

Contents of Help

What is music maker?

Quickstart

Definitions

Editing Objects

Menus

Menu File

Menu Edit

Menu Effects

Menu Window

Menu Help

Upper Toolbar

Lower Toolbar

Problem Solutions

A few Tricks

Shortcuts

Was ist music maker?

Music Maker is a program that lets you create music; its so easy, even kids can use it. No musical knowledge is needed - a computer with a CD-ROM drive, a 16-Bit sound card and the Music Maker software are all you need.

This new way of making music has been made possible through an ingenious new kind of software. The basic elements needed for creating music are all included on the CD-ROM. Professional music makers and sound designers have created over 1000 samples (music and sounds) which are just waiting to be arranged by a simple mouse click.

The best part is that all important functions operate while playing, meaning that you can load another sound from the CD and place it, move it, blend it or even delete it again without interrupting playback. This feature is one youll quickly learn to love.

All the samples are on the CD-ROM in 16 Bit, Stereo and 44.1 kHz; absolutely top CD-quality. If however you want to save memory or use the arrangement for video sound mixing, you can convert the music maker samples to 22 kHz and/or mono. This way youll save up to ¾ of your memory capacity and can make long arrangements using less juice.

The samples are listed in a structured order on the Cds, so that you can quickly find matching drumloops or harmonizing chords!

An arrangement made from multiple samples can be saved anytime in a single hard-disk file (MIX-function), so that the RAM-Memory can be freed up and more tracks for new samples are made available. These hard-disk files can be easily loaded and edited again using the MAGIX Music Studio Harddisk recording program. Making arrangements from your own recordings is equally easy with the Music Maker. There you have it: The MAGIX Music Maker and Music Studio go together perfectly!

Here are a few examples of how you can use music maker:

- Drumbeat accompanyments
- combining techno-samples
- making jingles
- adding music and effects to videos
- making accompanying patterns to go with instrument practice
- simply having fun with 1000+ samples

Hardware-Requirements

Music Maker runs on any computer with 386 DX and 4 MB RAM or more, a minimum of 10 MB available memory, VGA resolution, CD-ROM drive and 16-Bit sound card, and Windows.

We recommend a 486/33 with 8 MB RAM and 100 MB available hard disk memory (for MIX-files and effects).

Music Maker runs perfectly on the Windows versions 3.11, Windows-95 and Windows-NT.

Synchronized playback of AVI-videos requires 8 MB memory and a color definition of 32000 is recommended.

To playback MIDI-Files, a MIDI-interface or a sound card with MIDI-synthesizer as well as corresponding drives are needed (MIDI-mapper).

Please note that all samples used in an arrangement must be loaded in the computers RAM.

As a general rule, a PC with

- 16 MB RAM holds 100 seconds
- 8 MB RAM holds 50 seconds
- 4 MB RAM holds 20 seconds

of samples in the memory. This calculation is based on the maximum values using 44 kHz and stereo.

Selection an arrangement with only 22 kHz doubles the possible sample length; with additional reduction to mono it is quadrupled.

Naturally music maker can use virtual memory; nevertheless it depends on the performance of your individual system whether or not the feedback functions correctly.

Das Menu File

Here you find functions for loading, saving, exporting and manipulating music maker arrangements.

<u>New Arrangement</u>	Create a new arrangement.
<u>Load Arrangement</u>	Load music maker arrangement.
<u>Save Arrangement</u>	Save actual arrangement.
<u>Save Arrangement as...</u>	Save actual arrangement with new name.
<u>Save Arrangement to...</u>	Save actual arrangement with all samples to a new path.
<u>Export Arrangement exportieren...</u>	Save actual arrangement as Wave file.
<u>Media-Link...</u>	Links MIDI- or AVI files to the actual arrangement
<u>Project Information</u>	Shows informations about the actual arrangement.
<u>Exit</u>	Finish music maker.

New Arrangement (Menu File)

With this menu selection a new Music Maker arrangement can be created. Select between stereo-mode or mono-mode and between 44 kHz sample rate or 22 kHz.

Track Number:

Here you can set the number of tracks in the arrangement to 4 or 8 (only 4 in the 1e version).

Volume:

Furthermore the volume setting is displayed and can be edited here in steps of 6 dB. Lowering the volume is necessary in multiple track arrangements, as the sum of all the tracks may not exceed 16 Bits (0 dB). That means that each track on a 4-track-stereo-arrangement has to be decreased by 1 Bit or 6 dB (2 Bit or 12 dB in a 8 track project). However, frequently in practice you wont be working with maximum amplitude material on all tracks simultaneously, so that the decreases in volume can be minimal.

Remember that in the case of volume blowouts, only the user is liable.

Memory Mode: Here you can enter the format Music Maker should use when loading WAV-files into the RAM.

Mono: Stereo waves are converted to Mono when you load sounds. This means that only half as much memory is needed. Moreover, with mono you have 4 tracks instead of 2 Stereo tracks available.

22 kHz: Waves with 44 Khz sample rates are converted when loaded to 22 kHz, which also takes up half as much memory space.

Shortcuts:

Toolbar:



Key:

e

Load Arrangement (Menu File)

With this menu selection a previously saved arrangement can be loaded. Note that in order to do so, the sound files must be located on hard disk or CD-ROM! Music Maker searches for the sounds first in the drive in which the arrangement was saved. If they are not to be found there, Music Maker searches the drive in which the arrangement original is found.

Shortcuts:

Toolbar:



Key:

L

Save Arrangement (Menu File)

Saves the actual arrangement under its old name. If it does not have a name, a file requester is opened.

Shortcuts:

Toolbar:



Key:

s

Save Arrangement as... (Menu File)

Saves the actual arrangement with a new name.

Shortcuts:

Key: **SHIFT + s**

Save Arrangement to... (Menu File)

This selection lets you save a complete Music Maker arrangement including all samples used in one folder. This is especially useful when you want to reuse the project or archive it in a certain spot, or when you're using samples on numerous CDs, so that you won't have to keep changing them when re-loading the arrangement. Even the sample effects used are saved together with the others.

A File Requester opens in which you can write the name of the folder and the disk drive under which you wish to save.

Export Arrangement...(Menu File)

This selection lets you export a complete arrangement including all samples in the form of a WAV-File.

Media-Link (Menu File)

This is one of the hottest features in Music Maker: It lets you combine nearly all kinds of media with Music Maker-projects. These can be entire MIDI-Songs (.MID files), video clips (.AVI files) or others, as long as a **MCI-Driver** is installed. In this way Music Maker is not limited to processing only digital audio materials, but is instead truly a multi-media program.

The most important functions are the following:

-Connecting Music Maker with **MIDI-Songs**. This lets you combine an existing MIDI-Song with audio tracking or combine existing audio effects in arrangements with MIDI-material (i.e. drumloops, scratches, etc.) The recording of a project can also be perfectly synchronized with the MIDI- and Audio materials. Please make sure that the MIDI-file is synchronized, so that the MIDI and Audio material fit perfectly together.

-Combining Musik Maker projects with **Video-for-Windows Movies**. Music Maker is excellent for setting films to music. The film you use must be saved as an AVI-file, for which there are many hardware bargains available. Then you can connect the film in Music Maker with any arrangement. In this way, music, speech, effects etc. can be placed in the timeline and synchronously played back with the AVI-video. When you've got everything perfect, the tone can then be saved (sound overlay) onto the video. The AVI-video is in this manner used only during preview of the sound recording, so that the picture quality should not be a problem. Nevertheless, a fast computer is necessary so that the audio and visual material can be processed, i.e. 486/66 or higher and a fast graphic card.

File Name: Here you can enter the name of the media file to which you wish to connect the current arrangement. Please note that you may have to also specify the file type (.MID, .AVI).

Always Playback: This button activates the synchronized playback in Music Maker.

Always load new: This button determines whether or not the media file should be newly loaded before every playback. This can be a good idea, if for example a MIDI-song is also being edited in a parallel MIDI-sequencer. In this case then, from the sequencer side, only the file is to save as a MIDI-file, Music Maker loads it again for the next playback.

If the media file is finished, however, this option should not be activated. The file will then be loaded only once, which is especially sensible when using .AVI files: the window with the video remains constantly open. In this way the cursor positioning can be used to exactly control the picture display and playback starts much more quickly.

SMPTE-Offset: Here you can enter an offset to help you switch from a media file to Music Maker. A value of 30:00 (30 seconds, 0 frames) means that the beginning of the Music Maker arrangement starts not at 0 seconds but rather at 30.

Note that small offsets are generally easier to make by delaying Music Maker in VIP than by entering numerical values in this dialog.

FX: Here you can enter a correction factor with which the preciseness of the positioning of Music Maker and the media file can be optimized.

When the beginning of an arrangement exactly corresponds with the beginning of the media file, then under no circumstances should the files come apart during playback, as Music Maker as well as the media playback both have precise timers (if however this should be the case, it is a sign that your system is overburdened). If you should be positioning the middle of an arrangement and then start playback, however, slight delays may appear, because sound cards frequently do not have exactly the same sample rates needed for the positioning of the samples used. This problem can be overcome using the correction factor, with which the positioning of the sample rate is multiplied.

Go through the following steps:

- Make sure that the start functions exactly (Cursor Home)
- highlight the Cursor shortly before the end of the arrangement.
- Vary the FX slightly (i.e. 1.0001, .9999 ...) and start before the cursor on each side respectively until the speed is perfected. Now you can start from any position, without encountering delays. Once you've found the right value for this particular constellation (medium, sample-rate) you can use it again and again without having to enter it anew.

Video without sound: With this option you can switch off the sound of an AVI video. This is useful, if you have only one sound card, because otherwise music maker and the AVI audio could produce conflicts accessing the same sound card.

If you have two sound cards with Windows drivers you can switch off this option to hear both music maker and the sound of the AVI file.

Video in music maker window: With this option you can set the AVI window as a child of the music maker window. That's why the AVI window is always visible and cannot be behind music maker. This mode is the default option.

Note: Depending on your AVI driver it may be, that the video does not start when you start audio playback the first time. Simply start playback in music maker again and the video will run!

Test: This lets you playback the active media file for testing.

End Connection: This ends the connection between the Music Maker and the media file.

Project Information (Menü Projekt)

Here current information about the active arrangement is displayed. This includes the date of creation, memory size, drive and file name.

With arrangements, a list of all physically used files is included.

Furthermore the volume setting is displayed and can be edited here in steps of 6 dB. Lowering the volume is necessary in multiple track arrangements, as the sum of all the tracks may not exceed 16 Bits (0 dB). That means that each track on a 4-track-stereo-arrangement has to be decreased by 1 Bit (6 dB). However, frequently in practice you wont be working with maximum amplitude material on all tracks simultaneously, so that the decreases in volume can be minimal. Remember that in the case of volume blowouts, only the user is liable.

Shortcuts:

Key: i

Exit (Menu File)

This button ends the Music Maker...

Menu Edit

<u>Delete Objects</u>	Delete all selected objects.
<u>Copy Objects</u>	Copy selected objects
<u>Build Group</u>	Group all selected objects.
<u>UnGroup</u>	Ungroup objects in the selected group.
<u>Mix-Down</u>	Mix complete arrangement into one hard disk projekt (HDP).
<u>Undo</u>	Undo last operation.
<u>Redo</u>	Redo last undo operation.
<u>Clean Up</u>	Sets default settings for arrangement.
<u>Play Parameter</u>	Sets sound card and sample rate for playback.
<u>Setup</u>	Global settings for buffers, pathes and memory mode.

Delete Objects (Menu Edit)

This menu option lets you delete all selected objects from the arrangement. To highlight or select more than one object, use the SHIFT Key while you click with the mouse.

Shortcuts:

Key:

Del

Toolbar:



Copy Objects (Menu Edit)

This menu option lets you copy all selected objects. The copy appears right next to the original object and can be moved easily using the mouse (drag and drop).

Shortcuts:

Toolbar:
Key:



CTRL + c oder c

Build Group (Menu Edit)

This menu option lets you group all selected objects together. This has the advantage that you can then edit them simultaneously, i.e. copy, move, or delete.

Note that stereo objects are just like a group of two mono samples. They can be changed into simple objects by selecting UnGroup, so that you can change the panorama or create delays between the left and right channels, for instance.

Shortcuts:

Toolbar:



UnGroup (Menu Edit)

This menu option lets you un-group a group, in order to edit the samples individually. This works on stereo objects as well, which are automatically grouped for you until you make this selection.

Shortcuts:

Toolbar:



Mix-Down (Menu Edit)

Using the MIX-function, all objects on all tracks are summarized onto a hard disk file. Afterwards, your arrangement no longer takes up RAM-memory, but instead a few bits of your hard drive (10 Mbyte per minute of stereo). Moreover, only two tracks are now occupied (only 1 with mono arrangements), so that after mixing, you can add more sample objects. The hard disk file created is optimized by Music Maker, so that the loudest portion exactly equals 16 Bit (normalizing). This prevents any loss in sound quality, even if you mix over and over again.

This hard disk file can also be easily loaded into the twin-program, Music Studio, for more processing!

Shortcuts:

Toolbar:



Undo (Menu Edit)

Music Maker offers a comfortable and capable undo function. In all arrangements, the last 3 changes made can all be undone, including object and cursor manipulations. Thanks to this extremely functional feature, you need not worry when testing out critical operations; if the result isn't what you want, the Undo function will take you right back to the previous arrangement.

Shortcuts:

Key: **CTRL+z**

Redo (Menu Edit)

Redo lets you reverse the last undo command.

Shortcuts:

Key: **CTRL+a**

Clean Up (Menu Edit)

This function resets some of the basic settings, in case they were changed during editing. This means:

- The screen display zooms to include the complete project
- The start and end cursors go back to their original positions
- If numerous windows were opened, they will be arranged underneath each other in a row, in order to make drag & drop asier.

After a Clean Up command the end cursor positions automatically to the last object, until you move it manually to another position.

Shortcuts:

Toolbar:



Play Parameter (Menu Edit)

This menu option opens the window with playback parameters that you can set.

The **Sample Rate** adjusts the playback speed of the original, as far as the sound card allows (some cards let you adjust speed even during playback!). This can be useful if you want to hear each note of an arrangement carefully (slow-motion); if you reduce the speed by one half, the sound will go down an octave.

With **Device**, the driver of the sound card for the playback can be set. This is especially important if you have more than one sound card on your computer.

Autoscroll lets you activate an especially useful function, particularly for working with longer arrangements. The graphic display scrolls automatically when the cursor reaches the end of the screen display.

You can select between scrolling page-wise or by half pages. Careful: the scrolling process requires a certain processing time (depending on the processor, graphic card and resolution), so that this may overburden your PC, possibly causing major problems during playback. You may need to deactivate the autoscroll mode.

Shortcuts:

Key: **p**

Setup (Menu Edit)

This menu function opens a setup window.

Im-/Export: Here you can change the path for importing and exporting WAV-files.

Temporary: Here you can set the path for MIX-files and effect-files.

Arrangements: This sets the path for arrangements (.VIP).

Buffer Size: Standard setting is 8192 samples of buffer, which are used during playback of arrangements. Since a perfect playback is generally more important than a quick reaction time, this value should be increased to 16384 or 32768, if you listen playback interruptions.

Buffer Count: Here you can enter the number of buffers to be used (between 2 and 10). The higher the number, the higher the safety, but also the amount of memory needed.

The current buffer count can be seen during playback in the status row in the bottom right corner of the screen.

Memory Mode: Here you can enter the format Music Maker should use when loading WAV-files into the RAM.

Mono: Stereo waves are converted to Mono when you load sounds. This means that only half as much memory is needed. Moreover, with mono you have 4 tracks instead of 2 Stereo tracks available.

22 kHz: Waves with 44 Khz sample rates are converted when loaded to 22 kHz, which also takes up half as much memory space.

Direct Synchronization:

Here you can switch on and off the automatic direct synchronization between music maker and the MIDI sequencers Evolution, MIDI-Connections and Q-Trax and the hard disk recording software music studio 2.x and Samplitude 2.x.

You need to have 2 sound cards for running music studio or Samplitude in multitasking to music maker!

Shortcuts:

Key:

y



Toolbar:

Menu Effect

<u>Volume...</u>	Change volume of the sample.
<u>Distortion...</u>	Calculate a distortion effect.
<u>Reverb...</u>	Calculate reverb effect.
<u>Echo...</u>	Calculate echo effect.
<u>Backwards</u>	Playback sample backwards.
<u>Normalize</u> HID_NOR	Maximizes the amplitude of the
MALIZE	sample.
<u>Filter...</u>	Calculate filters with the sample.
<u>Gater...</u>	Calculate rhythmic volume or filter
	effects on the sample.

Volume (Menu Effect)

This control changes the volume up or down.

You can also use this function to create an overdrive effect.

Distortion (Menu Effect)

The sample can be distorted by a non-linear transfer curve using this function. There are 3 different distortion levels to choose from.

Reverb (Menu Effect)

Calculates a reverb effect on your sample.

You can choose 3 kinds of reverb, short, medium and a long echo like effect.

Echo (Menu Effect)

The sample will be given a slight time delay. Choose from several different delay-types, which function in relation to the sample length. If for example with a 1-beat drum loop you select the value $\frac{1}{8}$, the delay will be in $\frac{1}{8}$ th notes.

Backwards (Menu Effect)

The sample is played backwards.

Normalize (Menu Effect)

This effect maximizes the volume of a sample object. In a first pass music maker searches for the maximum level in the sample. Then the volume is increased until it reaches the 16 bit limit.

Use the normalize function to manipulate "low power" samples and objects after filter calculations.

Filter (Menu Effect)

With this menu you have a digital filter at hand which you can use to adjust the frequency of a sample. There are three different types of filters you can activate. You can boost low, medium or high frequencies.

Gater (Menu Effect)

This special effect chops a sample into a certain number of pieces (1-128). Enter first the number of cuts you want, which will be divided equally through the entire sample length. Then move the sliders to activate all the pieces in which the signal should be made audible and deactivate those where it should not be heard.

This function is especially useful if you want to make a grooved sample using one sound level, which fits well with drumloops, etc.

Try the **filter** setting instead of **volume** to create rhythmical filter sweeps etc. !

Play Once

Playback project once.

Shortcuts:

Toolbar:



Key:

Space

Play Loop

Playback project in loop mode.

Shortcuts:

Toolbar:



Key:

Space

Stop (Menü Spezial)

Stop playback.

Shortcuts:

Toolbar:



Key:

Space

Menu Window

This menu contains functions for window manipulation.

<u>Cascade</u>	Arranges all open windows.
<u>Tile</u>	Arranges all open windows.
<u>Untile</u>	Restores previous arrangement.
<u>Toolbar</u>	Shows or hides the upper toolbar.
<u>Statusbar</u>	Shows or hides the status bar.
<u>Close All Windows</u>	Closes all open windows..
<u>Half Height</u>	Changes the Samplitude screen to half the height.
<u>Window 1, 2, ...</u>	Activates the window 1,2...
<u>Cascade (Menu Window)</u>	

This function arranges all open windows in a cascade style.

Tile (Menu Window)

All open windows are moved next to each other, making use of the whole display area. This is useful when dragging objects between arrangements.

Shortcuts:

Keys: **Return/Enter**

Untile (Menu Window)

This function will return the window order to the previous state.
Shortcut is **Shift + Return**.

Toolbar (Menu Window)

Shows or hides the upper tool bar.

See also Upper Toolbar .

Statusbar (Menu Window)

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

See also Statusbar .

Half Height (Menu Window)

The music maker screen is shown in the upper half of the display.

This is useful, when using a sequencer program in multitasking with direct synchronization. So you can switch between music maker and the sequencer without the need of complete screen redraws.

When using the sequencer Evolution, Q-Trax or MIDI-Connections in direct synchronization, their display reduces automatically to the lower half of the screen.

Close all Windows (Menu Window)

Closes all opened projects. Before closing a window/project, music maker will ask you whether you would like to save the project.

1, 2, ... (Menu Window)

Choose active window from the list.

Menu Help

This menu contains the context sensitive online help functions of Music maker, the title screen with the SEKD Logo, CompuServe e-Mail ID...

<u>Contents of Help...</u>	Shows the items, for which help is available.
<u>Using Help...</u>	How to use the online help system.
<u>Context Help</u>	Activates the context sensitive help system.
<u>About Music maker...</u>	Shows copyright notice and the version of Music maker.
<u>System Information</u>	Shows informations about memory usage etc...

Contents of Help... (Menu Help)

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

Using Help... (Menu Help)

Use this command for getting informations about the online help system.

About Music maker... (Menu Help)

Copyright notices and version numbers are displayed.

Context Help (Menu Help)

Use this command, to get help about any part of Music maker. Click the
















button in the upper toolbar and then click on any button or menu item to get the help information.

System Information (Menu Help)

A window is displayed, containing information about the memory status and other parameters.

Particularly useful is the display of the free storage on all connected disk drives, the used system resources utilized by Music maker and the memory usage. Make sure the parameter for system memory used by Music maker never grows larger than the overall system memory available (physical RAM). If this happens, the performance of Music maker is reduced caused by page swapping done to compensate for the missing memory.

Obere Werkzeugleiste

Bild	Aktion
	<u>New Arrangement</u>
	<u>Load Arrangement</u>
	<u>Save Arrangement</u>
	<u>Copy Object</u>
	<u>Delete Object</u>
	<u>Build Group</u>
	<u>UnGroup</u>
	<u>Zoom In</u>
	<u>Zoom Out</u>
	<u>Play Loop</u>
	<u>Play Once</u>
	<u>Stop Playback</u>
	<u>Create Mix File</u>
	<u>Setup</u>
	<u>Clear Up</u>
	<u>Contextsensitive Help</u>

Status Bar

The statusbar is displayed in the lower line of the Music maker screen. A black bar shows the progress in most edit functions.

Title Bar

The titlebar is displayed in the upper line of a windows. It contains informations about the project title and its length in samples and in bytes.

Scroll bars

Displayed at the right and bottom edges of the document window. The scroll boxes inside the scroll bars indicate your vertical and horizontal location in the document. You can use the mouse to scroll to other parts of the document.

Edit Arrangements

On the left side of the screen you'll find a listing of all the basic samples. If you haven't already, activate the letter of your CD-ROM drive, i.e. D:.

Now the Index-framework of the CD appears on the list. Click with the mouse to move about through the many index listings, i.e. DRUMS130\Groove01 (with ... you can jump back a level).

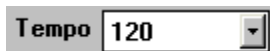
Clicking on a sample with a .wav ending will let you play the material quickly to test it out. This lets you get a quick overview of the samples in an index, without having to load its entirety.

Now arrange your own 4-track sample. Click on the name of one of the samples, hold the mouse-button down and drag the mouse to the first of the four tracks. An inverted color square covers the largeness of the sample. When you release the mouse-button, the sample will be loaded into that position. If you arrange samples onto parallel tracks, they will be played back simultaneously.

Samples can be deleted from the arrangement using the Delete key.

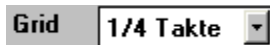
The lower tool bar includes tools with which you can set the tempo and the grid.

A color palette is also included to let you color sample objects.



Here you can set the tempo to be used as the basic setting for the bars and grids on the screen. Try to use the same tempo as the basic samples you're using, in order to maintain a good overview of the whole arrangement.

Music Maker tries to recognize itself the right tempo for the first sample that you load into an empty arrangement. This can only work however, when the length of the sample exactly corresponds to the set tempo!



Here the grid-type can be entered (also affects frame type).

Values of 1/4 mean that a frame will have quarter notes.

1/8 Triplets means that a triplet frame has been activated.



With the **color palette** you can give the active sample object a new color.



With this button you can use the **Color-Requester** to edit an alternative color.



With this button you can determine whether the selected color should be used for the sample **background** or for the **foreground**.

No help available

For this part of the window is no help available.

Quickstart

In this chapter you should learn the first steps in using the Music Maker. You'll be amazed how easy it really is!

A systematic description of all the functions is given in the descriptions of each individual menu.

Start the Music Maker by double-clicking on the Windows-Desktop icon. The Music Maker then opens.


First you should load some of the demo-tracks included in the package, in order to give you a better idea of what the Music Maker can do.

To do this, go to the File button in the menu and activate the menu option Load Arrangement. In the file window, enter the drive of your CD-ROM, i.e. D:. Then open the Demos file and load the first arrangement Demo-1.VIP.

A 4-Track-Window will appear with numerous sample objects. Start the playback of the arrangement using the Play-button or by pressing the space bar.

Now the cursor will run along the screen and the you'll hear the music as it is being played. If you don't



hear anything, check the Setup-Window (Button ) to see if the correct sound card has been activated. Also make sure that the sound card is connected to speakers or an amplifier.

If you should still have no sound, refer to the chapter Problems and Solutions at the end of this manual.

Once the playback is working, you should try out making a few changes in the arrangement: Using the mouse, grab the sample objects and reposition them. The **handlers** (5 small boxes found on the corners of the activated objects) let you adjust the following:

- volume**(top middle)

- fade in**(top left)


- fade out**(top right)

- Start sample**(bottom left) and

- End sample** (bottom right)

Now you're ready to **create your own arrangement**:



Open a new 4-track-screen by clicking the -Button; This is done for you automatically when you start the Music Maker.

On the lefthand side of the screen you'll see a list of sample tracks. If you haven't already, activate the CD-Rom drive by clicking on the corresponding letter, i.e. D:.

Now the Index-framework of the CD appears on the list. Click with the mouse to move about through the many index listings, i.e. DRUMS230\GROOVE01.WAV (with ... you can jump back a level).

Clicking on a sample with a .wav ending will let you play the material quickly to test it out. This lets you get a quick overview of the samples in an index, without having to load its entirety.

Now arrange your own 4-track project. Click on the name of one of the samples, hold the mouse-button down and drag the mouse the first of the four tracks. An inverted color square covers the largeness of the sample. When you now let go of the mouse-button, the sample will be loaded into that position. You can load more samples in the same way, either singly or parallel. If you arrange samples onto parallel tracks, they will be played back simultaneously.

Samples can be deleted from the arrangement using the **Delete** key.

Manipulating Objects

Now start the playback by pressing the space bar. The arrangement you made will be played from the first to the last object. If you place another sample after the last, the length of your arrangement automatically adjusts accordingly.

With the number **keys 1 to 0** (found above the letter keys) the playback start of the arrangement can be set to a certain bar, from 1 to 0. This function works also during playback and is a cool live effect!

Using the control **keys F1 to F10**, the play range can be adjusted bar wise. Changing back and forth

between bars 1...10 is therefore as easy as pressing a button, and can be done during playback. The < key lets you switch between **backward** and **forward** playback, another SUPER live effect!

You can manually move the cursor to adjust the playback start and end positions in the row of sample objects, so that you could for example loop only a certain section of a complex arrangement. The Panic-



function Funktion (Button) sets the start and end back to the first and last object, respectively. Experiment around by making adjustments to the sample objects! All manipulations will be played back in real time. This has the advantage that you can immediately hear the changes you make without destroying the sample track itself (non-destructive editing). This also makes the multi-level Undo function possible, letting you reverse changes that you make. This makes it very easy for example to change one drumloop by extending it (using the bottom right button) into a long drum piece. If it still isn't as long as you want, you can use the Zoom-out function to extend it even more verlängern (Button



If you only want to use one sound from a drum loop (say the Hi-hat from the 2. counter) you can mark the object using the buttons below it and thereby remove all other sounds. You'll love the way that Music Maker grafically displays the sample tracks- this is certainly not the case with other programs! The sample display can be turned off by using the TAB-key, which lets you i.e. speed up the screen display on computers with slow graphic-cards.

Using the volume control button in the top middle row you can adjust the volume of objects individually. When numerous sounds are played back simultaneously, you can also adjust the balance. Stereo sounds always take up two tracks in the arrangement. In order to move the stereo panorama right or left, first



delete the grouping of both samples (Button). Now the volume of each object can be set individually. The top track is usually set to the left, the next one to the right, etc. If the tracking is different in your case, it's probably due to a faulty connection to the speakers or amplifier.

With the command buttons on the top right or left you can **fade a sample in or out**. By combining in- and out- fading over several tracks, you can realize cross fades between different objects. Try making a snare drum blend gently into bird song! The length of the cross fade can be regulated with the handlers.

An important function in setting up larger arrangements is the **copy-function**. Simply select an object with




the mouse and activate the Button. A copy of the object will appear right next to the original. This copy can then be placed in the desired position. And you'll be happy to know that such (virtual) objects take up almost no additional memory!

A word about **Frames and Grids** in Music Maker:

Surely you've noticed by now that frames are involved in the positioning of sample objects in an arrangement. These frames help ensure that the movement from one section to the next occurs perfectly smoothly. Each object's frame touches that of the next. Furthermore, grids are usually active, which separate the frames according to the counts in a bar of a certain tempo, i.e. every fourth beat of a 120 bpm (beats per minute) Tempo. 120 bpm means that the frequency is 2 beats per second. The higher the bpm value, the faster the tempo. Modern techno-titles often have tempos of 160 or higher! The grids can be adjusted in the bottom row of your screen, i.e. from 120 to 160 bpm. The frames can also be changed from quarter-notes to whole notes or eighth notes simply by changing the setting. For setting music to videos, the grid with time display has been constructed, in which instead of beats, minutes and seconds are displayed. In this way you can position sounds and effects to correspond exactly with the video.

Once you have created a relatively complex arrangement, you may find that the memory of your PC is nearly used up or that the overview is missing. After all, all the samples you used must fit onto the RAM of your computer.



This is the time to bring the MIX function into action. With the **MIX-function** (Button ) all objects on all four tracks are compiled onto one harddisk file. Afterwards, your arrangement no longer takes up any RAM memory any longer, but instead just a few megabytes on your hard drive. Furthermore, only 2 tracks (or 1 with Mono-projects) are used up, so that after the MIX procedure you can continue to arrange more objects. The hard disk file created is so optimized by Music Maker that the loudest tone has exactly a 16-Bit value (normalizing). In this way, the Music Maker ensures that even numerous MIX-ings wont damage the sound quality!

Such a hard disk file can also be opened in the accompanying program **Music Studio**, in order to edit it more there!

Effects: Since one can always make a good thing better, we have given Music Maker not only 1000 first-class samples, but also lots of effect-algorithms as well. With theses you can add to every sample object in your arrangement special effects such as echo, distortion or filtering in order to get a completely new sound. To do so, simply mark the the object in the four-track window and select the desired effect from the Menu list Effect. Music Maker creates a new file from the original, which is saved in Music Makers window. This new file will be automatically integrated into the arrangement, so that immediately after the adjustment you can here the new sound-effect. Try giving a drum loop a short delay or changing a sound using the filter-effect!

You can also open the **effects menu** with the **right mouse button** in the arrangement window!

At the end of this short introduction to Music Maker, you should test out the Menu **Media Link!** With this menu, a Music Maker arrangement can be can be played back synchronously with a media file. The Media-files you could use are for example MIDI-Songs (*.MID) or Video for Windows movies (*.AVI). But all other media for which you have an installed MCI-Driver can be used as well.

Lets assume that you have an AVI-movie on your hard drive to which you wish to add your own sound effects. Open the Menu File /Media Connection and load the video-file. Using the Test button, you can open the video in a test. End the dialog by pressing O.K., and now the video will be played along with your arrangement. Since generally a beat time isnt very practical for videos, select the grid pattern time display (in the lowest screen row). Now you can arrange all your sample objects exactly according to the scenes in the 4-track window!

Please note that the color reproduction in Music Maker and in the video window are only independent at a color level of 32000 or higher. With 256 or 16 colors, either Music Maker or the video will show distorted colors, since all windows have to share the same color palette.

One more tip: for a complete music-video arrangement, the Music Studio program is a great accompaniment, in which all the Music Maker effects can be combined with original sounds and self-recorded music in up to 4 hard disk tracks of unlimited length. Simply create a MIX-file and load this into the Music Studio as a hard disk arrangement!

Adding a MIDI-Song can be done in much the same way. For example, you can fine-tune a demo-song through effects in the Music Maker. Dont forget that MIDI-files are always reproduced using the MIDI-mapper (system control). There you need to make sure that the right driver for your sound card or the MIDI-interface is installed.

Editing Objects

Selection of objects with the mouse

Multiple selection of objects

Unselect objects

Move objects

Edit the borders of objects

Fade In / Fade Out

Object-Volume

Covering objects

Selecting an object using the mouse

To select an object simply click on it with the left mouse button. You should see 5 small handles that appear at the beginning and end of the object and in the middle. If you click on the object again, the selection will be revoked.

The frames around the object will also be inverted if the left mouse button remains being pressed.

If you select an object this way, you will deselect all previous selected objects.

Selecting several objects using mouse

Pressing the left mouse button together with the Shift key enables the selection of an object without revoking the selection of other objects.

Object Lasso

In a music maker arrangement you can select several objects at a time with the object lasso. Simply click in the space between the objects and drag the mouse while holding the button.

After that you can manipulate all selected objects together, e.g. for moving, deleting or adding effects.

Unselecting objects

Click the mouse next to an object and all selected objects are unselected.

Move objects

After one or more objects have been selected, they can be moved horizontally (on the time axis) or vertically (in the track number). You will need to click on the object(s) and hold the mouse button. By dragging the object(s) you can either shift it to a new position on the time scale or move the object to a different track.

When shifting multiple objects, please keep in mind that the shift can only occur until one of the objects reaches its outer limits. In other words, if the first object in the group reaches the beginning of the virtual project the shifting will stop at that point.

Changing the beginning and end of objects

The two lower handles of an object define the edges of the object. By manipulating the handles you can change the beginning and the end of an object. The beginning of the object can be shifted forward or backward, when you first click on the front handle and then keep the left mouse button pressed.

The beginning of the object can only be shifted to the beginning of the physical sample or to the end of the object. Respectively, the end of the object can only be shifted as far as to the end of the physical samples or the beginning of the object.

If you drag the end handler behind the end of the physical sample, you can create **multiple loops** of the material (loop object). This is an excellent function to produce a complete drum track from one drum loop!

Fade In / Fade Out

The two upper corners of an object are the handles for fading in and fading out. Fading in and out can be easily achieved by manipulating those handles. As already explained, this function is performed in real-time mode. Any alterations you make here will leave the original physical sample unchanged.

You can specify fades without risking losing any sample data.

Since real-time fading requires system resources, you might encounter small interruptions during playback on slower computers even though Music maker makes use of optimized Assembler programming. Should this occur try increasing the VIP buffer values by selecting Setup... from the Edit menu.

Object-Volume

The volume of any object can be adjusted using the handle in the middle of the object. This function is also performed in real-time. If your system cant handle the needed requirements, the physical sample can be set to the appropriate volume levels using the volume effect function.

Covering of objects

On a track (channel), only one object can be played at a time. When an object is shifted and covers a certain portion of another object, the invisible portion of the covered object cannot be played.

Shift the object to make the invisible portion of the covered object portion visible and audible.

Object Raster

As explained above, rasters will let you easily shift objects to a specific position. Using this function with the Object Raster, you can only shift objects as far as to the beginning, the end or the hotspot of another object. The front edge of the object is normally the reference point. A hotspot for the object is only taken into account if its already defined. If several objects are selected, they will always be shifted to the front edge (or the hotspot) of the object which is selected as the last (the mouse points to this object).

This function will let you rearrange audio patterns easily and quickly by gaining sample exact merge points.

The screen of music maker

On the left side of the screen you'll find a listing of all the basic samples. If you haven't already, activate the letter of your CD-ROM drive, i.e. D:.

Now the Index-framework of the CD appears on the list. Click with the mouse to move about through the many index listings, i.e. DRUMS130\Groove01 (with ... you can jump back a level).

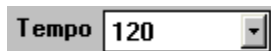
Clicking on a sample with a .wav ending will let you play the material quickly to test it out. This lets you get a quick overview of the samples in an index, without having to load its entirety.

Now arrange your own 4-track sample. Click on the name of one of the samples, hold the mouse-button down and drag the mouse to the first of the four tracks. An inverted color square covers the largeness of the sample. When you release the mouse-button, the sample will be loaded into that position. If you arrange samples onto parallel tracks, they will be played back simultaneously.

Samples can be deleted from the arrangement using the Delete key.

The lower tool bar includes tools with which you can set the tempo and the grid.

A color palette is also included to let you color sample objects.



Here you can set the tempo to be used as the basic setting for the bars and grids on the screen. Try to use the same tempo as the basic samples you're using, in order to maintain a good overview of the whole arrangement.

Music Maker tries to recognize itself the right tempo for the first sample that you load into an empty arrangement. This can only work however, when the length of the sample exactly corresponds to the set tempo!



Here the grid-type can be entered (also affects frame type).

Values of $\frac{1}{4}$ mean that a frame will have quarter notes.

$\frac{1}{8}$ Triplets means that a triplet frame has been activated.



With the **color palette** you can give the active sample object a new color.



With this button you can use the **Color-Requester** to edit an alternative color.



With this button you can determine whether the selected color should be used for the sample **background** or for the **foreground**.

Definitions

-Wave-File

A Wave-file is a file with digital audio-information. The Music Maker CD-ROMs include such files, which are automatically compatible with most audio software programs.

The Music Maker Wave-files have 16-Bit stereo and a sample rate of 44,1 kHz, giving them CD-quality.

If you use Wave-files from other sources, please be aware that 8-Bit samples give you much lower quality sound.

-Samples and Sample Objects

A Wave-file becomes a sample object when you move it from the file list into the 4-track window (drag and drop). Sample objects are in Music Maker the basis to which you add effects, change the fades or volume, grouping the sounds, etc.

Please note that all the samples used in an arrangement must be loaded into the RAM of the PC.

Therefore you need to have sufficient memory available, otherwise parts of the sample will have to be stored on the hard drive (virtual memory), which leads to slower processing and could even cause playback interruptions.

As a general rule, a PC with

- 16 MB RAM holds 100 seconds

- 8 MB RAM holds 50 seconds

- 4 MB RAM holds 20 seconds

of sample in the memory. This calculation is based on the maximum values using 44 kHz and stereo.

Selection an arrangement with only 22 kHz doubles the possible sample length; with additional reduction to mono it is quadrupled.

Naturally music maker can use virtual memory; nevertheless it depends on the performance of your individual system whether or not the feedback functions correctly. Enlarging the playback buffer in the Setup-Dialog may help.

-Sample rate

When digitizing audio material, the value of the analog wave forms are measured and recorded at a rate of several thousand times per second. The more this is done, the better the quality. Generally, high

frequencies can be measured up to half as fast as the sample rate, i.e. with a scanning of 44100 Hz (44100 sample per second) frequencies of 22000 Hz are measured, higher than the human ear can hear.

If you are working with a reduced sample rate in order to save memory, you may notice a light decrease in the highest frequencies. With 22 kHz sample rates, for example, only frequencies of up to 11 kHz can be processed.

-Sample Resolution

Music Maker works with 16-Bit sample resolution, meaning the analog wave forms would be divided among 65000 stepping scales. This high resolution guarantees you a high clarity (>90 dB) and a true sound.

If you are using 8-Bit samples from other sources in Music Maker arrangements (which can be done), don't be surprised if the sound quality is not as good due to noise background and distortions.

These samples have only 256 stepping scales of memory available, which takes up half as much memory but means making compromises in sound quality.

-Arrangements

Arrangements are the contents of the 4-track windows, all the sample-objects, hard disk files and effects found therein.

You'll be happy to know that you can open numerous arrangements simultaneously, change the order using the Return key and then move objects back and forth between arrangements! This makes it super easy to copy a passage into other arrangements.

-Cursor

The cursor shows you your position in the current playback. It moves itself step-by-step across the screen according to the buffer-size setting in the Setup-Dialog. If you decrease the buffer size, the

cursor will move more slowly. If however the playback should be disrupted, you will have to increase the

buffer size somewhat.

There is also a cursor for the starting and ending playback. Both of these cursors can be moved with the mouse, in order to play back only a smaller section of the arrangement in a loop.

-Frames and Grids

In the lowest portion of your screen there are two settings for tempo and grid-type. Both settings are based on the active frame and let you adjust the sample object exactly frame by frame.

Please note that objects which touch the active frame rest against the other neighboring objects sharing the same frame edges.

With Tempo you can select the speed of the object frame, i.e. 130, if you are using drum loops with 130 bpm from the menu on the Music Maker CD-ROM as the basis for your arrangement. This lets you be certain the grids on the screen fit rhythmically with your sample material.

With Grid-Type the frequency of the frames can be set, i.e. whole notes (1/1 or eighth notes (1/8). Even triplet frames can be set, i.e. 1/8 Triplet

Sometimes it makes sense to work without any frames at all, i.e. when setting videos to music. For this we recommend the grid-type Time Display, which gives real time to the grid lines (minute:second:frames) and the frame itself is deleted.



This button will let you switch between different zooming factors. The length of the section displayed is always cut in half. However, the middle of the section is maintained. Exceptions are possible if the range is at the beginning or end of the sample. From a certain resolution on, the single sampling values are represented individually and separated from each other by vertical gaps. The lower limits of zooming in are 2 or 3 sampling values. The whole section will be filled with these sampling values.



Another way is zooming out of the section. The length of the section is doubled, and its middle position is maintained. Exceptions are possible if the section has already covered almost the complete sample. The upper limit of zooming out is the complete sample.

Lower Toolbar

The lower tool border includes tools with which you can set the tempo and the frame. A color palette is also included to let you color sample objects.



Here you can set the Tempo to be used as the basic setting for the frames and grids on the screen. Try to use the same tempo as the basic samples you're using, in order to maintain a good overview of the whole arrangement.

Music Maker tries to recognize itself the right tempo for the first sample that you load into an empty arrangement. This can only work however, when the length of the sample exactly corresponds to the set tempi!



Here the grid-type can be entered (also affects frame type).

Values of $\frac{1}{4}$ mean that a frame will have quarter notes.

$\frac{1}{8}$ Triplets means that a triplet frame has been activated.



With the **color palette** you can give the active sample object a new color.



With this button you can use the **color-requester** to edit an alternative color.



With this button you can determine whether the selected color should be used for the sample **background** or for the **foreground**.

Wave List

On the left side of the screen you'll find a listing of all the basic samples. If you haven't already, activate the letter of your CD-ROM drive, i.e. D:.

Now the Index-framework of the CD appears on the list. Click with the mouse to move about through the many index listings, i.e. d:\DRUMS130\GROOVE01.WAV (with ... you can jump back a level).

Clicking on a sample with a .wav ending will let you play the material quickly to test it out. This lets you get a quick overview of the samples in an index, without having to load its entirety.

Now arrange your own 4-track sample. Click on the name of one of the samples, hold the mouse-button down and drag the mouse the first of the four tracks. An inverted color square covers the largeness of the sample. When you now let go of the mouse-button, the sample will be loaded into that position. You can load more samples in the same way, either singly or parallelly. If you arrange samples onto parallel tracks, they will be played back simultaneously.

Samples can be deleted from the arrangement using the **Delete** key.

Problems and Solutions

The following are solutions to some common problems. Should your problem persist, please contact the distributor or us via CompuServe. Please supply the following information:

- Version of Music maker
- Where you bought the program
- Configuration of your system (Processor, RAM, hard disk, etc.)
- Sound card configuration (Type, Driver)
- Information on whether other audio components are operating properly

Installation process is interrupted

If the installation process interrupts, but all paths have been specified correctly it is usually an indication for either a defective installation diskette or your hard disk simply doesn't have enough space left to install Music maker. Music maker needs at least 2.5 MB of hard disk space for a proper installation.

No sound while playing

If you do not hear any sound played, but the cursor still moves through the project you will need to check on the following:

- The wrong driver in the Play Parameter Window (key p) has been chosen.
- No Windows driver has been installed for your sound card.
- The volume setting in your soundcard's mixer program is set too low.
- Faulty connection of the speakers or the amplifier to the sound card.

A good idea is to check audio playback apart from Music maker. If there is any doubt about the proper soundcard setup, use the Windows Media Player to test the soundcard. By loading a wave file in the Media Player and playing it you should be able to receive an audio signal on your soundcard's output connectors. If you are still having problems, ensure that the driver for your soundcard has been properly installed.

Cant open Wave Form Device!

Music maker informs you that the audio outputs of your soundcard have been opened by another program. Make sure the Media Player or another wave player is not loaded. Close the program and try loading Music maker again (or if already loaded, start playback again).

Cant play this wave format!

This message appears when you try to play a wave format which is not supported by your soundcard. Because Music maker requires a 16 bit soundcard, the use of a 8 bit card causes this message. Another reason for this message is that your card doesn't support all sampling rates available in Music maker. To check the capabilities of your soundcard use the standard sampling rates such as 44 kHz, 32 kHz, and 22 kHz.

Short interruptions during playback

After starting playback, especially in case of HD Projects and VIPs, you might encounter short dropouts. This usually means that your system (processor or disk) is too slow for the adjusted buffer size and sampling rate. Try the following steps:

- Raise the buffer value for RAM, HD or VIP in the dialog window by selecting Setup, System (key y). Higher buffer values will increase overall performance, but it will also slow down cursor movement and requires more RAM memory.
- If it still doesn't work, then you must reduce the sampling rate. Reduce it from 44.1 to 22 kHz. In most

cases the audio quality is still sufficient (enough for video music arrangement or cassette recording).

Playing doesn't stop

If you can start playback by pressing the Spacebar, but you are unable to stop it your system might have become too busy with the data processing. The only way to stop playback is by pressing the ESC key. This is the only time playback can be interrupted by pressing the ESC key.

Mediafiles not in sync

Should you encounter delays in playing media files in sync with your digital audio you can adjust the playback by specifying a correction factor FX in the menu Project, Media Link.... See the description on the menu option in this manual.

A few Tricks

A few tricks that help make working with Music maker an ease:

- Using the **Return** key you can arrange all windows in comfortable way.
- Using key **P** you can open the play parameter window, where you can choose the sound card and the sample rate for playback.
- With the **Tab** key you can switch between 2 display modes in arrangements!
- With **Control + left Mousebutton** you can copy sample objects!
- With the **Del** key you can erase sample objects!
- With the **numerical keys 1 to 0** (above the alpha keys) you can change the starting point for playback from bar 1 to bar 10. This effect also works while playing!
- With the **function keys F1 to F10** you can playback bar 1 to bar 10 in loop mode. Also this effect works in realtime while playback!
- With the **< key** you can switch between playback forwards and backwards. This is a super live effect, if used while playback!
- With the **right mousebutton** you can activate a pull up menu for sample effects. So it is very easy to add effects to your sample objects!

Keyboard Shortcuts and Mousebuttons

General

a+ctrl	Redo
c	Copy Object
e	New Arrangement
i	Project Information
o	Load Arrangement
p	Play Parameter
s	Save Project
s+shft	Save Project with new name
y	Setup
z+ctrl	Undo
Tab	Toggle Display Mode
Tab+shft	Define display mode
Space	Start/Stop Playback
Enter	Arrange Windows
Esc	Abort playback
Del	delete selected objects

numerical keys 1..0

Sets playback starting point to bar 1...10

function keys F1-F10

Sets playback range to bar 1...10

right mousebutton

Opens effect pop up menu

