same bell shape used for the center bands.



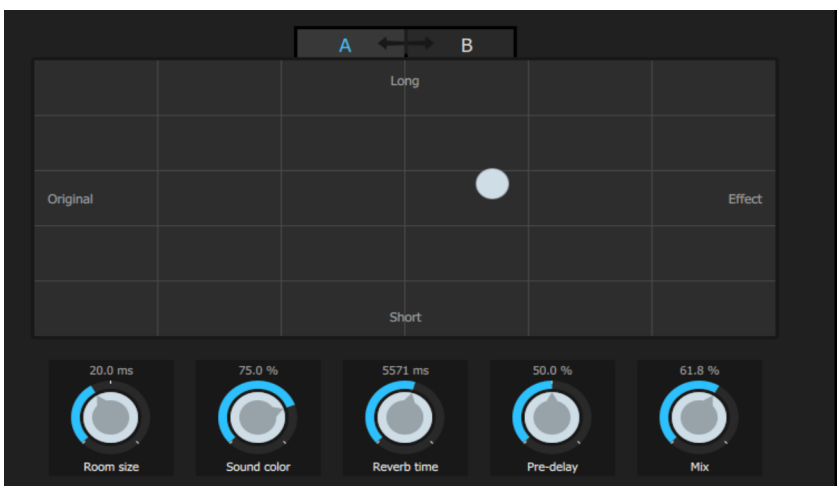
Shelving (basic setting): Starting from the set frequency, there is a gentle increase or decrease in the frequencies.



High-pass and low-pass: Starting from the set frequency, all higher and lower frequencies are filtered out.

8 It is possible to control the output level of the equalizer with the Peak Meter, and with the **output amplification** beside it, you can balance level changes resulting from EQ adjustments.

Reverb/Echo



The reverb effect device offers realistic reverb algorithms to add more room depth to your recording. You can control the sound of the reverb effect using the following parameters:

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

Tone quality: You may influence the sound characteristics of the effect within certain limits. The effect of this controller depends on the used preset. In rooms, "tone

quality" controls the dampening of the highs in the reverb (from dark to bright) as well as pre-filtering of the signal. With plate and spring presets, this fader determines the dampening of the basses as well.

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

Pre-delay: The reverb portion ("Mix") and the early reflections play a big role in the spatial perception of the sound. Here the time required for the perception of the early reflection is know as "Pre-delay". For sound sources that are close, the reverb portion is usually low and the early reflections reach the ear noticeably later than the direct sound. In contrast, sound sources that are far away usually have a high reverb portion and the early reflections reach the ear almost simultaneously with the direct sound. The length of the pre-delay can be used to influence the perceived "distance" between the sound source and the listener.

Mix: This controller sets the mix ratio between the original and the edited signal. For rooms you can move a signal further into the room by increasing the effect share.

Note: The presets contain basic settings for different room algorithms which can be varied with the parameters above. The presets need to be used in order to achieve all the reverb effect variations.

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 1m² 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.

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 projects. 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)

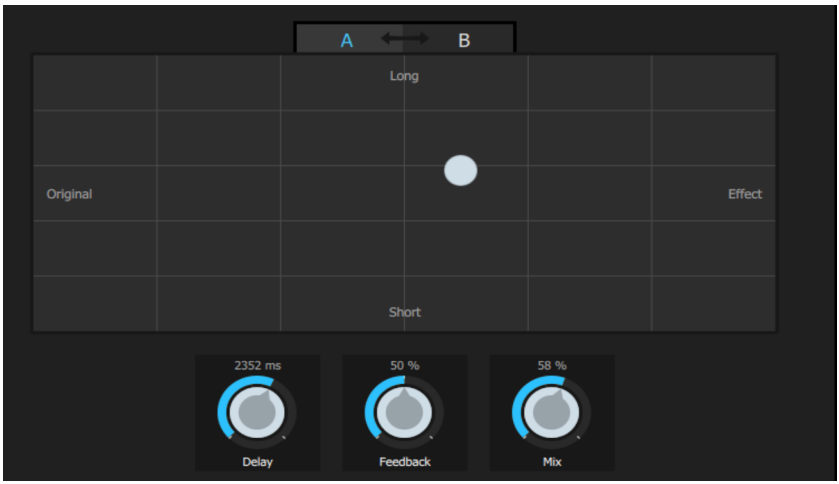
Aux: Room: Standard room for the aux path, mix 100%, medium-sized, medium diffusion, some distinct first reflections, low reverberation

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

Echo (delay)



This effect creates an echo. This results in the signal being played back with a delay. Since the output signal is sent back to the input of the effect line, the echo repetitions are more or less long.

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

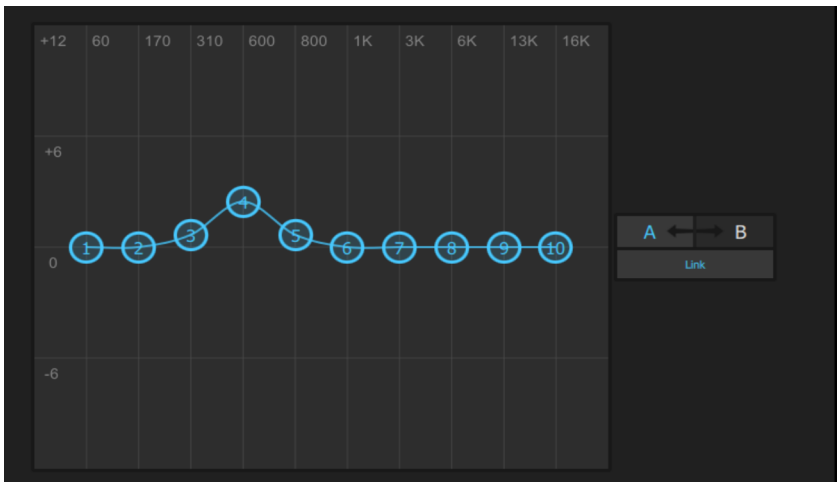
Feedback: This adjusts the strength of the echo. This determines how long the echoes are. If you turn the dial completely to the left, there is no echo at all; if you turn it completely to the right, there are seemingly endless repetitions.

Mix: This fader determines how much of the unprocessed original sound (dry signal) is subjected to the echo (wet signal).

Presets: Presets serve different purposes. In the upper part of the list there are presets that allow the delay time to be set using musical units. This is very useful for adding beat-synced echo to rhythmic material such as drum loops or arpeggios. The other settings can be used for special effects involving very short or very long delay times, e.g. "metallic" or "robotic" sounds. "Simple Echo" can be used to set the echo repetitions between 0 and 4 using the feedback slider.

10 Band 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 distortion. 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 effects rack.



Bullets 1-10: Each of the 10 frequency ranges can be separately made louder or softer with the 10 volume controllers.

A/B: 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.

Link: Using this feature randomly combines the frequency ranges with each other in order to avoid artificial-sounding overemphasis of an individual frequency range.

Distortion



This is a distortion tool that overmodulates the audio object.

Gain: With these faders you can specify the degree of distortion.

Cut-off frequency: Here you can set the frequency range you want to distort A specific frequency band will be made stronger with a bandpass filter. The filter deactivates if the cut-off frequency is set to 100%.

Threshold value: You can have the distortion applied once the level exceeds a certain threshold value, so that quiet signals remain undistorted.

Volume: Here you can set the volume of the distortion. This allows you to even out a stark increase in volume which can be caused by the distortion.

Tip: Be sure to try out Vintage Distortion (view page 215) or, if you have the Live version, the VANDAL SE (view page 220) amp simulator for authentic guitar sounds!

Filter

Note: This effect is only contained in Music Maker for the sake of compatibility with older projects. You can get better results by using the parametric 6-band EQ (view page 175) or the Vintage Filter! (view page 212)

The filter controls the volume of specific frequency ranges similarly to the Equalizer. You can use the filter to completely suppress frequencies, which can in turn create quite strong distortions.

Frequency: Here you can set the frequency you want to filter.

Level: Here you can set the strength of the filter. The frequency can be increased or decreased.

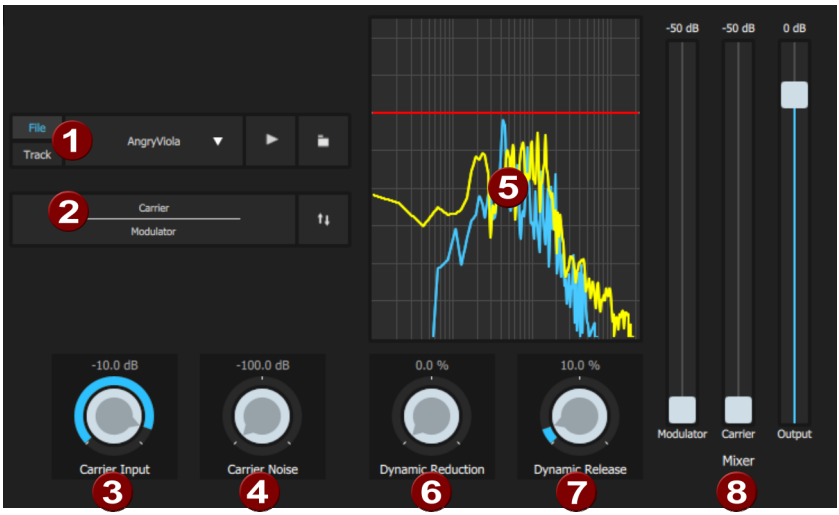
Q factor: This is the filter Q factor. This defines the filter bandwidth around the frequency to be increased.

Volume: Here you can even out volume differences resulting from the filtering.

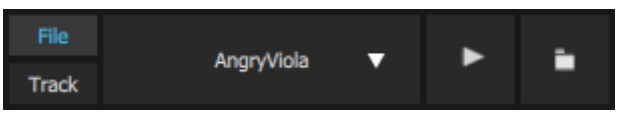
Vocoder

The vocoder works as follows: Carrier material (e.g. a string instrument pad or synth chord) is affected by a modulator (e.g. language or singing) to give the impression that the pad sound is “speaking” or “singing”. In addition, rhythmic pads can be created by modulating an area with a drum loop.

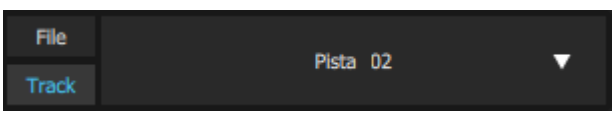
This works by transmitting the modulator's frequency characteristics (language) to the carrier (chord).



1

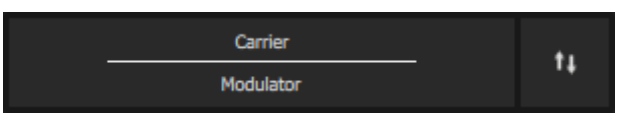


Select the carrier signal for the vocoder here. Click the arrow button to select one of the predefined carrier samples in the list field. The carrier sample can be previewed via the small "Play" button. Another carrier sample can be loaded via the folder icon.



By switching to "**Track**", the output signal of another of the project's tracks can be used as the carrier signal.

2



By clicking the double-arrow button you can swap carrier and modulator signal. The object's audio signal will then be modulated by the selected sample or track signal.

3 Set carrier signal volume with the "**Carrier input**" in the middle.

4. Material containing all frequencies in equal amounts, such as strings, orchestra chords, broad synthesizer pads, hissing or wind noise, are particularly suitable for carrier samples. If this is not enough, additional white noise can be mixed into the carrier signal with the "**Carrier Noise**" fader to improve speech clarity.

5. **Filter graphic:** Here you can draw any frequency progression you want with the red line in order to optimize the vocoder output. For example, you can get rid of disruptive bass frequencies by adjusting the curve downward in the left area. Or you can boost weak highs by adjusting the curve upward in the right area. The yellow line shows the frequency curve without filters, the blue line the frequency curve with filters.

6. **Dynamic Reduction:** 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 hand, the low-level portions of the modulator signal are ignored in order to prevent modulation of the carrier by breathing or noise.

7. **Dynamic Release:** Influences the speed of adjusting the vocoder to the modulator spectrum. As this value increases the vocoder starts to follow the modulator more slowly resulting in softer, reverberated sound changes in the carriers.

8. In the **Mixer** you can also mix parts of the carrier and modulator signal to the vocoder output signal. If the output signal of a track is used as a carrier in the vocoder, this track will first be muted. In the vocoder mixer you can then make it audible again.

MAGIX Mastering Suite

MAGIX Mastering Suite is a special effects rack for use with the mixer master channel. The effects in the Mastering Suite are used as part of the mastering process, in which the mixed music piece is given a final polishing.



The **On/Off switches** switch the effects on and off individually or the Mastering Suite as a whole.



Each effect contains a list of presets from which individual presets can be selected. The list can be hidden using the arrow to the right.

Auto Mastering

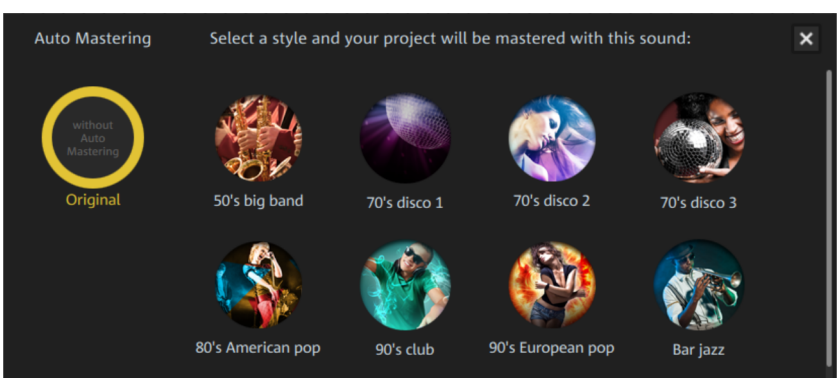
The Auto Mastering feature enables you to automatically apply the sound of typical musical styles from the past and present (e.g. 70s disco, 90s club, jazz etc.). The sound of the source material is analyzed and appropriate equalizer and dynamic effects are applied.

Now choose the musical style.



MAGIX Music Maker 2016 Live will analyze the audio material in the project.

The Auto Mastering results will be played back immediately. You can now click through the different styles to compare them.



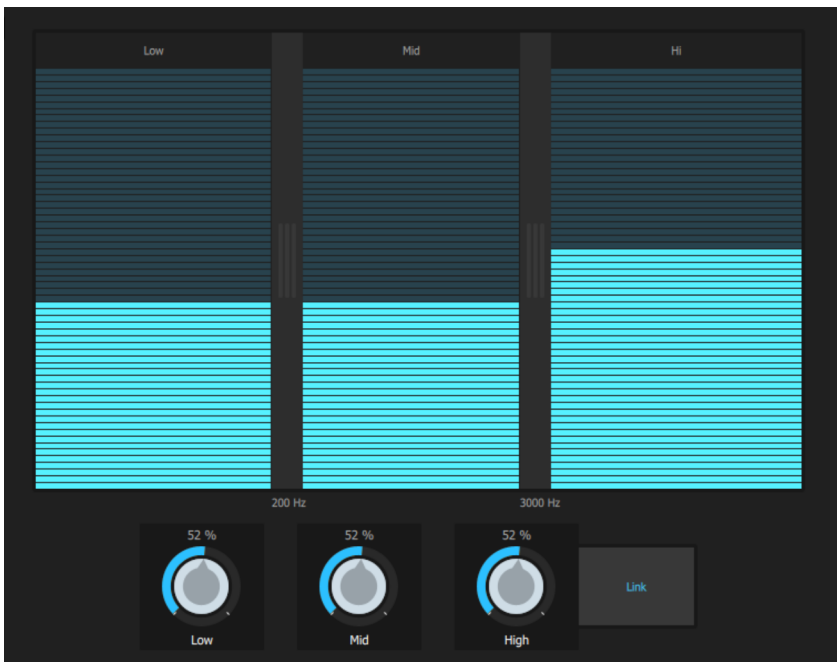
Selecting "Original" allows you to compare the edited version with the original.

You can also create your own styles. Select any type of audio file as a template in "Load & Analyze" if you want to emulate its sound. Formats such as MP3 or OGG are converted beforehand into WAV format. After the analysis, your new style is available in the selection list.

Stereo processor / parametric EQ

The stereo processor (view page 173) and the parametric EQ (view page 175) in the Mastering Suite are identical to those in the FX rack for objects, tracks and the master.

Multimax



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

The advantage of a multi-band compressor versus a "normal" compressor is that the "pumping" tendency and other unwanted side effects are dramatically reduced while editing the dynamics. For instance, it can prevent a bass top peak from "dragging down" the entire signal. Multiband technology also lets you specifically edit individual frequency ranges.

Setting the frequency bands: The settings of the frequency bands are changed directly in the graphic. Simply click on the separator lines and move them.

Lows/mids/highs: These knobs control the level of compression for each frequency band.

Link: When this button is activated and a fader is adjusted, all other faders are changed proportionally. However, the way the dynamics are edited is not affected.

Presets: In MultiMax, you can use Presets 2 to open further special features:

- **Cassette NR-B decoder**: MAGIX Music Maker 2016 Live simulates decoding of Dolby B + C noise suppression if a Dolby player is not available. Cassettes recorded with Dolby B or C sound more muffled and slurry if played back without the corresponding Dolby.
- **De-esser**: These special presets help to remove overstressed hissing sounds from speech recordings.

Non-real-time effects

All the effects mentioned above are calculated in realtime. Some audio effects are not calculated in realtime. When you apply the effect to an object, copies of the audio material are created for calculating the effect after the settings dialog is closed. You cannot change the effect parameter in realtime during playback. However, no additional calculations are required during playback.

To change these effects, use the undo feature.

The following effects do not work in "realtime": Freely-drawn filters (only in the Live version), gater, reverse, invert phase.

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 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

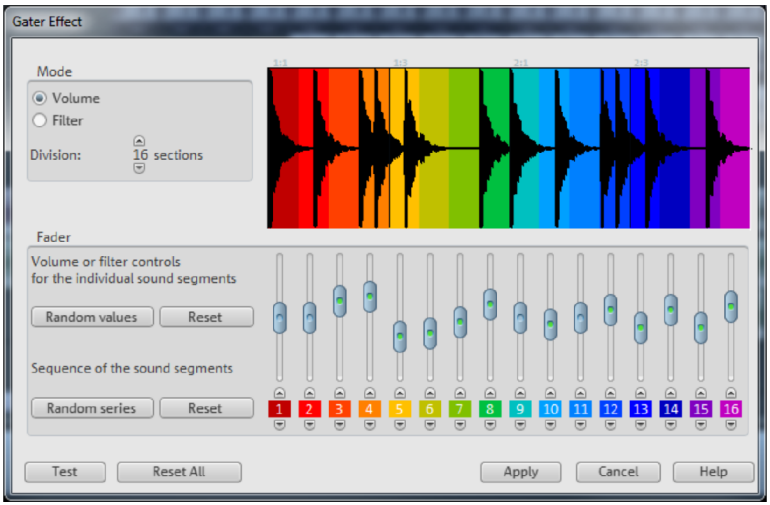
The creation of so-called "Filter-Sweeps" or "Morphing" is also possible:

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!

Invert Phase

With a stereo signal the phase of a channel is inverted. In other words: The waveform is flipped from top to bottom, all positive values are replaced by negative values and vice versa. This cancels all the signal components that are identical in both channels. The result is a special, hollow sound that only contains the extreme right and left positions in the stereo image. One side effect of this function is that the object is only played back through the rear speaker in a Dolby Surround system.

Gater



This special effect "chops up" a sample into a given number of parts (16-128) Select the number of steps, which will then be distributed over the duration of the sample. Additionally you can set the volume for each individual step using the fader, so that the hard sections can be produced in the same way as soft levels.

The Gater function can also work as a filter to create interesting sound deformations which are particularly good for Techno! This is useful when you want to create a cool sample from a sound without its own rhythm.

In "Division" you can set more than 16 sections to produce even more variations in the sound. . The fader settings are then repeated which means that step 17 has the same value as step 1 etc.

A real-time monitoring function allows immediate musical control of any fader change.

Principally, there are two operating modes which can be combined with each other:

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!

Gater 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 1. 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 pronumerous 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...

essentialFX

MAGIX essentialFX (view page 196) is a collection of "bread and butter effects" for the most important applications.

These are simple but solid tools with clear feature sets for daily application. They include fewer controllers and require less resources.

MAGIX plug-ins

Console

Some MAGIX plug-ins show a so-called "Console" at the top edge when they are opened – a display bar for managing presets with expanded settings options.



A menu containing available presets is located behind the display. To the right is a prev/next button, which lets you leaf through presets.



This button is used for saving presets. MAGIX plug-ins use a proprietary preset save format (*.fxml)



You can return the presets to their initial settings by clicking on the "Reset" button.



Bypass switch: Routes the signal directly to the output instead and bypasses processing. Internally, processing is continued so that you can toggle between processed and unprocessed material anytime.



A/B comparison: Very useful for trying out settings. The controller setting "A" memory is normally activated when the interface is opened.

As this is the initial status, "B" also contains the same settings. If you would like to experiment without losing the current setting, press the "B" buttons and try other settings. To transfer the values to "A", press the copy button between the two letters.



"?" button: This opens the online help for the plug-in.

Parameter smoothing/ Controller knobs

Each plug-in offers soft controlling. Pot settings are softly faded internally from the old value to the new one. This is particularly noticeable when playing in "Live" mode. Due to performance reasons, switches (e.g. on/off) and some settings of VariVerb II that change delay times directly or indirectly are excluded from this action.

Use the mouse wheel to move the knobs (pots). A combination of the mouse wheel and "Shift" key slows down the increase or decrease by a factor of ten. Double-clicking resets the knob to the original value.

Vpot Controls

Some controllers snap to the middle setting, which may be useful for quickly returning to a "neutral" status. It is extremely difficult to adjust the fine settings within close proximity of this snap point. You can temporarily deactivate this snap mode by holding "Shift" before touching the controller.

Use the mouse wheel to adjust the controllers. A combination of the mouse wheel and "Shift" key reduces the increase/decrease by factor ten.

Apropos the controller movement, note that all plug-ins follow the host settings regarding linear or circular mouse movement. You can usually choose whether you prefer up/down or a circular movement to adjust the value.

essentialFX Presets

By clicking on the tool symbol in the graphic display, you can open the presets.

Under "**Tweak**" you can find specific settings options for each effects device.

Under "**eFX Globals**" you can find settings options for graphic level display as well as mouse control.



eFX Globals

These settings apply to all Essential FX.

Metering: Here you can set the meter display.

- **Decay Time** controls reaction speed.
- **Peak Hold** controls the hold of the highest peak.
- **Brightness** controls the display brightness.

Mouse: Here you can set the display reaction to mouse movements in the essential FX graphic display.

- **Linear mode** lets the faders move in response to vertical and horizontal mouse movements.
- **Circular mode** lets the faders be controlled by circular mouse movements.
- **Mode As Host** lets the faders move in response to the mouse exactly how mouse settings in MAGIX Music Maker 2016 Live specify it.
- **[Shift] Factor** specifies the factor for fine adjustment of individual faders with the mouse with simultaneously held Shift key.

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 are combined into a single plug-in. They normally differentiate in terms of delay time, type of modulation, and degree of internal feedback.



Chorus flanger parameters

IN / OUT: Here you can set the input and output level.

mode:

- **Stereo chorus:** Compared to mono chorus, two copies of the original are created, modulated against each other in pitch, and then fed accordingly to the set mix ratio to the left and right output channel.

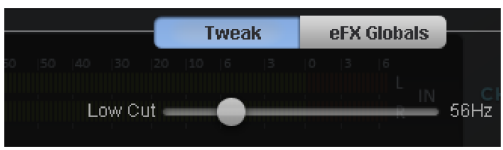
- **Mono Flanger & Stereo Flanger** In contrast to the Chorus Effects the lower delay periods and a slightly changed modulation are processed.

- Ensemble: This creates a denser chorus, similar to Boss/Roland CE-1: Instead of two voices, six are generated. Two internal sine LFOs for de-tuning, whereby for both LFOs the second and third voice phase length by 120°. This results in a denser-sounding effect that is also less warped.

- **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.
- **phase:** This fader moves the right channel's oscillator phasing relative to the left, wave is put back to the right. So that the Tremolo effect drifts apart in the stereo field with ever increasing values. At 180° both oscillators work in reverse, therefore the stereo effect is at its strongest.
- **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.

Tweak

- **Low Cut:** This knob sets the filter frequency of a high-pass filter. Signal components below this frequency will be filtered out.



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 to create atmosphere or distortion effects.



Phaser parameters

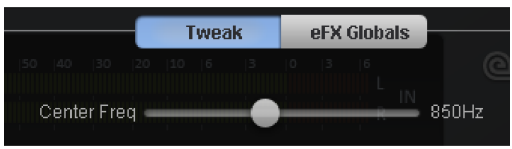
IN / OUT: Here you can set the input and output level.

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.
- **phase:** This fader moves the right channel's oscillator phasing relative to the left, wave is put back to the right. So that the Tremolo effect drifts apart in the stereo field with ever increasing values. At 180° both oscillators work in reverse, therefore the stereo effect is at its strongest.
- **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.

Tweak

- **Center Freq:** Sets the mid-frequencies of the phaser. The filter modulation acts on these frequencies.



Stereo Delay

The stereo delay is a simple too for typical bread and butter delay effects. The stereo delay offers the "analog algorithm", which features the sound of echo devices of yesteryear.



Stereo delay parameters

IN / OUT: Here you can set the input and output level.

Mode: This selects between the essential algorithms.

Digital: Normal, transparent delay

- Analog tape: Analog tape delay simulation. In this mode, a band echo is simulated with a typical compression and saturation behavior, including phase shifts with high feedback settings.

Analog BBD: Simulation of a bucket brigade delay (BBD, bucket brigade delay). 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. BBDs create different delay times by varying the system beat (clock), meaning that for short delays the beat is faster, and for longer it is slower.

- **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).
- **Delay L/Delay R:** Specify the delay period for the left and right channels here.
- **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.

Tweak

- **Feedback Low Cut:** This control sets the filter frequency of a high-pass filter for the "feedback". Signal components below this frequency will be filtered out.
- **Tape / BBD Noise:** Here you can control system noise for both analog modes. Especially if you work with high feedback rates, noise can create quick or stable oscillation, making the effect even more authentic.
- **BBD Stages:** Here you can determine the count of For very long delays, chips with many memory cells are used. This explains why bucket brigade echoes with long delays sound so muffled and dirty. Please keep in mind that the shorter the delay, the faster is the "virtual" system beat. For performance reasons, the system beat is limited. The limit is displayed below the delay control (with deactivated "tempo sync") as soon as it is reached, e. g. 46 ms **(min)**.
- **BBD Compander:** Here you can simulate Compander settings. Due to per-cell loss, BBDs have low system dynamics. For this reason, some have an integrated compander (compression at the input, counter-expansion at the output). Strong compander settings interact noticeably with the input signal, especially with high feedback, because the input effects the expansion ration at the output, even when there is no signal at the input.
- **BBD Clock Drift:** This parameter can add drift (during audible jitter effects) by slightly varying the system beat of BBD cells. It works similarly to an LFO, but is randomized.

Vocal Strip

This plug-in combines several components in one special tool which is ideal for working with speech or vocal tracks. Virtually all recurring voice signal edits are integrated in a compact, simple interface.



The signal flow is set by the e_FX_VocalStrip and is directly represented by the position of the fader.

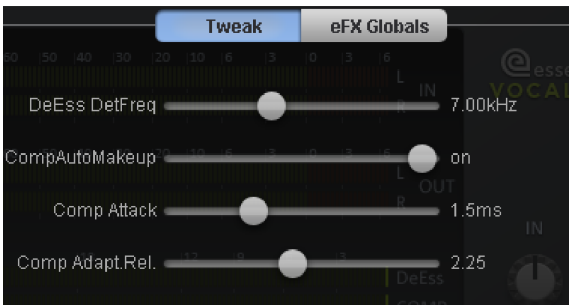
Vocal Strip Parameter

IN / OUT: Here you can set the input and output level.

- **highpass:** This fader determines the cut-off frequency for a steeply sloped highpass filter (24dB/octave) to remove part with low frequencies, such as rumbling or noises created when touching the microphone.
- **gate:** With gate you can attenuate the signals that fall below the threshold. Here, a smooth curve and a maximum 'softening' of up to 24dB is used to avoid hard transitions.
- **DeEsser:** The effect is very similar to that of the eFX_DeEsser. Here, however, the application frequency is set. The filter used in eFX_VocalStrip works in another range. The fader determines the degree of reduction.
- **compression:** For the most part, an eFX_Compressor component contributes to working parameters for optimizing voice recordings. The further the fader is turned the lower the threshold and higher the compression ratio. The Attack and Release times are selected according to the program.
- **tone:** This EQ corresponds principally to the filter network, which is also used in the eFX_TubeStage plug-in. With this you can simply and effectively calibrate the sonic balance of the voice signal, e. g. for better integration into the mix.

Tweak

- **DeEss DetFreq:** Determines the frequency of the filter used for detection, and filter blocking in the signal route. Typically the sibilants in speech or singing voices are in the 6 - 8 kHz range.
- **CompAutoMakeup:** The maximum level is retained while overall level is reduced.
- **Comp Attack**: Here you can determine how fast the compressor responds after reaching the threshold.
- **Comp Adapt.Rel.:** Rising values cause the compressor to work increasingly with "Adaptive Release". This means that the longer and harder the compressor intercedes upstream in the signal path, the longer is the resulting release phase.



Note: Detailed information about compressor-specific settings can be found under "essentialFX > Compressor > Compressor Parameter".

Analogue Modelling Suite: AM-Track SE



AM-Track SE is a purely analog compressor simulation. The tape simulation contained in the full version (Analog Modeling Suite AM-Track http://pro.magix.com/de/audio-plugins/analogue-modelling-suite.175.html) is not included. This is used primarily for so-called "tracking", i.e. editing individual channel strips or subgroup signals. The compression takes place in the "vintage" setting,

whereas an additional "vca" setting is available in the full version. The plug-in recognizes the number of incoming signals and, if necessary, edits the signal in mono.

Am-Track SE limitations compared to the full version:

- No tape simulation
- No "VCA" mode in the compressor, only "Vintage" operation can be implemented along with the presets.
- Some expert compression settings (view page 208) are integrated in the interface, parameters: "ahead" (pre-delay) and "adapt release" (switchable release automation) are missing.

(Release automation is always activated in the SE version which corresponds to the set value of the mid position of the 'capacity' controller.)

Below, the full version of AM-Track is explained and its features compared to "normal" software compressors and the available parameters.

Compressor Section

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

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

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

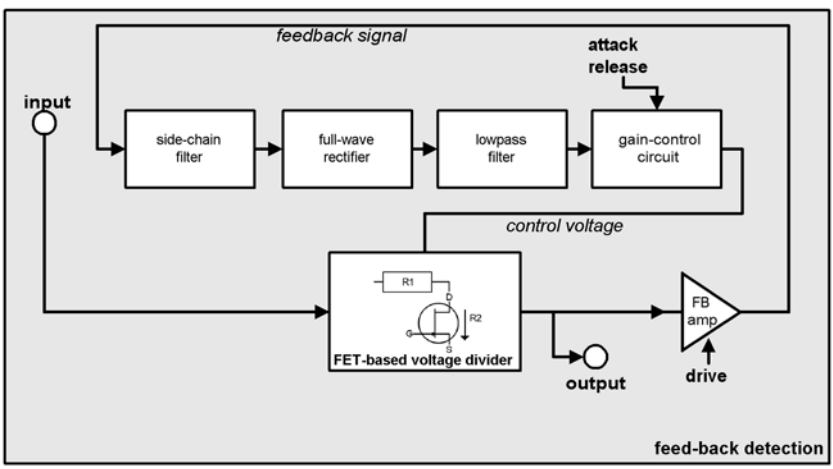
The two operating modes of the AM-Track may be selected using the switch "vca/vintage":

VINTAGE mode



This mode appears as a preset on start-up of the AM-track. It has fewer parameters than the VCA mode and has audibly less of a "surgical" quality, but more of a trimmed sound character.

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



The disadvantage is that the set time parameters for attack and release depend somewhat on the program. In some cases, it's actually advantageous for vocals, bass, or even drums (e.g. subgroup, ambience, mics). You should rely completely on your ear for this.

Because of the feedback topology, the maximum gain reduction is usually lower than VCA devices with forwards detection, usually 20 dB. This way, there is almost always a level matching amplifier in the feedback loop. The "drive" controller of the AM-Track regulates the feedback amplification here. This can be so high that the detector may become saturated by a loud input signal, resulting in signal peaks being

swallowed up. Simultaneously, the setting becomes more intense as quieter signals also start reaching the threshold. You can creatively implement this according to the situation to create complex signal compression which doesn't much sound like dynamic compression due to the transients that slip through and release at high "drive" levels.

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

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

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

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

VCA Mode



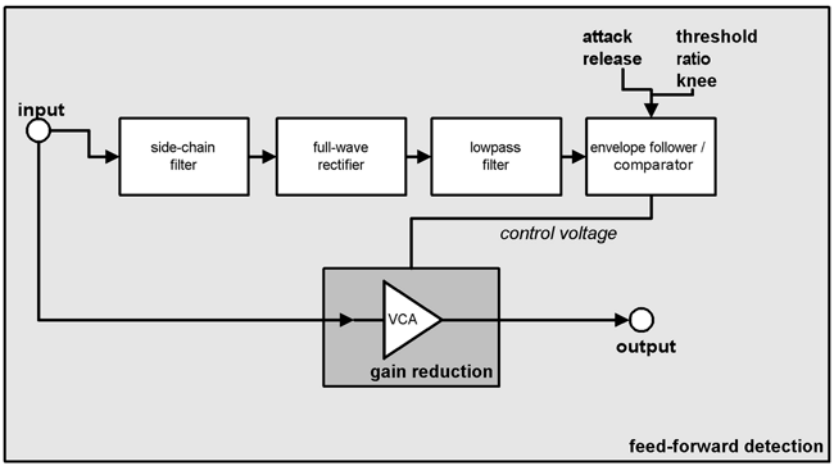
In VCA mode, the parameter selection and the circuitry design correspond to a modern compressor with a VCA element as the control circuit and a forward automatic gain control in the detector section ("feed-forward design", i.e. the controlling signal for level reduction is taken from the input signal).

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

In VCA mode, the control signal is accessed at the input where it firstly executes a controllable low-cut (which may be set up via "detector hp freq" in "Expert" mode). The filter makes sure that deep-frequency signals have less influence on the

adjustment settings; this is a popular trick for more power, e.g., when using drums in a sub-group.

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



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

Compression Parameters

Vintage Mode

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

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

VCA Mode

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

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

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

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

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

Compression Expert Settings

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



- **Look ahead**: AM-Track is always ahead of the signal. You can specify how many milliseconds you want to "look ahead". The audio signal path is delayed according to the signal route so that the detection circuit is fed first with the input signal (so-called "look-ahead delay"). You can increase the attack time and still avoid fast peaks. The latency compensation in the host program ensures that other tracks in the project are adjusted and that no time delay occurs. For percussive signals, you can even set the delay all the way to "0".
- **Detector hp filter**: This high-cut filter is positioned before the two compressors' detection circuit. You can use it to specifically exclude basses and mids from these rules. Complex signals with bass and hi information like a subgroup or complete mixdown produce fewer "pumping" artifacts. This is because low-frequency signals feature the most power and therefore always trigger regulation and modulate other frequency ranges in the volume
- **Auto makeup gain**: Normally, you have to continuously adjust level reduction to generate "compression" at the same maximum level. This is done by activating auto makeup gain. The volume difference expected from the set working parameters is determined and applied as an output factor after master regulation. If you prefer to adjust the "classic" level reduction and amplification manually, you can deactivate this function.
- **Adaptive release**: This is "semi-automatic", i.e. you can roughly adjust the release time, and AM-Track reduces it according to the current signal power from "a little (1%)" to "considerably slower (100%)". In "Vintage" mode, this regulation method is particularly intense, since it affects the feedback loop process. For instance, if you are editing vocal tracks or dense, complex material, it can sound "calmer" or more "musical" if adaptive release is activated.
- **Capacity**: Adjusting the "capacity" controller sets the time response of the "adaptive release". The greater the capacity, the more sluggish the release adjustment. You can therefore influence larger parts of the compensation response. For instance, if you want to use vocals that have been "moved forward", you should use a short release time (maybe 80-100 ms) and a greater value for semi-automatic (e.g. 80). Vice versa, you can reduce automatic feed by switching the relation (smaller capacity, generally greater release time).

- **Comp mix**: Parallel compression is a popular "studio trick", particularly with complex material. Adding the original signal retains the transients and spectral balance of the source. You can add compression by turning the mix controller. A mixed signal is particularly discreet, more transparent, and less "squishy" with vocals, whereby the compressed portion usually has a higher level reduction than without adding the original.

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



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 artefacts 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" in terms of this delay also means that typical tape echo sounds can be mimicked, e.g. tape speed fluctuations and reduced highs during playback ("feedback"). The feedback has a two-band filter that can be used to create dark, high, or mid repetitions depending on the settings.

These properties can be useful, for example to create "wild" dub/reggae-style delays that move towards the center of the sound with each repetition and even grind slightly. In this case, "analog" means that you cannot digitally overdrive the delay. Even in a 'looped' repetition, the signal cannot be distorted indefinitely, but it is 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 "Flange" effect is similar to that of the chorus, but does have a different technical and historical background. It came about by chance: Someone (various sources say John Lennon) slowed down one of two running interconnected tape machines in a studio with his hand. 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, but it has a lower delay time (less than 10 ms). "Release" or signal doubling is not highlighted here; the result is a much more creative frequency response deformation.

A "complete" flange effect will definitely require feedback: The flange portion is returned to the input to increase the effect. People often talk about the "jet effect", since it resembles a jet on take-off.

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 like chorus and flanger. However, it controls the frequency response of a modulation source as well as the pitch. There are various filter types and modulation sizes available for this.

Possible areas of application are synthesizer sounds (filter sweeps on pads) or creative distortions of drumloops (e.g. for variations, fills, etc). With guitars you can

create typical 'wah' effects: either by tempo modulation or in a special mode, modulation via the envelope curve. The decisive factor is the current signal strength above the frequency set for the filter.

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 project.

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



The chorus pedal creates characteristic "floating" sounds which one typically recognizes from guitar or synth pads. You can add acoustic "depth" to an instrument to add more power to the sound or to create the illusion that it exists multiple times.

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 in at least two: direct sound and effects part. The double 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 double a guitar track for instance. A short delay in the mix already sounds "doubled" 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" distorter for crunch and lead guitar sounds. If you like typically "British" amp sounds and want to quickly record a guitar track with little effort, this pedal is for you.

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

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

- **Low:** The "bass" controller. This allows you to set the share of basses, even after the distortion. The type of prefiltering is important for guitar amps in particular, and is characteristic for the basic sound. You should set the bass controller depending on the basic sound of the guitar and the sound you are aiming for ("powerful" or "cut").
- **High:** Mainly controls the share of highs before and after the distortion. If you are not using an external guitar speaker as a monitor, we recommend setting the controller to the middle position or even moving it slightly to the right. This way the "sharp" highs disappear, which all guitar amps generate without the suitable loudspeaker. At the same time the mids stand out more, which gives the sound more "kick". On the other hand you can further emphasize the highs if you want the sound to be more neutral.
- **Drive:** The level of distortion. This controls the amplification used to operate the "virtual valve circuit" (max. 60 dB). As the level increases, the valve goes into overdrive and generates typical distortions. For a slightly distorted sound ("crunch"), it's sufficient to set the controller to 10-11 hours at maximum; the modeled circuit also 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 is better heard.

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 2016 Live. Nevertheless, there are some situations, for example, a more imperfect lo-fi sound would perfectly suit a drum loop or a synthesizer sound.

Remember, for example, the first hardware samplers from the 80s that usually only ran at 8 or 12-bit rates and at low sample rates. With the BitMachine, changing the sound with such an "antique" device is no problem.

You can use the BitMachine to bring back to life the times when minimalist and scratchy soundchips 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.

Furthermore, the effect has a modulation section with which you can 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

The following section describes the details of BitMachine:

"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. ¼ 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 SE



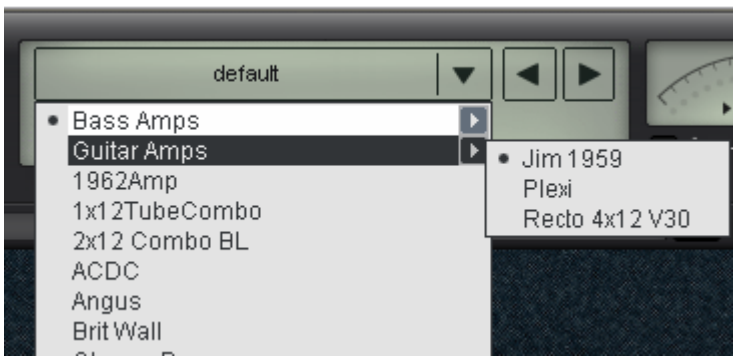
Virtual Guitar & Bass Amplification

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.

Quick start via preset selection

Would you like to know about everything that's possible with Vandal SE? Play yourself or use some of the 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.



Tuner

The best amp or the best simulation is useless if the guitar is out of tune. VANDAL offers its own chromatic tuning device for this. You can use it like any analog device: It automatically displays the note that has been struck (in octave) and the display visualizes deviations (in cents).



The following describes the major components of VANDAL. The stations are described according to their position in the signal chain.

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 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).



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 four "stomp slots" that can be equipped with effects 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 - 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. To guarantee that you are nevertheless able to get a number of different sound characteristics out of your Vandal SE amp, the amplifiers are set up variably. Internally, circuit designs work absolutely the same as the real devices. 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 pre-amp modes and two switchable end stage models. These basic configurations differ according to the selected preset.

The guitar amp is set up 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 a song.



Voicing: We have provided Vandal SE pre-amps 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 important points between individual amplifier stages and filters the signal, before it is distorted by the next stage. Move the curve in both directions and navigate through the spectrum using the "Freq" controller. 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 need on-board spring reverb. We relied on well-known reverb springs for modeling. 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 an "instant slap".

Next, the signal passes through the compressor stage **(Comp)**. This is a simple but extremely musical, visual design: The bass triggers a light source that is coupled 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 possibly high 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.

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 synched 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

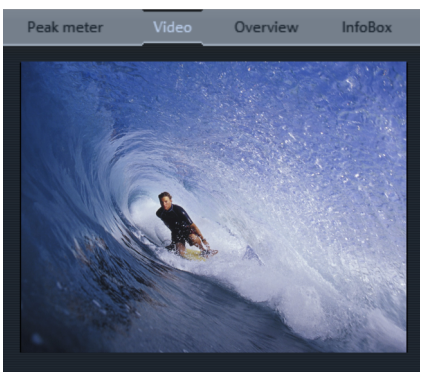
Video and bitmap formats

MAGIX Music Maker 2016 Live can load and export videos in the following formats: AVI, Windows Media (*.wmv, *.asf), MAGIX Video (*.mxv) and Quicktime Movie (*.mov). 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 (only in the Live version).

Video monitor



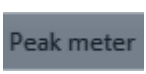
The video monitor can be opened by clicking on this button or pressing the **F3** key.



Both video monitors can even be positioned freely on the screen and adjusted for size. To adjust the size, right-click on the monitor screen and select the size you want in the context menu or make your own (user-defined). Please note that larger video monitors require more computing power.

The video monitor's size can be increased to the full size of the screen by double-clicking on the video monitor or by pressing Alt-Enter. You can end fullscreen by pressing Escape (Esc). Apart from the video monitor size, you can also add a large time display on the video monitor. Select “display play time” in the context menu and the current playback marker position is displayed on the video monitor. Foreground color, background color and transparency are selectable

Audio peakmeter



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

Shortcut: Shift + F4

Overview



In the Overview mode, you can view the whole project 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.

Shortcut: Shift + F2

Infobox



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

Shortcut: Shift + F1

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 project, 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 (view page 57)".

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 wee 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.

Video scrubbing

The scrub mouse mode is particularly useful for quickly finding certain positions within a video. To do this, activate the scrubb 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 project window 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 (view page 285) function in the "Edit" menu or button in the project window. Now you can replace the audio or the video track, or process each file separately. Rejoin/regroup the tracks with the "Export project" 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.

By overlaying of multiple videos or bitmaps, MAGIX Music Maker 2016 Live 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

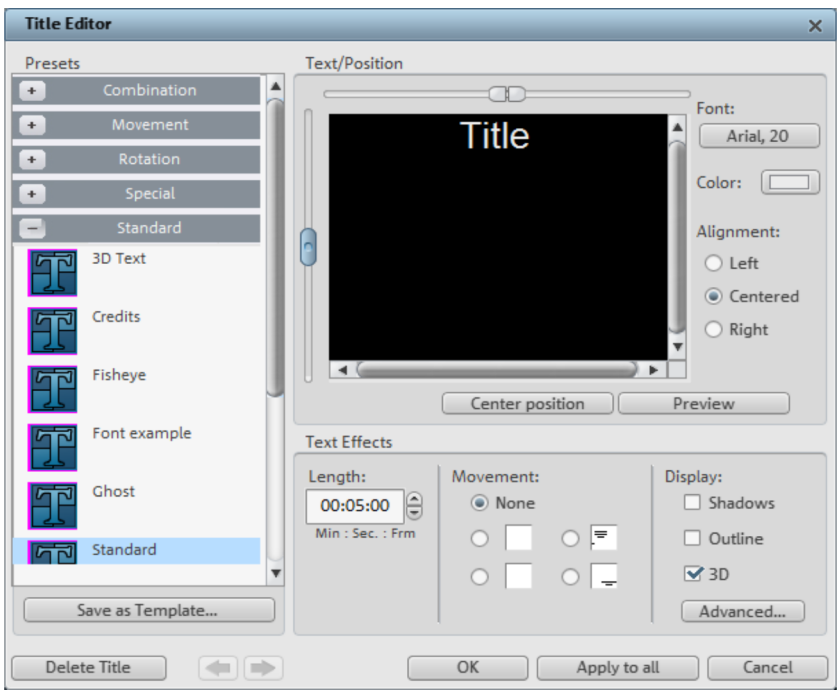
Text objects and title presets

MAGIX Music Maker 2016 Live has an option for inserting and editing titles. These can be things like animated text in music videos to indicate the artist and song or opening and closing credits.

The title templates ("Title" button in the Media Pool in the "Templates" tab) offer a good basis for creating titles. To add a title to your project, proceed as follows:

- Select a template. As usual, a simple click generates a preview in the video window. This lets you see what the title will look like like in the video.
- Once you've found the right title, drag & drop it onto a track in the arranger. This will create a title object at that position. Several title templates (e.g. YouTube templates) contain additional image objects and require two tracks.
- The title editor (see below) opens automatically. You can customize the text here. Clicking on "OK" closes the title editor.
- As with all other objects in Music Maker, title objects can also be edited. They can be moved freely in the arranger, faded in or out, shortened or extended.
- To open a title object again simply double-click on it or open the context menu with a right-click and select the option "Title Editor".

Title Editor



Enter text, e.g. for subtitles or opening and closing credits. Texts can be displayed in all of the installed fonts and colors.

Presets: The list on the left continas the title templates from the title folder in the Media Pool. 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 all the 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 monitor. 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: Here you can enter the font style, size, color and type.

Color: With this button you can 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 at 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 project. 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".

Length: Sets the duration of how long you would like to display the title. (You can also adjust the length of the title object directly in the arranger by dragging the lower handles to shorten or extend it)

Text Effects: This function allows you to add motion, shadows, and 3D effects, or a border. These settings can be adjusted in detail in the "**Advanced**" section.

Delete Title: Closes the title editor and removes the title object.

Arrow Buttons: If there are several title objects on a track, you can use the arrow buttons to switch between the these objects without having to close the editor.

OK: Changes are applied and the title editor is closed.

Apply to All: The settings in the title editor (font, color, effects etc.) are applied to all title objects. The text in each title object remains intact during this process.

If everything is as it should be, close the title editor by pressing "OK".

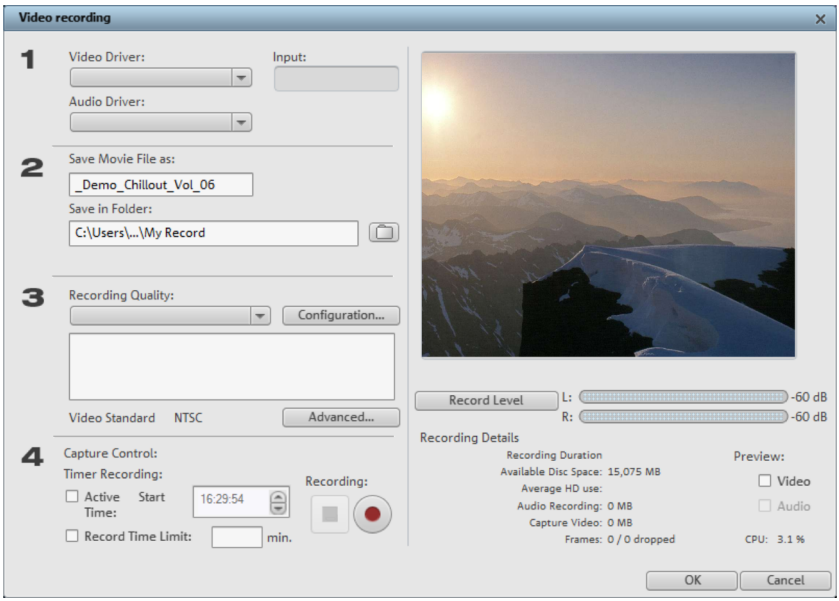
Video recording

MAGIX Music Maker 2016 Live can be used with USB cameras, graphic cards, TV cards, or video cards. Video recorders or other devices are connected to the video input of the video card, TV card or graphic card (either with RCA or S-VHS)connectors. If your card also has audio ports, these should be used for capturing and playing back sound so that the image and sound do not go out of sync during a lengthy video.

To record from analog sources:

- Select "Import > Video Recording" in the "File" menu.
- In the video recording dialog select the appropriate driver for your video and audio cards (if you have more than one installed). A video preview window is now displayed.
- Name your recording. Choose an appropriate name.
- Then select the recording quality in the "Recording Quality" menu. The default is set to the highest quality possible that your system can handle.
- Start recording by pressing the red record button and end it by pressing the stop button. Play close attention to the "dropped frames" display. If this number gets too high, e. g. 10 frames per minute or more, reduce the recording quality to prevent your PC from becoming overloaded.
- Click "OK" to end the recording dialog.
- You can check that everything works as it should by pressing the space bar to preview your recording.

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 (view page 233).

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 lead 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.

Source: 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

Display

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 2016 Live can also process such high-resolution video data completely. Within MAGIX Music Maker 2016 Live, 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.

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 (**co**der/**dec**oder) 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® video) have now become standard components of the Windows installation. Others 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.

Mixer



MAGIX Music Maker 2016 Live 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.

The Mixer displays eight tracks simultaneously by default. You can enlarge or minimize the mixer by dragging on the left or right border. You can view further tracks using the scroll bar.

Slider (Fader)

Each track in the project corresponds to a particular volume fader in the mixer, which controls the volume of all audio objects, synth objects, or a synthesizer in the track. (The fader has no effect on image and video objects.)



The stereo position for each track is 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 any of the controls resets it to its default passive setting (no boost or cut in level) that does not require processor output.



With the **REC-**button you can activate recording for this track. (see the "Track box and Instrument Icons (view page 34) section in the "Arranger" chapter) and Monitoring (view page 71).

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

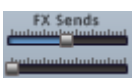


You can open the track audio effects rack with the FX button.

A lit FX track button signifies that effects are active in the track.

For more information on using and controlling the individual effects, please read the Audio effects (view page 163) chapter.

FX tracks



Two FX send controllers (FX1 and FX 2) are located below the plug-in slots.

You can define 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 for use as a send effect. A send effect differs from a normal effect found in the track (Insert) in that 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 reverb feature is activated by default, since it is the most essential way of using send effects.

The "Mute" button is used to switch the FX feature on and off. "Solo" lets you listen to the FX track by itself. The other tracks will be muted, but not the input signal of the FX track. This is why the peak meter of the tracks which send to the FX track are displayed in gray.

Master track

The FX button works exactly like it does in the tracks. It opens the **Master Audio Effects Rack**. The complete mixer settings including the FX tracks can be reset with the "**Reset**" button.

Mastering: Opens the MAGIX Mastering Suite.

5.1 Surround: This button switches the mixer to Surround Mode (view page 240).

Both faders control the total volume.



Link buttons: If the link button is deactivated, the volume of the right and left channels may be set individually.

5.1 Surround

MAGIX Music Maker 2016 Live 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).

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.

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 drivers, the loudspeaker settings normally have to be changed to 5.1 playback in the control panel. 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

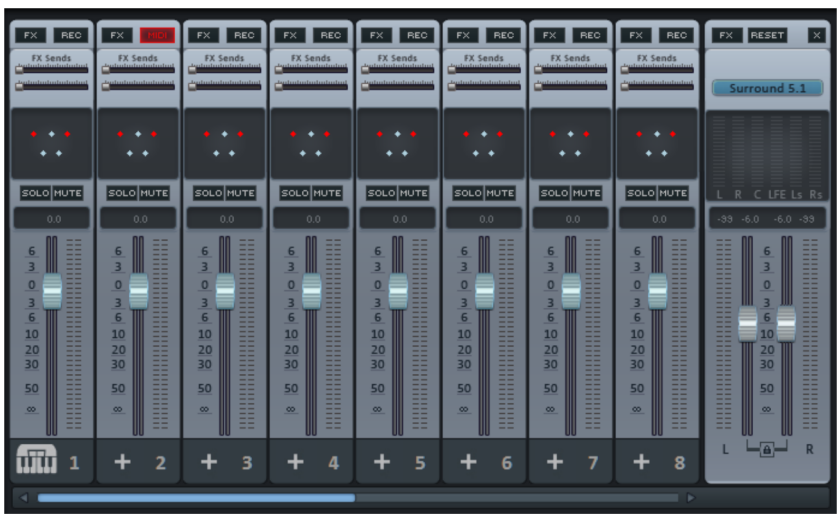
Surround exports can occur in any one of the following formats:

- 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 project -> 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 (view page 240)) which can be opened by clicking on the display.

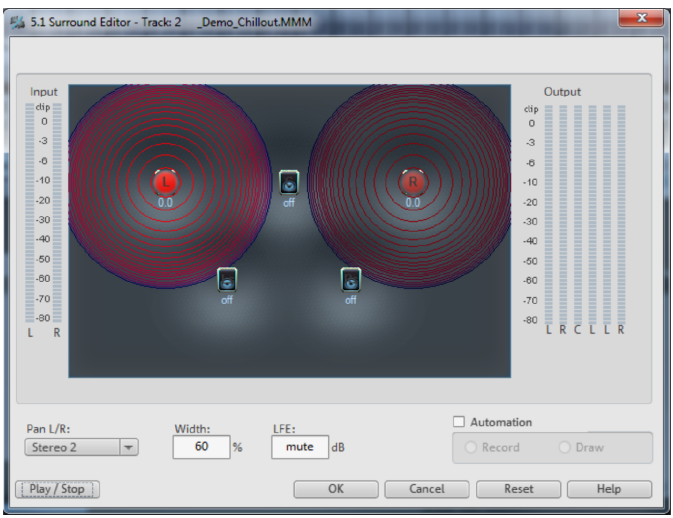
The Surround editor is also available to the FX tracks (see "Mixer"). For example, you can send the original track to the front loudspeaker **L/R**, the FX track however will remain at the rear loudspeakers **Ls/Rs**.

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 (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 (view page 238).

"**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.

Live Pads

The Live Pads are ideal for quick music production in realtime, live performances or sketching out ideas for new songs. You can control 16 matching loops, global pitches and effects via mouse, keyboard, MIDI keyboard or smartphone app (view page 246). This transforms MAGIX Music Maker 2016 Live into a musical instrument that can be played right away and intuitively. 50 premade Live Sets in 13 great styles are included. You can also create your sets from the Soundpools and your own recordings.

The operation of the Live Pads has been specially developed for and works perfectly with the MAGIX Music Maker 2016 Live Performer bundle including Novation Launchkey mini (view page 244).

Live Pads interface



Open the Live Pads by clicking on this button under the arranger or by pressing the K key.



1. **Pads:**Loops are started using the pads (view page 243).
2. **Pitch:** Like in the Soundpools, all melodic and harmonic loops in a live set are divided into 7 pitches. If you choose a different pitch, all loops will adapt to create a harmonic mix.
3. **REC**: If REC is active, objects added to the project via the pads stay in place and the live performance is recorded.
4. **Quantization:** When the pads are clicked, the loops don't start immediately, but right on the beat to ensure that beats and melody synchronize. You can set the time resolution for this (1 beat to 1/32 note) or deactivate quantization entirely.

5. **Presets:** Select one of the pre-programmed live sets from the submenu and load it to the pads.
6. **New Live Set:** Removes all samples from the pads.
7. **Save live set:** 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 project.
8. **Load live set:** With this button you can load your own or premade live sets.
9. **Settings:** In addition to some system settings, Sync mode can be deactivated here (see below)

Playing the Live Pads

Load one of the live sets supplied by clicking on "Presets". This fills the pads with loops and gives them different colors. Loops can be played back by clicking on the corresponding Live Pads using the computer (keys 1-8 and Q-I) or MIDI keyboard (see below).

As soon as a Live Pad is selected, playback begins. During playback the corresponding object will appear for each Pad, and then disappear again when the Pad is released (when recording with **REC** it will remain visible).



The pads that are being played will illuminate more brightly.

Pads in the same color form a group. This means that these loops are sharing a track and only one of them can be played at a time - for instance different variations of one drum loop.

Sync mode

By default, loops are played in **Sync Mode**, as if they were all started at the project 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 project. If the sync mode is turned off, loops will always be played back from the start. Use this mode if you would like to add solos or effect sounds or separate the beats in break beats. Sync mode can be deactivated through clicking on the gear icon.

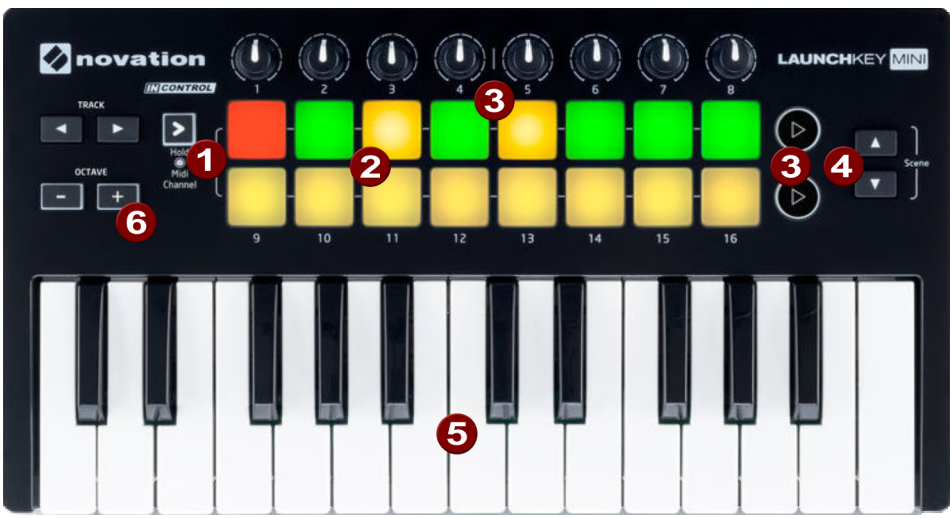
Your own live sets

Using drag & drop, you can add samples from the Media Pool to the Live Pads in order to put together your own live sets. If you're using loops from the Soundpools in addition, these also adapt to shifts in pitch. However, pitch shifting will not function with your own samples, or recordings that don't contain any information about pitch.

If using several drum loops that are played backed alternatively, these should be mutually exclusive. Therefore, they need to be grouped together. To do this, right-click on the pads you have selected and choose the same group number for all of them.

Use with Novation Launchkey mini

MAGIX Music Maker 2016 Live is specially designed for using Live Pads with Novation Launchkey mini.



1. The **InControl** button lets the keyboard be used in Live Pad Mode. In this mode you operate the loops with the pads and control global pitch with the keyboard. If InControl is deactivated, the keyboard behaves like a normal keyboard (see below).

   When the Live Pad dialog (view page 242) is opened, the keyboard automatically changes to InControl mode.

Live Pad Mode on:

2. **Pads**: Loops can be stopped and started with the pads. A yellow-lit pad indicates that a loop is loaded to this pad. When a pad is played, it lights green.
3. **Slider / Selection buttons**: You can control a filter effect for the loops with these sliders. With the selection buttons on the right, select whether you want the slider to be applied to the top or bottom row of pads.

   Note: The filter affects the whole group of pads that share the same track and are played alternatively. See above for more information)

4. **Scene buttons:** Load the next/previous live set with the scene buttons.
5. Change the pitch with the seven lower keys. The other keys do not have a function
6. The octave +/- buttons are not necessary in this mode. These should be switched off so that pitch selection can function.

Live Pad Mode off

1. By pressing InControl and one of the 16 Pads simultaneously, you can select the MIDI channel that's connected to the slider and the keyboard. This usually does not need to be adjusted.
2. **Pads:** The pads send the standard notes for a GM drumset to MIDI channel 10 (the standard channel for drum sounds).
3. **Sliders:** The sliders send controller values (CC20-28) that you can use to operate synthesizer parameters.

   Tip: These sliders are already preset in the Vita synthesizers and Vita solo instruments supplied.

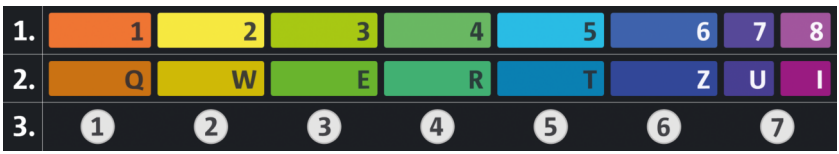
   The round selection buttons on the right do not have a function in this mode.

4. The scene buttons on the right do not have a function in this mode.
5. With the keyboard, you can play instruments as normal.
6. The octave +/- buttons shift the octave on the keyboard. The button lights up if the octave is shifted.

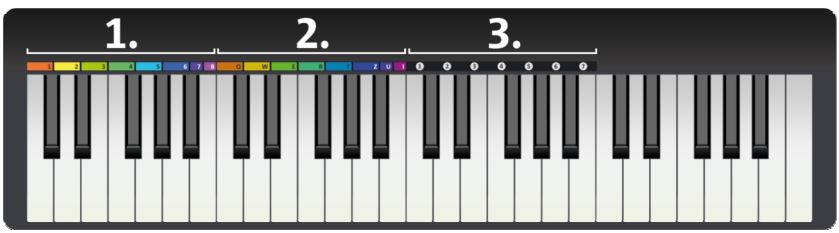
See the MIDI objects (view page 91) chapter for more information on synthesizers and MIDI control.

Keyboards stickers

In the MAGIX Music Maker 2016 Live Control package you'll find a set of stickers for marking the keys of your MIDI keyboard. This way, you can operate the Live Pads even if you don't own MAGIX Music Maker 2016 Live Performer or don't have Novation Launchkey mini. Owners of MAGIX Music Maker 2016 Live (without additional hardware) can print the stickers from a PDF file and apply them to their keyboard. This file is located in the program folder. A link to this can be found in the start menu.



Mark the three lower octaves of your keyboard with these stickers. The first two octaves operate the 16 pads, and the third octave is for adjusting pitch. Here's what the keyboard should look like:



MAGIX Audio Remote

The MAGIX Audio Remote app is for remotely controlling certain functions of MAGIX Music Maker 2016 Live via smartphone or tablet. Your computer and device need to be on the same Wi-Fi network for this to work.

This app is continuously under development and will be used as a "universal remote control" in the future for all MAGIX products.

Here you can download the app!

Connect

Setting up a connection between Music Maker and MAGIX Audio Remote is simple.

1. Make sure that your PC and the mobile device are connected to the same network. The connection will be automatic if both devices are using the same internet router.
2. Open the app and click the gear icon in the top right corner. The settings screen shows the name of the computer on which MAGIX Music Maker 2016 Live is running under "List of found devices".
3. Click "Connect". The connection is now established.

General operation



Settings

The gear icon opens the settings screen. This is where you set up the connection to the program. Use the slider to adjust screen brightness.



Menu: Here you can choose how many pages you want in the control area. Currently, there are four pages in the control area

- Filter
- Reverb
- Transport
- Live Pads (can only be used in MAGIX Music Maker 2016 Live)

The small **transport console** is visible on every page.



Loop on/ off

To start

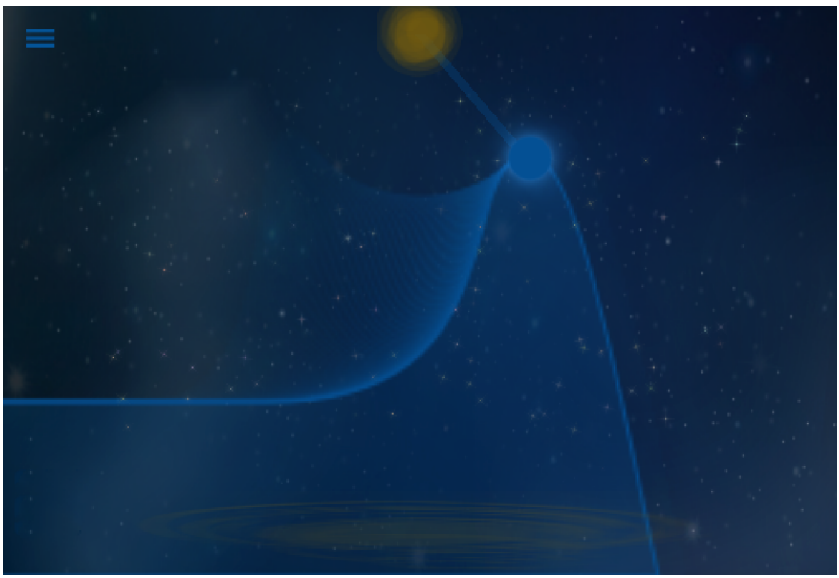
Stop

Play / Pause

Record

Filter

Filter is a remote control / modulation source based on physical modeling for the filters in MAGIX Vita Solo Instruments.



The vertex of a filter curve is controlled by a sphere graphic that hangs from a thread in a set position (the sun). When the whole thing is set in motion, things start to get exciting. Depending on how the graphic is manipulated, you can carry out slow filter changes, LFO modulations or chaotic reflections. Even if you're not an expert, the interface makes it easy to experiment.

To use the filter, load one of the Vita Solo Instruments with filter. How to set the filter in motion:

- Click on the graphic and drag it. You can also click in space and drag to illuminate the sphere with a tractor beam.
- The sun can be moved.
- Zoom between the sun and sphere to change the length of the thread.
- Click on the sun to undo the connection between the sphere and the sun. The sphere now flies freely through space. It bounces off walls and the sun and gains energy in doing so. The "ground" is in the lower part of the screen.
- Drag below left or right to the change the gravity.
- Two-finger zooming in free space changes the damping. As damping is increased, the quicker the sphere comes to a stationary position.

Technical note

In technical terms, the "Filter" sends the xy positions of the sphere in the space as MIDI CC20 and CC21 to the Vita Solo Instruments. These correspond to the controllers that are used by the the first two Novation Launchkey mini sliders and that are assigned preset parameters in all the Vita synthesizers. In the replications of the synthesizers these are the cut-off and resonance filters. These attributes can be changed in order to modulate two other synthesizer parameters with the "Filter".

Details for assigning MIDI controllers to Vita Solo Instrument parameters can be found under Automation of Vita Solo instruments (view page 159)!

Reverb

In the reverb page you can control reverb in the Vita synths.



- Set room size in the rectangle
- Zoom with a two-finger gesture to define the amount of reverb (Dry/Wet).

Transport console

The transport console performs exactly the same function as in MAGIX Music Maker 2016 Live (and in the small transport console on the edge of the app).



Tip: For anyone creating music and producing at the same time, a recording in a recording booth can be controlled remotely.

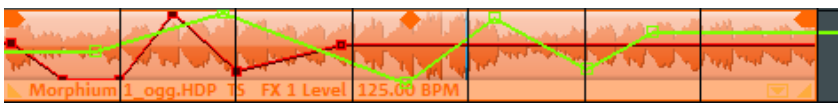
Live Pads

Operate the MAGIX Music Maker 2016 Live with the app. The interface will be the same as the Live Pads interface (view page 242) in Music Maker.

Automation curves

In addition to 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 adjusted correspondingly.



Object featuring FX Level 1 object curve on a track with an active volume curve

Automation curves change a specific value, e.g. the volume value for a track, which is "automated" during playback. This enables you to make your arrangements more exciting, e.g. the volume of several tracks shortly before the refrain may be reduced slightly in order to make the refrain itself more powerful once it appears.

Effects that may be automated

The following effects can be controlled via effect curves:

Audio objects

- **Volume** and **Panorama** are identical to the functions in the mixer, in which case a volume curve is added to the mixer setting and a panorama curve replaces the mixer setting entirely. 0% in the Panorama corresponds with all the way to the left, while 100% is all the way to the right.
- **Softening and sharpening filters** as well as **distortions** are additional effects that are only available for effect curves and that are independent of the filter or distortion effect in the effects rack. This controls the filter's input frequency or the degree of distortion.
- **Effects level 1 and 2** control the effect level sent from the object or track to the two effects tracks (view page 236).

Video, image, and title objects

- **X,Y position:** An X curve value of 50% corresponds to the normal position; at 0%, the video is moved to the left by its own complete width, and at 100% it is moved to the right (it becomes invisible in both cases). Analogous to this, a Y value less than 50% moves the video downwards, and a value more than 50% moves it upwards.

- **Height/Width/Zoom:** 50% corresponds with the original size; 100% corresponds to double size. 0% causes the object to disappear.
- **Rotation**: 50% corresponds to the original orientation, 180° corresponds to the maximum clockwise rotation, and 0% 180° rotates the object counter-clockwise.

Video effects are only available as object effects.

Track automation

FX You may also show an automation curve for editing the project in the track's "Effects" menu. In this case, only one automation curve will be displayed; all automation curves are able to affect the track simultaneously.



Editing the track curves in the project

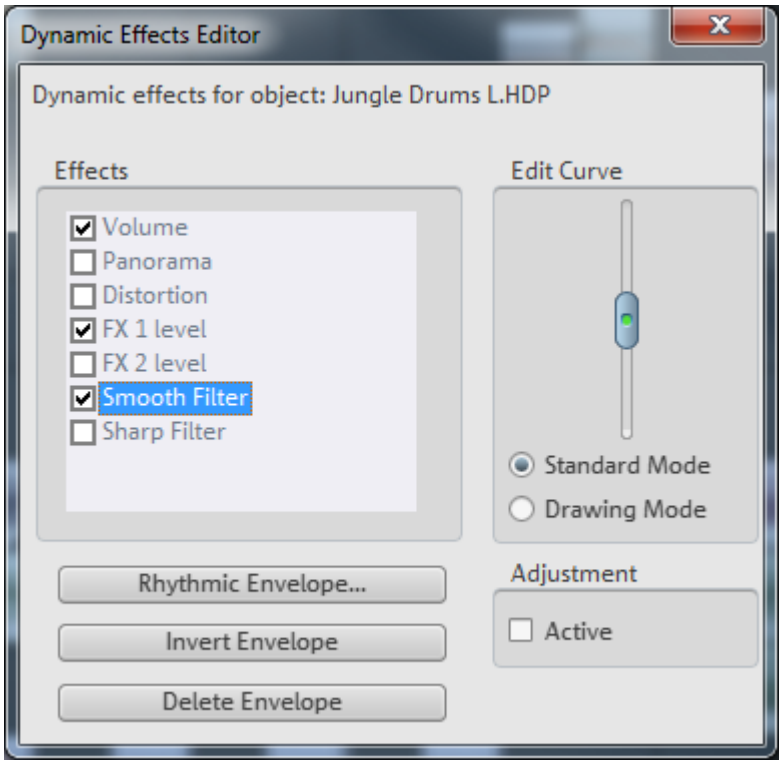
In the arranger, only one track curve may be edited per track at a time. The curves can either be edited with the individual handles or by freely drawing the effects curve.

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.

In Automation (view page 54) mouse mode, the left mouse button may be used to draw a new curve on the track.

Object automation

Object curve effects are selected and edited in the "Dynamic Effects Editor" dialog. Use the "Object automation" command in the "Effects > Automation" menu (Keyboard shortcut: Ctrl + H) to open this feature.



Effects provides a list of all available effects for the selected object. The box before the name allows you to activate the respective curve. To keep things clearly laid out, only one curve at time can be shown for an object. Clicking on the name allows you to select which of the active effects should be shown as a curve in the project.

Tip: You can select or activate another object and its automation curves without having to close the editor in the meantime.

The volume and panorama curves of an object may also be hidden/shown via "Effects -> Automation".

Delete envelope: Deletes the current effect curve.

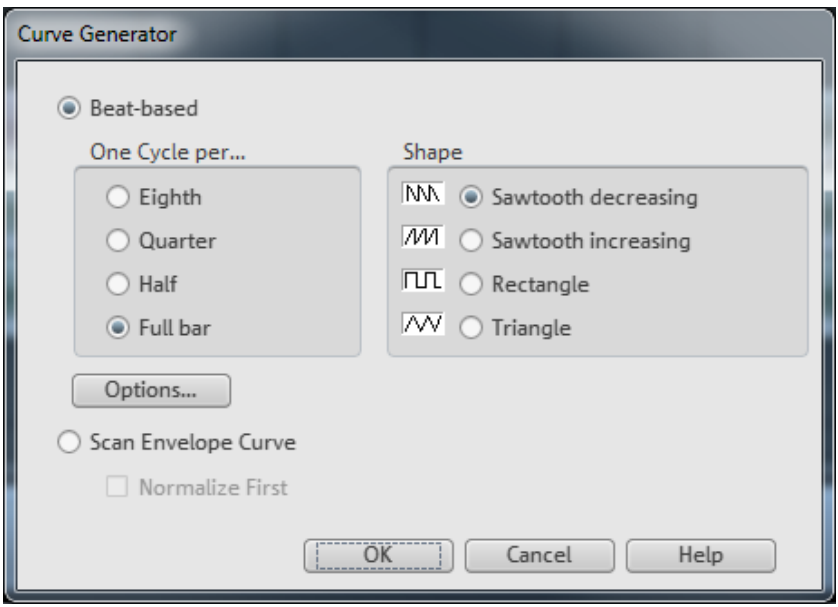
Invert envelope: Mirrors the current curve on the 50% horizontal axis, i.e. 0 becomes 100%. For a panorama curve, this would result in the playback side changing.

Rhythmic envelope: This options creates a rhythmic curve either via the generator or (for audio objects) via volume analysis of the object.

Rhythmic envelope

The curve generator will create a beat-based automation curve that pulses according to eighth, quarter, half, or full notes. Enter a minimum and maximum value or define delay values as options for writing the beat-based envelope curve calculation.

The selection dialog allows you to define the shape of the automation curve in more detail:



Beat based: This option causes the automation curve to follow the beat of the arrangement.

There are 4 basic patterns available for beat-based automation curves, i.e. 2 sawtooth shapes, rectangle, and triangle. These shapes are regularly run 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 pattern of the automation curve should run once per eighth, quarter, half, or whole note.

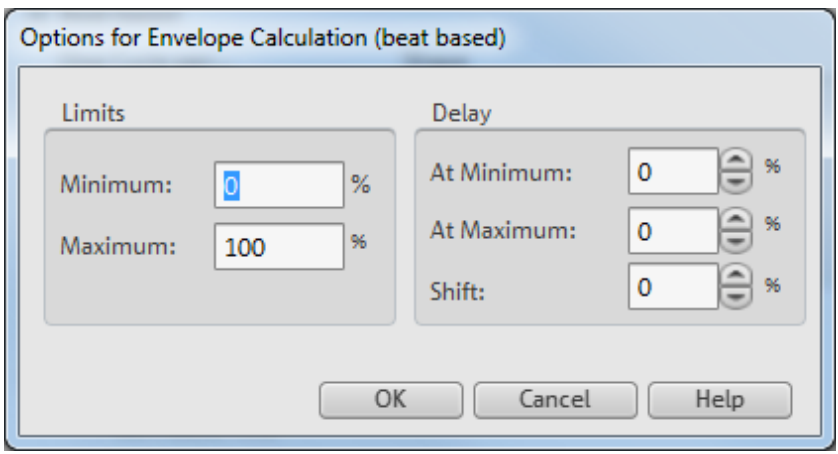
Options: This opens an additional dialog to control the style and intensity of the influence of the beat on the automation curve (see below).

Scan envelope curve: Allows the volume process to be displayed as an automation curve as an alternative to a beat-based automation curve.

Normalize first: This function normalizes the level of the audio object before the object is scanned to create an automation curve.

Curve generator - options for beat-based calculation

Limitation: Determine the minimum and maximum value of the envelope via **Delay Minimum/Maximum** the basic forms can be altered further.



Shifting moves the entire curve. This lets you create interesting off-beat effects.

Editing curves

Standard mode: If the project is not playing, you may create an effects curve point at the position of the start marker and move it vertically. An effects curve may be edited 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 curve drawn corresponds with the object's duration. Automation (view page 55) mouse mode is also activated so that the curve may also be drawn in 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, then the object curves will be compressed and stretched with the objects, i.e. the curve points are moved correspondingly. For example, 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).

Integrating other programs - Synchronizing and ReWire

MAGIX Music Maker 2016 Live 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 2016 Live just like a software synthesizer via MIDI objects.

Synchronization

Sometimes MAGIX Music Maker 2016 Live 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.

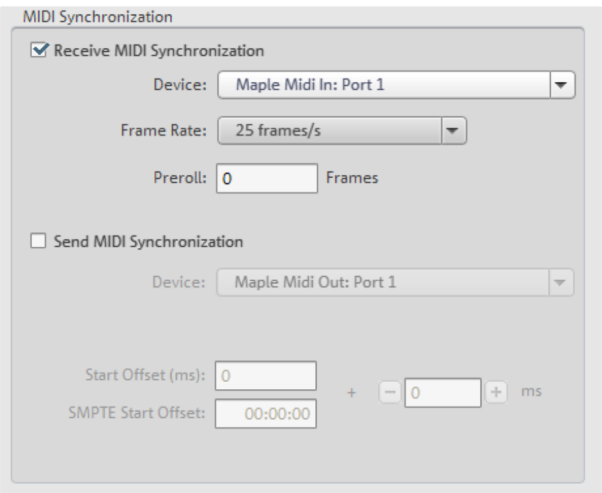
Even when playback is started simultaneously (synchronously), the sequencers can get out of beat over time, since even if tempo is programmed on both sides, this will never truly match 100%. Software sequencers determine the tempo based on time which is derived from the sample rate on the sound card. 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**.

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 "Project settings" ("E") under the "Synchronization" tab.

Synchronization settings



Receive synchronization (slave): Slave sync on. MAGIX Music Maker 2016 Live 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 2016 Live 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 2016 Live 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 2016 Live 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 2016 Live.

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 2016 Live 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 projects. You can accelerate the speed of the MIDI playback in this case by slightly increasing this factor (e.g. to 1.000001).

ReWire

If this option is activated, ReWire-compatible client applications (like, for example, Propellerheads Reason) can be integrated into MAGIX Music Maker 2016 Live as synthesizers.

Activate the ReWire function in the project 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 2016 Live) 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 2016 Live 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 2016 Live 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 2016 Live only sends to the ReWire MIDI bus and only supports the ReWire master output-side, not the ReWire audio bus system.

Reprocess arrangement

Export wizard

The export wizard can be opened through "File" > "Export" > "Common export options". This bundles different options for exporting your project in different formats, for burning onto CD, or publishing on the Internet with different platforms.



Export as MP3: This selection exports the project in the popular MP3 format for use on the Internet or on mobile playback devices (MP3 players, mobile phones, etc.). More details about the export dialog are provided in the "Export" (view page 266) section of the "File menu" chapter.

Burn to CD/DVD: This selection exports the project in the best possible quality and opens an additional program for burning an audio CD. The option is also available to backup the entire project with all involved files onto CD or DVD. See Burn audio CD (view page 264).

Upload to MAGIX Online Album laden: Uploads the project 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 the"File menu"

Publish on Facebook: You can send the project directly to your Facebook profile. It will then appear as a post on your wall.

Publish on YouTube™: This selection uploads the project as a music video to YouTube. To use video in MAGIX Music Maker 2016 Live read the chapter Video and Image Objects (view page 226). More info about YouTube export is available in "Export to YouTube" (view page 262) in this chapter.

Publish on Soundcloud: The project will be uploaded to Soundcloud. Additional info about this innovative music environment can be found in the Upload audio to Soundcloud (view page 263) chapter.

Send by email: Converts the project 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: You cannot use this function if you only access your email through a browser. 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 E-Mail attachment

The option "Send project as email" in the "File" > "Export" menu creates a file in the Windows Media format. Your mail program is activated simultaneously and the created file is added as an attachment of an opened message. Thus, any project can be compressed without intermediate steps and sent as an email immediately.

Export as ringtone

With MAGIX Music Maker 2016 Live you can produce your own individual ringtone melodies. Once completed, export the project using the "Audio as Wave/ADPCM" or "Audio as MP3" option in the File menu under "Export". Exactly which format to choose can vary depending on the capabilities of your phone.

Take a look at the "File menu"chapter for more information on the audio export dialog and the for specific export format settings.

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 project, 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 2016 Live 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

Community upload

The menu entries featured under "File" > "Export" >"Community upload" or via the Export assistant allow you to upload the finished song to different web communities.

Export to Facebook

You can export your project from MAGIX Music Maker 2016 Live directly to Facebook.

The command opens a dialog where the project name (displayed according to the settings in MAGIX Music Maker 2016 Live), a description and search words (tags) can be entered. After confirming this data with "OK", the project will be exported and uploaded to Facebook. For connecting and transmitting the video file, you must login with your Facebook username and password. If you aren't registered on Facebook, first open your browser and create a Facebook account.

After a successful upload, your browser will open to show you your video's info page so you can check the entered data once again. If everything is as you want it, you can leave the page and the new video will now appear in the list of your own videos.

Export to YouTube

You can upload your project to YouTube® directly from within MAGIX Music Maker 2016 Live.

You can find this function in the menu "File -> Export -> Youtube".

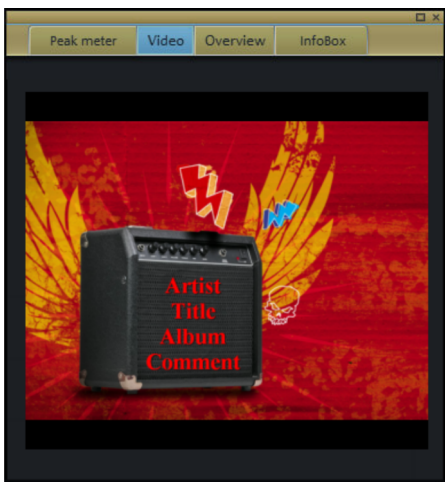
The command opens a dialog where you can set the name of the project for YouTube (default is the same as in MAGIX Music Maker 2016 Live), description, keywords (so-called "tags"), and the category for the video. After submitting this data by pressing "OK", the project is exported and uploaded to YouTube®. 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.

Title templates for YouTube

If your project does not contain a proper video, then you can still upload it to YouTube® with an attractive still image.

In the Media Pool, under the setting "Templates" you will find the subfolder "YouTube" under the "Title". This contains spezial title templates for use with YouTube videos. These templates feature neutral designs or match the style of the Soundpool (hip hop, rock etc.), and contain standard text for artists, title, album, and comments. These titles also appear throughout the entire length of the project.



Upload song to Soundcloud

Soundcloud is a community that is especially designed for musicians. The free version provides 120 minutes of storage space for your songs. Every song may be embedded as a player widget into external websites; the widget even allows comments along the timeline of the song and an optional download of the original song.

For more information about the possibilities provided by the Soundcloud community and the different premium accounts see www.soundcloud.com.

Additional editing

You can send your project directly into other MAGIX programs for further editing. In the "Mixdown" menu you can find the applications available in Music Maker.

MAGIX Music Maker 2016 Live lets you use your project

- as background music in slideshows and videos
- to be added to an existing music collection
- to be edited with an external editor
- to be uploaded onto an online platform
- and much more...

Note: The relevant MAGIX program must be installed in order to use these features. Music Maker automatically populates the menu "Share" with the corresponding features available.

Burn audio CD

To burn an Audio CD, export your project as a wave file: Click on "File" and select the "Export project" option > "Audio as Wave/ADPCM". The WAV file created can be burned as an Audio CD with any burn program.

In the Live version, the burner program MAGIX Speed burnR as well as the MAGIX Music Editor are at your disposal. You can load your project into the MAGIX Music Editor with the help of the option from the menu command: "File" > "Export project" > Burn project on audio CD-R(W), and burn an audio CD using this CD mastering tool. Or you can open MAGIX Speed burnR, for example, with the help of the context menu in the Media Pool. An MP3 data CD can also be created with MAGIX Speed burnR.

File Menu

New project

A new MAGIX Music Maker 2016 Live project is created with this menu item, with 16 tracks. More tracks can be added via the menu “Edit”.

Shortcut: Ctrl + N

Load project

A previously saved MAGIX Music Maker 2016 Live project is loaded with this menu item. Please note that the object files for the project must also be available! MAGIX Music Maker 2016 Live will look for the sounds and videos that were used first in the path where they were located when the project was saved. If they are not found there, then the MAGIX Music Maker 2016 Live Project will look for the objects in the same directory as the project itself.

Shortcut: Ctrl + O

Save project

The current project 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 project as...

A dialog opens where the path and name of the project can be specified.

Shortcut: Ctrl+Shift+S

Import

Import audio CD tracks

You can simply import one or more CD tracks like a regular file from the Media Pool via drag & drop. If this convenient method fails for some reason, then this menu command may be accessed via the CD manager to insert tracks from audio CDs

directly into the project. More on this can be found in the section "Importing Audio CDs (view page 72)" in the "Audio objects" chapter.

Shortcut: C

Audio recording

See Audio recording (view page 68).

Shortcut: R

Video recording

See Video recording (view page 231).

Shortcut: G

Export

Common export options

You will find a quick selection of the most common export options here.

Please read more on this in the section Export wizard (view page 259).

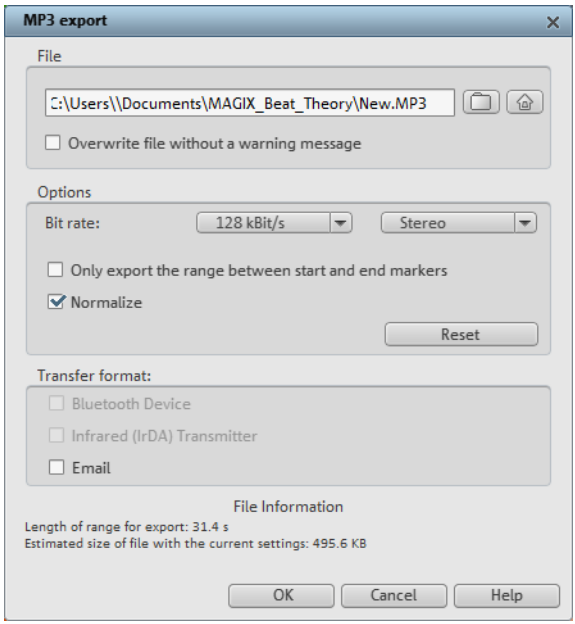
Keyboard shortcut: X

Burn audio to CD-R(W)

With this option the project will be exported as a WAV file and loaded into an additional program called MAGIX Music Editor. From there it can be burned straight to disc.

Shortcut: Shift + C

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 (More information can be found in the section "Folders" on page 281) 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 project.

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) 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 he exported arrangement to mobile devices via Bluetooth, infrared or email. Read more in the Reprocess arrangement (view page 259)chapter.

Audio as WAV/ADPCM

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

Compression (IMA ADPCM): This option compresses the WAV file in to the ADPCM format. This format is needed for playing WAV files on mobile phones. A lot of mobile phones also need a lowered sample rate. (usually 16000 Hz).

Note: You can also export single tracks. TO do so, simply "mute" those tracks that you don't want. Then, only the active tracks will be exported with this function.

Shortcut: Shift + W

Audio as MP3

MAGIX Music Maker 2016 Live supplies an optional MP3 encoder for especially fast, top-quality conversions into the popular MP3 audio format.

Hint: The MP3 encoder cannot be used as a codec for audio tracks from AVI audio files.

Transfer format:

Here you can specify how you wish to send the audio file to the mobile device. Read more on this under Transferring files (view page 260).

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 files.

Mono/Stereo/5.1 Surround: Most mobile devices have only one loudspeaker. To save memory, you can also export in mono. In 5.1 Surround mode (see Mixer in Surround mode) you can also export in MP3 Surround.

Note: Before you can use the MP3 encoder for MP3 Surround, you will have to activate it first. Activation is fee-based! For more information, read the Activate additional functions chapter.

Normalize: This function should always be activated. It guarantees that the music is not too loud/overmodulated or too quiet.

Shortcut: Shift + M

Audio as Ogg Vorbis

"OGG Vorbis" is a license-free open source audio codec with very good sound characteristics for comparably small files – similar to the MP3 file format.

In the settings under "Advanced" you can still choose from three various encoder modes and bit rate. Set quality. Constant bit rate enables streaming and maximum compatibility; with variable bit rate a better audio quality with the same size files can be achieved.

Shortcut: Shift + O

Audio as Windows Media

Exports the project in Windows Media Audio format. Please read more on the advanced settings in the Windows Media Video Export (view page 272) section.

Shortcut: Shift + 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: Shift + I

Audio as FLAC

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

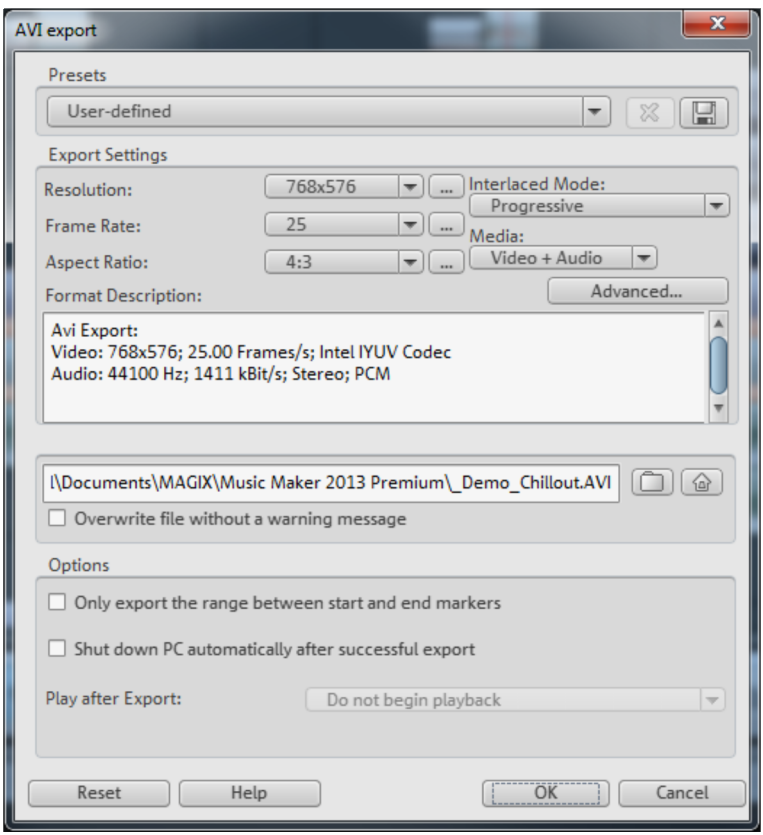
Shortcut: Shift + F

Audio tracks as single waves

Opens the WAV export dialog with activated "Export single tracks" option. Clicking on OK saves each track as a separate wave file in the export folder.

Shortcut: Shift + U

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 "**...**" button. 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 (More information can be found in the section "Folders" on page 281) 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 project.

Play after export: Here you can state whether you want to send he exported arrangement to mobile devices via Bluetooth, infrared or email. Read more in the Reprocess arrangement (view page 259)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 observe the general information on AVI video formats (view page 234) in the PDF manual.

Shortcut: Shift + A

Video as MAGIX video

Exports the project in MAGIX video format.

This format is used for video recording by MAGIX Music Maker 2016 Live video software and is optimized for digitally editing high quality video material.

Shortcut: Shift + X

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 Export, you can make corresponding settings for video size, frame rate and codecs for Quicktime export. However, the export dialog doesn't offer the option of saving comments for the video.

Tip: For Quicktime files (*.mov), the Quicktime library must be installed.

Shortcut: Shift +Q

Video as Windows Media

Exports the project in Windows Media format. This is a universal audio/video format from Microsoft. The setting options in the "**Advanced**"dialog are correspondingly complex.

Manual configuration

Audio/Video codec: Various codecs are available, corresponding to the various Windows Media versions (7, 8 or 9). Should compatibility problems arise on playback, try an older codec with a lower version number.

Bitrate mode: Constant and variable bitrates are possible; most devices and streaming applications demand constant bitrate. 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.

Bitrate/quality/audio format: The bitrate determines display and 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. Either the quality value can be set between 1-100 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 system profile (export type): For the most used methods (other than playback on mobile devices,for which you should use the supplied presets), like Internet streaming, etc., 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.

Go to **Clip info** to insert title, author name, copyright details, and a description.

Shortcut: Shift + V

Single picture as BMP

Exports the picture located at the current start marker and displayed in the video monitor as a bitmap (.BMP) file.

Shortcut: Shift + B

Picture as JPG

Exports the image located at the current start marker and displayed on the video monitor as a jpeg file.

Shortcut: Shift + J

Sending your project as an email

This option creates a compressed file in Windows Media format. Your mail program is activated simultaneously and the created file of an opened message is added as an attachment. This lets you compress and send your project immediately without having to go through any intermediate steps.

Upload to Community

In this menu item you have the option of uploading the finished project to various online platforms. You can find details about this in the section Publish online (view page 262).

Backup

Load backup project

Using this command you can load a backup project. Backup projects are created automatically by MAGIX Music Maker 2016 Live 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.

Save project and used media

With this menu point, you can put a complete MAGIX Music Maker 2016 Live project, including all used multimedia files into one folder. This is especially useful when you wish to reuse or archive such a project later on or when the files can be found on multiple CDs so that on loading you continually have to change CDs. Furthermore, the effect files used are saved in one folder with the other files.

A dialog opens where you can specify the path and name of the project.

Shortcut: Ctrl + Alt + S

Save project and used media (audio as OGG Vorbis)

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 + Shift + C

Burn project and used media onto CD/DVD-R(W)

Use this option to burn the project as well as all the relevant files to CD or DVD.

Even larger projects can be burned straight to disc. The project, if necessary, will then be split up and burned automatically to multiple discs. A restore program which is burned to the first disc of such a backup, guarantees easy re-recording of the backup.

Shortcut: Ctrl + B

Burn manually selected files to CD/DVD-R (W)

Opens MAGIX Speed burnR to burn videos or other files onto CD/DVD. File selection is done via drag & drop from <goyaburn>'s Explorer.

Shortcut: Ctrl + Alt + B

Settings

Project settings

In this dialog, the general properties of the project can be set. Statistical information about the project is also displayed.

Shortcut: E

General options

Name: Enter the name of the current project.

General project settings

Path: This is where you determine the folder on your hard drive in which your project is saved.

Save automatically: Saves the project automatically according to the settings used for automatic backups in the program settings.

Use settings as presets for new projects: The settings entered in this dialog are applied to all new projects.

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.

Time signature: Several types of bars are available to choose from, for example ¾ beat. With various grid settings you can also set additional time signatures. For example, with a set ¾ beat and a 1/8 note grid a 6/8 beat would be the result.

Video resolution: Here you can specify the presets for the video resolution used and the video format.

Synchronization

Options for Synchronization (view page 257) and ReWire (view page 258) support.

Information

Name/Path: See above

Created on: Displays the time the project was created.

Last changes: Displays the time when last saved.

Number of used objects: Displays the number of all objects in the project.

Used files: Here the names and paths to all multimedia files used in the project are shown.

Audio recording

See Audio recording (view page 68).

Keyboard shortcut: Shift + R

Program settings

Here you can set MAGIX Music Maker 2016 Live according to your needs and wishes.

Shortcut: P

General options

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 projects. 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 option determines whether the objects are displayed with one or two waveforms. When it is activated, the waveforms are displayed in stereo, i.e. with a right and left channel. In addition, video objects are displayed as individual frames in the arranger rather than just the frame at the beginning and end of the video object. This helps to improve performance and allows for a faster display.

Shift: Ctrl + Alt + Z

Automatic saving of backup projects: Here you can the time intervals at which automatic backup projects 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.

Hide instruments which are left empty in the style selection: 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.

Instruction dialogs: In its newly installed state, MAGIX Music Maker 2016 Live 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 2016 Live.

Import

Preview samples (Wav, OGG) while playing the project (Smart Preview): Here you can switch off the preview when a playback is running (Smart Preview).

Automatically adapt samples to BPM: When loading or previewing the project, MAGIX Music Maker 2016 Live tries to adapt the samples to the tempo of the project. This always works properly with newer MAGIX soundpool samples as the tempo information is saved in the audio file. It usually works with all other loops as well, provided the loops are clean, that is, they are cut to entire bar lengths.

With "**For patched samples only**", automatic timestretching can be deactivated for all other samples. With "**Apply to samples longer than 15 seconds as well**", longer samples will also be adapted if they contain tempo and bar information provided by the Remix Agent.

Automatically open Remix Agent for samples longer than 15 seconds: 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 project will then correspond to the pitch information of the first sample in the project.

Use destructive adjustment for shorter samples: Usually, loaded samples are adapted to the project in realtime with time stretching. 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 console. Read more on this in the "Recording audio CDs" section in the "Audio objects" chapter.

Automatically open MIDI editor during import of MIDI files / built-in VSTi synthesizers: The MIDI Editor will automatically open after loading MIDI files or synthesizers, allowing you to make changes to channel and instrument assignment and other settings.

Automatically 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: File formats that you never use can be de-selected here. Once de-selected they won't be imported anymore. Please keep in mind that several import modules exist for some file types (AVI, WMA); MAGIX Music Maker 2016 Live uses the fastest one in each case. If you experience problems when importing certain files, you can experiment with deactivation of certain import modules, forcing the program to use the slower but more compatible import module.

Audio

Output device: This option determines which sound card and which output plays back the wave audio objects and the drivers that 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 driver.

Wave/Direct Sound/ASIO/WASAPI: Specifies which of the conventional Windows wave drivers should be used for the sound card, i.e. the DirectSound system or ASIO. Starting with Windows Vista, the WASAPI driver model is also an option.

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 project 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.

WASAPI is a new Windows (native) driver model for low latency and can be used as an alternative to ASIO drivers. WASAPI is recommended for Windows Vista or later Windows versions when the sound card does not have its own ASIO driver and the MAGIX Low Latency driver isn't compatible.

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: MAGIX Music Maker 2016 Live uses an external MIDI device when no software instruments are applied and to preview MIDI files in the Media Pool. Here the "Microsoft GS 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 driver for your MIDI recording, i.e. the driver for the MIDI device that is connected to your MIDI keyboard or the driver for your USB keyboard.

Use MIDI target channel: The MIDI system offers 16 different channels to control 16 different sounds. Normally, MAGIX Music Maker 2016 Live 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 key is pressed. This value lets you even this out, causing all notes to be moved over by a certain temporal value.

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 project 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 project – all activities will be recorded and written to a separate wave 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 project, or deleted.

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 project in the transport control. Otherwise, the project 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 where

- projects will be saved (**Projects**)
- files are exported (**Export**) or imported (**Import**), and recordings (**Recordings**) are saved,
- files from the Soundpool are loacted (**Soundpool**)
- your MP3 collection is available (**My MP3s**)

Keyboard shortcuts

Opens the dialog for editing shortcuts used in MAGIX Music Maker 2016 Live.

Shortcut: U

Language

Here you can change the language used in MAGIX Music Maker 2016 Live. Normally the language that is used for installation is set as the program language.

Reset Program Settings to Default...

Use this function to reset all program settings (view page 276) you made in MAGIX Music Maker 2016 Live to their original settings.

Exit

Exits MAGIX Music Maker 2016 Live.

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 project, the Undo function will take you back to the previous project.

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.

Keyboard shortcut: R

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.

Shortcut: Ctrl + Alt + N

Text to speech

Please refer to the Audio objects (view page 90) chapter.

Shortcut: Ctrl + Shift + T

Record a new object

A new video object is recorded; see Video recording (view page 231)

Shortcut: G

Create a new title object

Creates a new title object and opens the title editor (view page 228).

Shortcut: Alt + Shift+ T

Cut

The marked objects are cut out of the current project and placed onto the clipboard. They can then be inserted at different positions.

Shortcut: Ctrl + X

Copy objects

Objects selected from the current project will be cut out and saved to the clipboard. They can then be pasted to a different location.

Keyboard 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

Inserting objects

The contents of the clipboard are added into the current project at the position of the start marker.

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.

Keyboard shortcut: Ctrl + V

Inserting multiple objects

This function is similar to "Insert", but you can choose how often the content of the clipboard is to be inserted.

Shortcut: Ctrl + Numeric pad '+'

Deleting objects

Objects selected from the current project will be deleted.

Shortcut: Del

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. For more about using takes, please refer to the section „Takes“ (view page 62) in the chapter "Arranging Objects".

Keyboard shortcut: Alt + Shift + S

Grouping

Group objects

Orders all selected objects into groups. As soon as an object is selected in the group, all objects in the group become highlighted so that you can work on them collectively.

Shortcut: Ctrl + G

Ungroup objects

Any selected objects that are part of an object group will become independent objects again in this case.

Shortcut: Ctrl + U

Loop range

Set user-defined loop

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 menu option **"Edit > Object > Loop range > 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.

Remove user-defined loop

The user-defined loop length is reset.

Object properties

This function displays all the information about the currently selected objects such as file name, position on the hard-drive, tempo, etc.

More information is available under Object properties (view page 296).

Shortcut: Ctrl + P

Track

Add track

A new empty track will be added to the arranger. In the "File > Project properties" the count of tracks can be set in large increments.

Shortcut: Ctrl + I

Mixdown audio...

This function can combine the project or segments of the project into a single audio/video object. Please refer to the "Track mixdown" (view page 66) section in the "Arrange objects" chapter.

Tip: To create the finished end version of the song or video, it is recommended you select the "Export project" function in the "File" menu instead of the "Mixdown" function.

Shortcut: Ctrl+Shift+G

Range

MAGIX Music Maker 2016 Live 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 range

The section between the in and out points is cut from the current project and placed on the clipboard. This section can be reinserted elsewhere.

Shortcut: Ctrl + Alt + X

Copy range

The section between the in and out points is copied from the current project to the clipboard. This section can be reinserted elsewhere.

Shortcut: Ctrl + Alt + X

Insert range

The contents of the clipboard are inserted at the current project's position of the in point.

Shortcut: Ctrl + Alt + V

Insert segment multiple times

Similar in function to "Insert", but you can stipulate how often the content of the clipboard is to be inserted.

Shortcut: Ctrl + Alt + Number key

Delete range

The section between the in and out points is deleted from the current project and not copied to the clipboard.

Shortcut: Ctrl + Del

Extract range

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 a project for further individual editing.

Shortcut: Ctrl + Alt + E

Navigation

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.

Shortcuts: See keyboard shortcut overview in the Arranger View (view page 313) section.

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 project live once the jump markers have been placed where you want them without losing the beat.

Shortcuts: 1..0

Set jump marker

This sets a jump marker at the position of the current playback marker. Here you can note specific parts of the project. 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 equidistant to one another in the bar ruler. Now you can jump to every jump marker using keyboard shortcuts.

Keyboard shortcut: Ctrl + Alt + M

Delete all jump markers

Deletes all jump markers

Shortcut: Alt+Shift+M

Select all objects

All objects in the project will be selected.

Keyboard Shortcut: Ctrl + A

Effects Menu

Object automation / Track automation

The dialog Dynamic effects editor (view page 253) for object automation or track parameters is shown. A parameter can be selected and edited in Automation mouse mode (view page 54). More about automation in the chapter Automation curves (view page 250).

Shortcut: Ctrl + H

Song Maker

This command opens the Song Maker (view page 88) to make projects semi-automatically.

Keyboard shortcut: W

Audio

Please read the chapter "Audio effects (view page 163)" 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.

Shortcut: B

Mastering Suite

You can open the MAGIX Mastering Suite with this option.

Shortcut: N

Text to speech

Please refer to the Audio objects (view page 90) chapter.

Shortcut: Ctrl + Shift + T

Object effect rack

See Object and master effects rack (view page 166).

Shortcut: E

Audio effects

This submenu includes all audio object effects plus the vintage effects and the effects from the MAGIX Mastering Suite (Live version only); the latter can be used individually.

Individual effects can be found in the chapter "Audio effects (view page 163)".

Volume

An assortment of different menu commands which influence the volume of your audio objects.

Mute/Unmute

Use this command you can mute one or more selected objects. Selecting this command again makes it audible once again.

Shortcut: Ctrl + M

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 project window.

Automatic volume damping

This command automatically dampens the volume of other audio objects. This can be used to insert voiceovers into your project 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 (view page 69) (Audio recording, advanced options).

Shortcut: Ctrl+Shift+D

Normalize (maximum level)

The function "Normalize" raises the level of an audio object to the maximum possible level without clipping the material. This searches for the largest signal peak in the audio material and raises the level of the object so that this position matches exactly 0 dB (maximum overdrive).

Keyboard shortcut: Shift + N

Tempo and pitch

An assortment of different menu commands which influence the pitch and tempo of your audio objects.

MIDI transposition

This command is only available for MIDI objects. It increases/decreases the pitch of a MIDI object's notes by 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.

Shortcut: Ctrl + T

Timestretch and pitchshift

See Timestretch/pitchshift (view page 172).

Shortcut: Shift + P

Harmony Agent

The Harmony Agent is designed to analyze harmonies.

Read more on this in the corresponding section of the "Audio Objects (view page 87)" chapter.

Shortcut: H

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 project.

Remix

These are the commands for MAGIX Music Maker 2016 Live's remix functions.

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.

Shortcut: Ctrl + J

Remix Maker

With the Remix Maker, automatic remixes can be created from Remix Agent loop objects.

Please refer to the Audio objects (view page 84) chapter.

Shortcut: Shift + K

Tempo & beat recognition

MAGIX Music Maker 2016 Live provides a Remix Agent for the automatic determination of the speed in BPM (beats per minute) and for the creation of loop objects.

Please refer to the "Remix Agent"chapter.

Shortcut: J

Loop finder

The Loop Finder was developed for the purpose of finding BPMs in short rhythmic passages and setting BPMs for the project. The Loop Finder can also help to fit short loops into an existing project or extract short rhythmic passages from drum loops.

Note: For longer passages (e. g. complete CD tracks), you can use the Remix Agent (view page 79, view page 293).

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 step-sequence to determine 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's 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 marker one beat forward or one beat back. This makes it very easy to select "round loops", i.e. 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. That means if four bars are selected as a loop, 16 has to be entered into this field.

Start (S) and End (E) Markers: These markers indicate the beginning and the end of a 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 this function in order to be able to use it again later.

Use new BPM: The project applies the BPM value found.

Timestretching: Adapts the object to the tempo of the project (as a result of the determined tempo) using timestretching.

Resampling: Adapts the object to the tempo of the project (as a result of the determined tempo) using resampling.

Keyboard shortcut: L

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.

Keyboard shortcut:	Load audio effects	Ctrl + Alt + O
	Reset audio effects	Ctrl + Alt + R

Convert stereo into two 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.

Shortcut: Shift + Z

Edit in external editor

Open a selected audio object in 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 2016 Live instead of the original object.

Shortcut: Ctrl + Shift + M

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 project.

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.

Video

Edit image in external editor

Graphics files (BMPs or JPEGs) may be edited retroactively with an external graphics program from the arranger. The selected image file is loaded automatically and, once editing has been completed, is used in the MAGIX Music Maker 2016 Live instead of the original material.

Shortcut: Ctrl+Shift+B

Load video effects

This command enables a saved effects combination to be loaded for the currently loaded object. If multiple objects are selected, then the effects combination will be applied to each selected object.

Save video effects

This command saves the current effects combination for each object separately.

Reset video effects

This option allows you to deactivate all currently used effects. The material will be reset to the state it was in before you applied the effect.

Title

Title Editor

Opens the title editor (More information can be found in the section "Title Editor" on page 228) for the selected photo or video object.

Shortcut: Alt + Shift + T

Load title template

Use this command to load previously saved title effects for the current object.

Save title template

You can save the current effect combination for each title object separately and apply it to other title objects later.

Automation

Display object volume curve

The automation curve for object volume is shown and can be edited in Automation mouse mode (view page 54).

More about automation in the chapter Automation curves (view page 250).

Display object panorama curve

The automation curve for object panorama is displayed and can be edited in Automation mouse mode (view page 54).

More about automation in the chapter Automation curves (view page 250).

Object automation / Track automation

The dialog Dynamic effects editor (view page 253) for object automation or track parameters is shown. A parameter can be selected and edited in Automation mouse mode (view page 54).

More about automation in the chapter Automation curves (view page 250).

Shortcut: Ctrl + H

View menu

Standard layout

This option determines, whether the video monitor and Media Pool are integrated in the main window or appear as a separate window which can be closed or opened.

Shortcut: F11

Zoom Soundpool and Keyboard

This setting enlarges the display of the loops in the Soundpool view of the Media Pool. The keyboard and menu items are also shown with a larger display. This makes it easier to use MAGIX Music Maker 2016 Live on touchscreens (view page 42).

Keyboard shortcut: Tab key

Arranger

Optimize view



The start marker is set at the beginning of the project and the end marker is set at the end of the last object in the project, so that the project may be played back in full.

Zooms out of the project so that the complete duration of the project is visible. The vertical zoom steps (track height) remain preserved.

Shortcut: F12

Objects with stereo imaging

This option determines whether the objects are displayed with one or two waveforms. When it is activated, the waveforms are displayed in stereo, i.e. with a right and left channel. In addition, video objects are displayed as individual frames in the arranger rather than just the frame at the beginning and end of the video object. This helps to improve performance and allows for a faster display.

Shift: Ctrl + Alt + Z

Highlight loop area

With this option, you can fade the loop area in and out, visible by the stripe above the first track that indicates the area that will be played as an endless loop.

Display pitch ranges

Displays or hides the Pitch bar (view page 39).

Cursor keys move playback marker

The option "Cursor keys move playback marker" in the "View" menu > "Arranger" is preset as active. If you disable this, you can move the playback marker with the arrow keys while additionally pressing the Alt key. You can then move the playback range (view page 38) with just the cursor keys.

Horizontal scrolling

This option reverses the horizontal and vertical functions of the mouse wheel for zooming and scrolling (view page 36). This means you can use Shift and Ctrl+Key for zooming and scrolling the tracks instead of for the visible duration. This corresponds with the performance of the mouse wheel in the old Music Maker version.

Show object marker > Show bar 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:	Bar Marker	Ctrl + Shift + F9
	Harmony Markers	Ctrl + Shift + F10
	Beat Markers	Ctrl + Shift + F11

Media Pool

Show Media Pool...

This option hides or displays the Media Pool.

Shortcut: F2

Media Pool views / template folders

Opens the corresponding folder in the Media Pool.

It's even easier to access the corresponding Media Pool views and folders via the corresponding keyboard shortcut.

Video monitor

Show video monitor

Opens and closes the video window.

Shortcut: F3

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

Video output

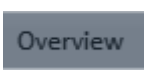
This option switches the preview monitor on or off to display the existing video objects in the Arranger.

Shortcut: Shift + F3

Project overview

With this option you can display an overview of the entire project on the video screen. It is particularly suitable for long and complex projects to prevent you from losing track.

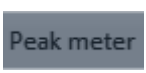
You can view the whole project and and still be able to access the sought-after object in a split second – you can zoom in directly on the video monitor or move around the clip displayed in the Arranger.



The function can also be opened via "Overview" on the video monitor.

Shortcut: Shift + F2

Audio peakmeter



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

Shortcut: Shift + F4

Infobox



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

Shortcut: Shift + F1

Mix

Mixer

With this option you can open and close the real-time mixer. Further information can be found in the Mixer (view page 235) chapter.

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.

Shortcut: B

Mastering Suite

You can open the MAGIX Mastering Suite with this option.

Shortcut: N

Live Pads

Opens the Live Pads . Please refer to the Live Pads (view page 242) chapter!

Shortcut: K

Live Arranger

Opens the Live Arranger . Please refer to the "Arranging objects" (view page 57) chapter, section "Live Arranger" (view page 63)!

Share menu

The Share menu provides access to online social networks as well as transfer functions to other MAGIX programs.

Here you'll find options for uploading individual objects in the arranger or files from the Media Pool as well as the entire project, as audio or video. You can also transfer your project to another MAGIX program (if it is installed) e.g. to use it as background music for your slideshow.

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.

Community upload

The menu entries featured under "File" > "Export" >"Community upload" or via the Export assistant allow you to upload the finished song to different web communities.

Upload project as MP3 to MAGIX Online Album

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

Upload video to Facebook.

Uploads the current project to Facebook. You can find additional information under Export to Facebook (view page 262).

Upload video to YouTube

Uploads the current project to YouTube. See Export to YouTube (view page 262) for details.

Shortcut: Shift + Y

Upload audio to Soundcloud.

Uploads the project to the Soundcloud music platform. You can find additional information under Upload audio to Soundcloud (view page 263).

Sending your project as an email

This option creates a compressed file in Windows Media format. Your mail program is activated simultaneously and the created file of an opened message is added as an attachment. This lets you compress and send your project immediately without having to go through any intermediate steps.

Present music on magix.info

Opens an Internet browser at the MAGIX Online World media upload page. There you can choose the file you would like to present on the website.

Note: You first have to export (view page 259) your project.

Use as background music

Converts your project into MP3 format and sends it to an installed MAGIX photo or video program, where it can be used as background music.

Note: This function is only available if you have at least one of the above programs installed.

Add to music collection

Converts your project into MP3 format and sends it directly to a MAGIX music management program (e. g. MP3 deluxe), where it is added to an existing music collection.

Note: This function is only available if you have installed an appropriate MAGIX program.

Edit audio objects in external editors

Converts your project into WAV format and sends it directly to one of the specified programs where it can be edited further.

- Music Editor

- Audio Cleaning Lab

Note: This function is only available if you have at least one of the above programs installed.

Burn audio to CD-R(W)

Your project will be sent to MAGIX Speed burnR, where it can be burned as an audio CD. The Live version offers you MAGIX Music Editor.

Keyboard shortcut: Shift + C

Burn project and used media onto CD/DVD-R(W)

Your project will be sent to MAGIX Speed burnR, where it can be burned to CD or DVD.

Shortcut: Ctrl + B

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.

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.

PDF manual

Opens the manual in PDF format.

Context Help mouse mode

The mouse cursor will turn into an arrow with a question mark.

Click on any button of the main screen, to open program help which will describe the control element in question.

Shortcut: Alt + F1

Display tooltips

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.

Watch more tutorials online...

Opens the magix.info with online tutorial videos.

Update program / Upgrade functions

Register online

This option opens the MAGIX homepage for online registration where you can register as a MAGIX user.

Registration grants you access to the MAGIX support website where various program updates and help programs can be downloaded.

Online Update

Connects directly to the online update page where you can get the latest version of your program.

magix.info - Multimedia Knowledge Community

Help others and find help Directly from within the program you'll be able to access magix.info – the new MAGIX knowledge base. You'll find answers to all the most frequently asked questions about MAGIX products and multimedia in general. Couldn't find an answer to your particular question? No problem, just ask the question yourself.

Ask the Knowledge Community a question online

Ask magix.info a question.

Find knowledge & workshops

Have a look at the newest workshops at magix.info and read useful tips from other MAGIX Music Maker 2016 Live users.

Present music on magix.info

Opens an Internet browser at the MAGIX Online World media upload page. There you can choose the file you would like to present on the website.

Note: You first have to export (view page 259) your project.

Open magix.info - Multimedia Community

Opens the magix.info main page.

About MAGIX Music Maker 2016 Live

Displays copyright info and version number of MAGIX Music Maker 2016 Live.

Buttons overview and keyboard shortcuts

Toolbar

 New Project

 Load Project

 Save Project

 Settings (view page 276)

 magix.info

 Grid On/Off (view page 37)

 Redo Action

 Undo Last Action (Undo)

 Split Object

 Select Mouse Mode (view page 53)

Keyboard shortcuts

In MAGIX Music Maker 2016 Live, 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 project context)

File menu

Load/Save project

New project	Ctrl + N
Load project	Ctrl + O
Save project	Ctrl + S
Save project as	Shift + S

Import

Import Audio CD track(s)	C
Audio recording	R
Video recording Live	G

Export

Common export options	X
Burn audio to CD-R(W)	Shift + C
Audio as Wave/ADPCM	Shift + W
Audio as MP3	Shift + M
Audio as OGG Vorbis	Shift + O
Audio as Windows Media	Shift + E
Audio as AIFF	Shift + I
Audio as FLAC	Shift + F
Audio tracks as single waves	Shift + U
Video as AVI	Shift + A
Video as MAGIX video	Shift + X
Video as Quicktime Movie	Shift + Q
Video as Windows Media video	Shift + V
Picture as BMP	Shift + B
Picture as JPEG	Shift + J

Backup copy

Save project and used media	Ctrl + Alt + S
Save project and used media (audio as OGG Vorbis)	Ctrl + Shift + C
Burn project and used media onto CD/DVD-R(W)	Ctrl + B
Burn manually selected files to CD/DVD	Ctrl + Alt + B

Settings

Program settings	P
Project settings	A
Audio recording	Shift + R
Keyboard shortcuts	U
Exit	Alt + F4

Edit menu

undo	Ctrl + Z
Restore	Ctrl + Y
Select all	Ctrl + A
Object	
Record new audio object	R
New MIDI object	Ctrl + Alt + N
Text to speech	Ctrl + T
Record a new video object	G
Create a new title object	Alt + Shift + T
Cut	Ctrl + X
Copy	Ctrl + C
duplicating	Ctrl+D
Insert	Ctrl + V
Multiple insert	Ctrl + "Num+"
Delete	Del
Select all	Ctrl + A
Split	T
Save objects as takes	Alt + Shift + S
Group objects	Ctrl+G
Ungroup objects	Ctrl+U
Object properties	Ctrl+P
Range	
Cut	Ctrl+Alt+X
Copy	Ctrl+Alt+C
Insert	Ctrl + Alt + V
Multiple insert	Ctrl + Alt + "Num+"
Delete	Ctrl + Del
Extract	Ctrl + Alt + E

Navigation: Set jump marker, move playback position (see Playback control), move view (see Move arranger view (view page 313)).

Effects menu

Song Maker	W
Audio	
Master audio effects rack	B
Mastering Suite	N
Text to speech	Ctrl + Shift + T
Object effect rack	E
10 Band Equalizer	Q
Parametric equalizer	Ctrl + Q
Sketchable filter	F
Compressor	Shift + D
Stereo processor	Z
Invert phase	Ctrl + Shift + I
Echo/Reverb	Shift + H
Distortion/Filter	D
Vocoder	V
Gater	Shift + G
Reversed	Ctrl + Shift + R
Mute/Unmute	Ctrl+M
Volume settings	Ctrl + Shift + D
Normalize	Shift + N
Timestretch/pitch shift	Shift + P
Vocal Tune	S
MIDI transposition	Ctrl + T
Harmony Agent	H
One pitch higher	Num *

One pitch lower	Num /
Create remix objects	Ctrl + J
Remix Maker	Shift + K
Remix Agent – Tempo and beat recognition	J
Load audio effects	Ctrl + Alt + O
Reset audio effects	Ctrl + Alt + H
Convert stereo into two mono objects	Shift + Z
Edit wave in external editor	Ctrl + Shift + M
Video	
Edit image in external editor	Ctrl + Shift + B
Title	
Title editor	Alt + Shift + T
Automation	
Object automation	Ctrl + H

View menu

Zoom Soundpool and Keyboard	Tabs
Standard layout	F4
Arranger	
Optimize view	F12
Change object presentation	Ctrl + Alt + Z
Show object marker	
Bar marker	Ctrl + Shift + F9
Harmony marker	Ctrl + Shift + F10
Beat marker	Ctrl + Shift + F11
Media Pool	
Show Media Pool	F2
Soundpool	F5
File Manager	F6

Synthesizers	F7
Templates	F8
Keyboard	F9
Inspector	F10
Catooh	O

Video monitor

Show video monitor	F3
Fullscreen video monitor	Alt + Enter
Video output	Shift + F3
Project overview	Shift + F2
Audio peakmeter	Shift + F4
Info box	Shift + F1

Mix

Mixer	M
Master audio effects rack	B
Mastering Suite	N
Live Pads	K

Help menu

Context help mouse mode	Alt + F1
About MAGIX Music Maker 2016 Live	I

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
Keyboard	F9
Object inspector	F10
Catooh	O

Video Monitor

Show video monitor	F3
Fullscreen video monitor	Alt + Enter
Video output	Shift + F3
Project overview	Shift + F2
Audio peakmeter	Shift + F4
Info Box	Shift + F1

Move Arranger view

Note: These commands similarly move the playback marker when it's stopped, the marker always remains visible in the project clip.

To next object edge	Ctrl + 0
To the previous object edge	Ctrl + 9
Go to beginning of project	Home
Go to end of project	end cap
Go to start marker	Ctrl + Home
Go to end marker	Ctrl+End.
Page right/left	Page Up/Down
Grid unit right/left	Ctrl+PgUp/PgDn
Go to the next jump marker	Ctrl + Shift + PgDn
Go to the previous jump marker	Ctrl + Shift + PgUp

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 project	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 project	Enter
Delete smart preview object	Del

If you still have questions

Tips for Program Help

When the program is open, you can access the Help feature by pressing F1 on your keyboard. The program Help contains tips on how to use the program and lots of additional information. Many important terms are indicated in the text in italics. Simply click on these terms for a more detailed explanation of what they mean.

Context Help: Press the "F1" key on your keyboard at any point in the open program and Help will open with the matching help topic.

Search function: This feature can be used to look for specific words in the Help section. Enter either the individual word or use logical operators (e. g. OR, AND, NEAR) to refine your search if you have several search words.

- **OR** (between two words): all topics which contain both words or one of the words will be listed.
- **AND** (between two words): only those topics will be listed which contain both words.
- **NEAR** (between two words): only those topics will be listed which contain both words. A maximum of 6 additional words are allowed between two search words.
- **NOT** (before a word): topics which contain this word will **not** be listed.

Print: The print function can be used to print out specific Help topics or entire topic sections. The print button is located at the very top of the toolbar in the Help window.

Uninstalling the program

If you would like to uninstall MAGIX Music Maker 2016 Live, go to the Control Panel and select "Software" or "Programs and Features".

System Requirements

Operating System: Microsoft Windows Vista / 7 / 8 /8.1

Minimum Configuration:

- Processor with 2 GHz or above
- 1 GB RAM (2 GB recommended)
- Free hard disk space: 6 GB (Live version: 9GB)
- Graphics card: Min. resolution 1024 x 768

- Onboard sound card
- DVD drive
- Internet connection required for activating and validating the program*

*Software can also be used offline. However, please note that the program requires an Internet connection at least once a month to validate the license.

Optional:

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

Note: Artist rights and ancillary publisher copyrights must be respected. Only non copy-protected audio CDs can be imported.

Serial number

A serial number is included with each product. This serial number is required for software activation. Please store this number in a safe place.

What does a serial number do?

With a serial number your program license is clearly assigned to you and only you. This allows you to use the free customer service via email. Serial numbers also help protect against software piracy. This makes it possible for us to offer our customers the most value for their money.

Where is the serial number located?

The serial number is on the insert card in the program box.

If you have purchased the download version, you will receive a confirmation email containing the serial number that you can use to activate the program. This will be sent immediately following purchase to the email address you provided.

When is the serial number needed?

The serial number is required when you start the program the first time, as well as for program registration.

Publishing works created in MAGIX Music Maker 2016 Live

What needs to be taken into account when publishing a music or video production?

A distinction is made between "non-commercial use" and "commercial use".

1. What constitutes non-commercial use?

If songs are created with MAGIX Music Maker 2016 Live or if music is added to private videos, they can be shared with others on social networks (e.g. YouTube, Facebook, Soundcloud, Twitter or personal blogs/websites). The decisive factor in these cases is that no money is made or will be made from the song or video soundtrack.

Examples of non-commercial use:

- A user creates a song with Music Maker and uploads it to their SoundCloud page or YouTube channel.
- A user produces a song using Music Maker, burns it to CD then sends it to their friends.

2. What constitutes commercial use?

Commercial use refers to videos with soundtracks or songs created using Music Maker for commercial purposes. Commercial use if if sales are made, if revenue is accrued through advertising (e.g. as a YouTube partner or through the process of monetizing) or if contracts are concluded. In this case the necessary licenses must be purchased from Catooh The Online Media Marketplace.

Examples of commercial use:

- A user creates a song in MAGIX Music Maker and uploads it to their YouTube channel, which they've enabled for advertising (YouTube Partner Program).
- A user produces a song in MAGIX Music Maker and makes it available for purchase from an online download shop (e.g. iTunes, Musicload).
- A musician produces a song with MAGIX Music Maker for a CD Compilation, which is sold at concerts.
- A user makes a video in which they advertise their company or one of their company's products.

Important: The downloadable styles in Catooh that are licensed for commercial use consist of high quality WAV files. Any "normal" Music Maker content from the installation DVD is in .ogg format for space reasons.

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 "Share" menu in MAGIX Music Maker 2016 Live.

MAGIX Online Album

MAGIX Online Album 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 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!

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, Slideshow 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

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

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

Soundpool DVD Collection

MAGIX Music Maker 2016 Live includes thousands of sound and video building blocks. Other media can be ordered later. MAGIX Sound Essentials includes 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 you'll always find the latest soundpool offers.

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