

New file

Open a window for new music.

Menu: **FILE|NEW...**

Keyboard: **Ctrl+N**

Note: By invoking the dialogue for editing the start of the score this command invites you to define the number of staves on the score, the key and time signatures at the start of the piece and the tempo.

Open file

Open a music file. (Standard extension **.mz**)

Menu: **FILE|OPEN...**

This command invokes the standard file selector.

Save file

Save a music file. (Standard extension **.mz**)

Menu: **FILE|SAVE**

Keyboard: Ctrl+S

The file may also be saved under a new name:

Menu: **FILE|SAVE AS...**

This operation invokes the standard file save dialogue.

Open clipboard

Create a new music window and import the contents of the clipboard.

Menu: **FILE|OPEN CLIPBOARD**

Print

Print the music. The standard print dialogue is invoked. If the music page is not correctly formatted for the printer a warning is generated.

Menu: **FILE|PRINT...**

Print setup

Set up the printer.

Menu: **FILE|PRINT SETUP...**

Note that options selected here do not alter the music format, which has to be adjusted to fit the printer page before printing. If the music page is not correctly formatted for the printer a warning is generated at print time.

Duplicate

Create a new window duplicating one, some or all of the parts in the active music window.

Menu: **FILE|DUPLICATE**

See also

[Duplicating one or more parts](#)

Save MIDI file

Save a MIDI file (standard extension **.mid**) from the music in the active window.

Menu:

FILE|MIDI|SAVE MIDI

FILE|MIDI|SAVE MIDI AS...

Play music from active window

Play the music in the active window/stop playing music.

Menu: **FILE|MIDI|PLAY** **FILE|MIDI|STOP**

Keyboard: **F2**

Note: The keyboard command toggles play/stop. This feature is only available on systems with the capability of outputting sound from MIDI files.

See also

[Playing music](#)

Close music window

Close the active music window.

Menu: **FILE|CLOSE**

Keyboard: **Ctrl+F4**

Exit

Terminate the program.

Menu: **FILE|EXIT**

Keyboard: **Alt+F4**

Most recently used files

The FILE menu maintains a list of most recently used files which can be reopened directly by clicking the mouse on the file name. Directory information is maintained but only the file name is displayed on the menu.

Copy

Copy selected music to the clipboard:

Menu **EDIT | COPY**

Keyboard: **Ctrl+C**

See also

[Using the clipboard](#)

[Open clipboard](#)

Cut

Cut the music from the tune and put it on the clipboard:

Menu: **EDIT | CUT**

Keyboard: **Ctrl+X**

See also

[Using the clipboard](#)

[Open clipboard](#)

Paste

Paste music from the clipboard into the tune:

Menu: **EDIT | PASTE**

Keyboard: **Ctrl+V**

See also

[Using the clipboard](#)

[Open clipboard](#)

Copy Image

Copy the client area of the active music window to the Windows Clipboard in bitmap format.

Menu: **EDIT | COPY IMAGE**

Keyboard: **Ctrl+Shift+C**

See also: [Exporting images](#)

Insert bars

Insert one or more bars using the insert bars dialogue.

Menu: **EDIT | INSERT BARS...**

Delete bars

Deletes the selected bars. (The music and the barlines are deleted from all parts.)

Menu **EDIT | DELETE BARS**

Cut bars

Deletes the selected bars and copies them to the clipboard. (The music and the barlines are deleted from all parts.)

Menu: **EDIT | CUT BARS**

Keyboard: **Ctrl+Shift+X**

Selecting one or all parts

Toggle the selected block between the **current part** and **all parts** on multipart music. When the menu item is ticked, block operations will apply to all staves on the score; otherwise they will apply to the current stave/part only.

Menu: **EDIT | BLOCK ALL STAVES**
Keyboard: **F9**

Go to bar

This command allows you to move the caret to a specified bar.

Menu: **EDIT | GO TO BAR...**

Keyboard: **Ctrl+G**

Music font (screen)

Select the music font, and font size, displayed on the screen using the music font selection dialogue.

Menu **VIEW | MUSIC FONT...**

Zooming in and out

The screen image magnification may be changed by zooming in and out. This is equivalent to selecting the corresponding screen music font size.

Menu|keyboard:

VIEW ZOOM OUT	F7
VIEW ZOOM IN	Shift+F7

See also:

[Music font \(screen\)](#)

Visible items

Invoke the visible items dialogue in order to define which control items should be drawn on the screen, and to define delineation of parts of the page on the screen.

Menu: **VIEW | VISIBLE ITEMS...**

Global preferences

Invoke the global preferences dialogue.

Menu: **VIEW | GLOBAL PREFERENCES...**

Cascade music windows

Cascade the music document windows

Menu: **WINDOW | CASCADE**

Keyboard: **Shift+F5** .

Tile music windows

Tiles the music document windows.

Menu: **WINDOW | TILE**

Keyboard: **Shift+F4**

Arrange icons

Arrange music window icons (if any) neatly within the frame window.

Menu: **WINDOW | ARRANGE ICONS**

Close all

Close all open music windows. Prompts if any music has not been saved.

Menu: **WINDOW | CLOSE ALL**

Next window

Activate the next music window.

Menu: **WINDOW | NEXT**

Keyboard: **Ctrl+F6**

See also:

[Previous window](#)

Previous window

Activate the previous music window.

Menu: **WINDOW | PREVIOUS**

Keyboard: **Shift+Ctrl+F6**

See also:

[Next window](#)

Refresh music window

Refresh the music window.

Keyboard: **F5.**

Check format and refresh.

Keyboard: **Ctrl+F5**

Note: These should strictly not be necessary, but are provided as insurance against things getting out of synch. And of course things would get out of synch more often if these were not provided!

Caret movement keys

Keyboard:

- ← move the caret along the current stave.
- ↑ move the caret up and down on the current stave.

Ctrl+←, Ctrl+

- move the caret to the next bar line.

Ctrl+↑, Ctrl+

- ↓ move the caret to the previous/next part on the music (up/down one stave).

HOME move caret to start of line.

END move caret to end of line.

Ctrl+HOME move caret to start of music.

Ctrl+END move caret to end of music.

Mouse: Click on the music window within a stave area to move the caret to the desired position. (To activate a music window without moving the caret, click elsewhere - eg on the title bar).

Note: there are two modes of caret operation: normal mode and highlight mode. All the movements are possible in normal mode but some are not active in highlight mode.

Caret mode toggle

Toggle the caret between normal mode and highlight mode

Keyboard: **F8**

Modifying notes chromatically

Flatten/sharpen a note. (Lower/raise pitch by one semitone).

Keyboard: - **(minus)** to flatten.
+ **(plus)** to sharpen.

Menu: **ITEM|NOTE|SHARPEN**
ITEM|NOTE|FLATTEN

Mouse:

To alter the current note accidental, click on the current accidental (to the left of the current note at the right hand end of the status line) with the left mouse button to flatten, or the right mouse button to sharpen.

Note: The keyboard operation acts on the note by the caret, after the caret, or the current note shown on the status line, depending upon the position of the caret.

Optional accidentals

Mark/unmark an optional accidental.

Menu: **ITEM|NOTE|ACCIDENTAL**
Keyboard: @

Erase accidentals in the current bar

Erase unnecessary (optional) accidentals from the current bar

Menu: **BAR|ACCIDENTAL**

Keyboard: **Ctrl+@**

Dotted notes

Add/remove a dot/double-dot on an appended note.

Menu: **ITEM|NOTE|DOT** and **ITEM|NOTE|DOUBLE DOT**

Keyboard: ' **(single quote)** and " **(double quote)**.

Remarks

Dotted notes and rests may also be created and removed using merge and split

Tie

Tie/untie notes either side of the caret.

Menu: **ITEM|NOTE|TIE**

Keyboard: **T**

Note: strictly only notes at the same pitch can be tied, but this operation can also be used to provide a legato marking between two consecutive notes.

Editing octaves

Raise or lower the pitch of a note by the caret by one octave.

Menu: **ITEM|NOTE|OCTAVE DOWN**
 ITEM|NOTE|OCTAVE UP

Keyboard: **O** (lower) **Shift+O** (raise).

Editing the octave of a bar

Change the octave of all the notes in the bar containing the caret.

Menu: **BAR|OCTAVE DOWN**

BAR|OCTAVE UP

Keyboard: **Ctrl+O** (lower) **Ctrl+Shift+O** (raise).

Change pitch

Change the pitch of a selected block of notes (or of a single note) via the pitch change dialogue.

Menu: **NOTE|PITCH...**

See also

[Entering notes and rests](#)

[Editing pitch](#)

Converting rests and notes

Convert a rest or ghost by the caret to a **note** at the pitch of the caret.
Convert a note or ghost by the caret to a **rest**.

Keyboard: **F12** (to note).
Shift+F12 (to rest).

Note: if a block is selected, then all **ghosts** in the block are converted but notes and rests are not.

Merge

Merge two notes, rests or ghosts (either side of the caret) into a single one where possible. The resultant has the total duration of the two and takes all its other properties from the first.

Menu: **ITEM|PARTITION|MERGE**

Keyboard: **M**

Split

Split a note, rest or ghost into two or more of the same total duration. There are three variations on this option: even split, long-short, and short-long.

Menu: **ITEM|PARTITION|SPLIT NOTE**

Keyboard: # (even) / (long-short) \ (short-long).

Multiplet

Convert a note to a triplet (in simple time), a doublet (in compound time), or arbitrary multiplet.

Menu: **ITEM|PARTITION|TRIPLET**
 ITEM|PARTITION|DOUBLET
 ITEM|PARTITION|MULTIPLT...

Keyboard: **3, 2, 7** (respectively).

Joining/unjoining tails

Join/unjoin the tails of two notes either side of the caret (as long as they each have a (base) duration of a quaver or shorter.

Menu: **ITEM|TAILS|JOIN**
Keyboard: **J**

Joining tails in a bar

Join the tails of the notes in the bar containing the caret according to the default tail joining algorithm.

Menu: **BARJOIN TAILS**

Keyboard: **Ctrl+J**

Adding and removing accents

With the caret by a note add an accent to the note.

Menu: **ITEM|ACCENTS|STACCATO etc.**

Keyboard:

- . **(full stop)** adds/removes a staccato mark (from the bulb end of the stem).
- _ **(underscore)** adds/removes a tenuto mark (from the bulb end of the stem).
- ^ **(caret)** adds/removes an accent (from above the note).
- > **(greater)** adds/removes an accent (from above the note).

Note: The menu interface allows any of the above marks to be added at either the bulb end or the tail end of the stem, (or above or below the note). The keyboard interface adds the accent to the more usual end.

Adding a pause

Add a pause above a note.

Menu: **ITEM|ACCENTS|PAUSE**

Barline style commands

1) With the caret by a barline: toggle between single and double barline; OR with the caret in the middle of a bar: add an "extra" barline (which is deletable with the usual delete command).

Menu: **ITEM|BARLINE|BARLINE**

Keyboard: |

2) With the caret immediately to the left or right of a barline: add/remove repeat dots.

Menu: **ITEM|BARLINE|REPEAT**

Keyboard: : **(colon).**

Numbering bar lines

Insert/delete a bar number at the start of the current bar.

Menu: **BAR|NUMBER**

Keyboard: **N**

First and second time bar commands

Define the start of a first time bar. Then define the end of second and subsequent time bars. The caret must be by the appropriate barline.

Menu: **ITEM|BARLINE|FIRST TIME** **ITEM|BARLINE|SECOND TIME**

Keyboard: [(start of 1st time bar)] (end of 2nd or Nth time bar).

See also

[Introducing and deleting first and second time bars](#)

Inserting and editing dynamics

Select a dynamic marking from the menu and enters it at the caret (or replace the existing dynamic at the caret).

Menu: **ITEM|DYNAMICS|PPP,** **ITEM|DYNAMICS|MP,** etc
Keyboard: **P=p,** **Shift+P=pp,** **Ctrl+P=mp,** **Ctrl+Shift+p=ppp**

and similarly for f, ff, mf, and fff.

Inserting and editing text

Insert/edit text (eg "andante") at the caret via the text edit box.

Menu: **ITEM|TEXT**

Keyboard: **Ctrl+T**

To locate existing text **see also highlight mode**

Clef changes

Enter a clef change.

Menu: **ITEM|CHANGE|CLEF...**

Note: Inserting or editing a clef change may transpose any subsequent music by one or two octaves.

Key signature changes

Enter a key signature change.

Menu: **ITEM|CHANGE|KEY...**

Note: Inserting or editing a key change will transpose any subsequent music into the appropriate key.

Time signature changes

Enter a time signature change.

Menu: **ITEM|CHANGE|TIME...**

Note: A time change may only be entered at the end of the piece before any subsequent music is entered in the new time signature.

Space insert

Insert one unit of extra space before the caret.

Menu: **ITEM|SPACING|INSERT**

Keyboard: **Insert**

Space delete

Remove one unit of space from between the items.

Menu: **ITEM|SPACING|DELETE**

Keyboard: **Delete** with the caret between items

See also

[Delete](#)

[Delete item](#)

Compressing the bar

Remove all excess space from the bar containing the caret

Menu: **BAR|COMPRESS**

Keyboard: **Ctrl+Delete** with the caret between items.

End-of-tune marker

Remove space between the last item in the tune and the end-of-tune marker.

Menu: **ITEM|SPACING|COMPRESS END**

Delete item

Delete an item from the music.

Menu: **ITEM|DELETE**

See also

Delete

Space delete

Delete

Delete an item or a unit of space, depending on whether the caret is at an item or between items.

Keyboard: **Delete**

See also

[Delete item](#)

[Space delete](#)

Whole bar rest

Convert the contents of a complete bar to a whole-bar-rest OR convert a whole-bar-rest symbol to individual rests totalling the same duration.

Menu: **BAR|WHOLE BAR REST**

Keyboard: **Ctrl+R**

See also

[Whole bar rests](#)

Multiple bars rest

Menu: **BARS|N BARS REST**
Keyboard: **Ctrl+Shift+R**

Description: Entering multiple bars rest

Pad bar with rests

Convert all the ghosts in the bar to rests.

Menu: **BAR|PAD WITH RESTS**

Titles

The first page of a piece may contain up to three title strings. The main **title** in the centre, the reference to the **composer** at the top right, and extra **reference** information at the top left. These may be set or reset by invoking the text editor as follows:

Menu: **LAYOUT | TITLES | TITLE...**
 LAYOUT | TITLES | COMPOSER...
 LAYOUT | TITLES | REFERENCE...

Alternatively double click with left mouse button on the appropriate title on the screen to invoke the editor.

Headers and footers

Headers and footers are entered using the text editor invoked by the header and footer commands. **Header A** and **Footer A** appear on the first page. **Header B** and **Footer B** appear on all subsequent pages.

Menu: **LAYOUT | TITLES | HEADER | HEADER A...**
 LAYOUT | TITLES | HEADER | HEADER B...
 LAYOUT | TITLES | FOOTER | FOOTER A...
 LAYOUT | TITLES | FOOTER | FOOTER A...

Alternatively double click with left mouse button on the appropriate header or footer area on the screen to invoke the editor.

Note: There must be sufficient space in the header and footer area of the page for the header or footer to appear properly.

Formatting the page

Set the music page dimensions to the printer page and/or format the music on the page and/or select a new music font or font size.

Menu: **LAYOUT|PAGE FORMAT...**

Description: [Formatting the music page](#)

Stave width and margins

Edit the width of the stave and left and right margins.

Menu: **LAYOUT|STAVE WIDTH...**

Description: Setting the stave width and left/right margins

Score depth and vertical page layout

Edit the vertical page layout including:

score and stave spacing;
space for headers, footers, and titles.

Menu: **LAYOUT|SCORE DEPTH...**

Description: Setting the stave spacing and space above/below the music

Music font (printer)

Choose the music font and font size to be used when printing.

Menu: **LAYOUT|MUSIC FONT...**

Description: Selecting the music font / font size on the printer

Editing the initial clef

Edit the initial clef on the current stave.

Menu: **LAYOUT|START|CLEF...**

Note: Editing a clef symbol may transpose the subsequent music by one or two octaves.

Editing the initial key signature

Edit the key signature at the start.

Menu: **LAYOUT|START|KEY...**

Note: This operation transposes the following music appropriately.

Editing the initial tempo

Edit the initial tempo.

Menu: **LAYOUT|START|TEMPO...**

Note: This operation mainly affects a subsequently saved MIDI file.

Swing

Edit the swing style by invoking the swing_style dialogue.

Menu: **LAYOUT | START | SWING ...**

Keyboard: **Alt + F2**

Among the options invoked by this command is the ability to switch swing on or off. When swing is switched **on** the menu item is ticked.

The swing style only affects what happens when the tune is saved as a MIDI file (or played directly).

Entering notes and rests

Notes or rests can be appended at the end of the piece or entered at the start of a blank region in the middle of a piece.

Keyboard: **Spacebar** (to enter note).
 Shift+Spacebar (to enter rest).

Note: if the caret is by a note, then these operations respectively change the pitch to that of the caret, and replace the note by a rest.

Scrolling

Keyboard:

PgUp	scroll one screen up.
PgDn	scroll one screen down.
Shift+PgUp	scroll up.
Shift+PgDn	scroll down.
Ctrl+PgUp	scroll one screen left.
Ctrl+PgDn	scroll one screen right.
Shift+Ctrl+PgUp	scroll left.
Shift+Ctrl+PgDn	scroll right.

Remarks

Horizontal scrolling is accomplished by adding the **Ctrl** key.
Scrolling by small amounts is accomplished by adding the **Shift** key.

Lengthening/shortening the current note

Lengthen or shorten the current note displayed in the note window.

Keyboard: **X or Shift+X** (lengthen).
Z or Shift+Z (shorten).



Mouse: Click on the note panel on the right of the status line. Left mouse button shortens the current note. Right mouse button lengthens the current note.

Selecting music

Use the caret movement keys with the **Shift** key to select a section of music.

Help

Request help. This brings the up the help system on the general contents page.

Menu: **HELP | CONTENTS**

Keyboard: **F1**

Go to: [Contents](#)

Search for help

Search for help on a topic. This command brings up the Windows search for help facility.

Menu: **HELP | SEARCH FOR HELP ON...**

How to use help

This command brings up the general Windows help guide, which provides a wealth of information on how to use the on-line help system. This information is not specific to **MOZART**.

Menu: **HELP | HOW TO USE HELP...**

Help with editing commands

This allows entry into the help system at the index of music editing commands and may be a convenient way of gaining an overview of what commands are available.

Menu: **HELP | EDITING COMMANDS...**

Go to: [Index of commands](#)

Context sensitive help

Help with menus

For help on menu items press **Shift+F1** while no menu is dropped down. This turns the mouse cursor into "help" mode: question mark + arrow. Clicking on a menu item with this cursor invokes help for that item instead of performing the usual action.

Help with dialogue boxes

Most dialogues have a help button which invokes help for that dialogue.

See also

[Help topics](#)

Help on getting started

The **Getting started** menu item brings up some paragraphs of help for getting started.

Menu: **HELP | GETTING STARTED**

Go to: [Getting started](#)

About MOZART

Provides the standard authorship, version, and copyright information about **MOZART** in a dialogue box.

Menu: **HELP | ABOUT MOZART...**

Registration benefits

This command on the help menu of the **Unregistered** version brings up a dialogue box which notes the requirement to register and the benefits of doing so.

Menu: **HELP | REGISTRATION BENIFITS...**

Obtaining support

This command on the help menu of the Registered versions brings up a dialogue box with information on how to obtain support.

Menu: **HELP | OBTAINING SUPPORT...**

Music Index

The following topics contain information about printed music as opposed to information on how to use the program. Some of the entries represent a glossary of musical terms.

[Accidental](#)

[Anacrucis](#)

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[US English - UK English Dictionary](#)

Swing

When asked for a definition of **swing**, Louis Armstrong is reputed to have said that if you have to ask, you'll never know.

Swing is indeed a quality (like many others in music) which eludes precise definition, and is felt, rather than learned from definitions. Nevertheless, this author offers some of his own thoughts on the matter here. Those who find these less than satisfactory are referred to Mr Armstrong's definition. (After all he ought to have known if anyone ever did!)

In its most general sense, swing is the quality that gives you an irresistible urge to tap your foot or dance to the music. It is associated with pieces which have a constant pulse, but not all such pieces swing. In this sense a Strauss Polka or Waltz swings along nicely in its own style. Classical Ragtime, in the style of Scott Joplin and many others, also has its own characteristic swing. (But on the other hand, nursery rhymes set to music do not generally swing - despite having a constant pulse.) In this general sense, swing is therefore clearly exhibited in pieces which predate jazz: the jazz men didn't invent swing (though they coined the term) - they simply do it differently.

However the concept of swing is generally associated almost exclusively with jazz, and the remainder of this article looks at swing in this more particular context. It must be recognised, even within the jazz context, that swing styles vary from one kind of jazz to another, and that no single precise definition can even be attempted.

Perhaps the major difficulty encountered by purely classically trained musicians is that the swing of jazz and modern popular music involves: **(a)** playing note durations significantly differently from the way in which they are written; and **(b)** placing some notes ahead of or behind the point where they would be expected in a piece in a more classical idiom. (It is interesting to note, however, that playing notes with durations different from the written one was quite usual in the 17th and 18th centuries - see [Note durations in early music](#) - although in a style quite different from the jazz idiom discussed here).



At one level **(a)** is a concept familiar in classical music. A musician faced with a 4/4 bar containing the crotchets shown here (for example) will place the start of each crotchet in the proper place on the beat, but play them with different durations: the ones marked staccato will be shorter notes followed by a brief silence to fill the required duration of the crotchet, so that the next one falls on the beat. **Each note occupies its proper space, even if it is not sounded for the whole time.**

In other words the rhythm is exactly as written - four evenly spaced beats. **The rhythm is determined by where each note starts**, rather than the length of time for which it is sounded. The latter is a question of expression.

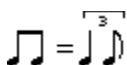
In jazz in particular, notes are not always annotated with staccato and tenuto marks, but the player is expected to have a feeling for the expression of each note in order to make the piece swing. This is entirely in line with classical music where similar nuances are left to the musicianship of the performer. But in jazz the composer's role is perhaps less and

the performer's greater.

Point **(b)** above is more complicated. In jazz and popular music, notes are often played so that they occupy more or less space than the written note, thus delaying or bringing forward the following note, and consequently modifying the rhythm. It is conventionally quavers which are treated in this way; crotchets occupy their proper space.



A 4/4 bar containing 8 quavers, for example, will be played so that the first of each pair occupies slightly more space than half a crotchet and the second slightly less. The second quaver thus actually starts slightly later than halfway through the first crotchet but the third arrives on the crotchet beat.



Thus one often sees the instruction to swing by playing quavers with a "**triplet feel**" as illustrated here. By replacing a pair of quavers by the triplet figure, it is as if the piece were in 12/8 instead of 4/4 for example. Such triplets are only an approximation to what is actually played.

See also

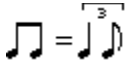
[UK-US-English glossary](#) (if words like crotchet and quaver are unfamiliar!)

[Jazz rhythms](#)

[Can jazz rhythms be quantified?](#)

Jazz rhythms

Note: this section makes extensive reference to note durations. The [UK-US-English glossary](#) may be helpful if you are unfamiliar with the European English terms.



Jazz rhythms cannot be written down in precisely the way they are played. But as an approximation one sometimes sees the instruction to play quavers as illustrated here. This indicates that the first quaver of a pair should be longer than half a crotchet, and the second should start late and last for less than half a crotchet. This section catalogues some other consequences of this rhythmic modification. For the moment let us duck the question of whether the notes are played with precisely 2/3 and 1/3 of the crotchet value respectively (they usually aren't - see [Can jazz rhythms be quantified?](#)) and adopt it as a working hypothesis.

Rhythm and expression

It is worthwhile emphasising that the topic of this section is rhythm. **The rhythm is determined by where the notes start.** Thus when we discuss notes of 2/3 and 1/3 of a crotchet, the important point is: the first note starts on a crotchet beat; the second **starts** 2/3 of the way through the crotchet beat; the following one **starts** on the following crotchet beat.

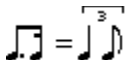
Whether the notes are sounded for their full duration or terminated early and followed by silence until the next is due (as in staccato playing) is a different question - one of expression rather than rhythm. The same rhythm can of course be played with different expression in different contexts. In jazz ensemble playing it is often important to match both the rhythm and the style of expression to get the most satisfactory results. When this is done well the group has a very "tight" feel in its ensemble passages which can compare for excitement with some of the best solo work.

Some of the commonest rhythmic groups, then, are as follows.

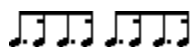
Quaver rhythms



With this convention then a 4/4 bar of eight quavers (left) would be played with the swing rhythm (right). This also illustrates the disadvantage of writing the whole piece in 12/8 as is sometimes done. The shape of the group of 8 quavers is immediately apparent from the joined tails - the 12/8 notation prevents tail joining and the shape of a phrase is much harder to read, especially with some of the more complicated examples below. (12/8 notation has been used particularly by jazz-oriented composers writing for classical musicians. However the boundaries of classical and jazz styles are now less distinct, and most musicians are expected to be capable of a wider range of genres than was the case hitherto. 12/8 notation is therefore thankfully not widely used.)



Before going further it is important to note that an alternative **swing instruction** is to play dotted-quaver semiquaver pairs in triplet feel, and quavers evenly as written. This has some advantages as it allows one to write swung quavers and straight quavers without further elaboration, but straight quavers are more often simply indicated with the instruction "straight" or "legit." (*legitimate*).



In this convention a 4/4 bar containing the dotted-quaver/semiquaver group on the left is played with the swing rhythm above. Henceforth we shall stick to the first, commoner notation.

Quaver-crotchet-quaver rhythms



Swing rhythms are not limited purely to quaver passages. The swing feel permeates the whole piece. For example quaver-crotchet-quaver rhythm included in the illustration on the left is very common and is swung (right). The notation is consistent with the triplet feel, implying longer quavers on the beat and shorter ones behind it.



The occurrence of quaver-crotchet-quaver in the centre of a 4/4 bar as illustrated on the left is also not uncommon. The swing version is again shown on the right in the same triplet convention.

Dotted crotchets



Dotted crotchets lying after the beat are also common and are often found with a strong accent leading into a phrase. The swing interpretation (right) shows that the dotted crotchet starts slightly later than a straight interpretation of the rhythm on the left would imply. This is equally true of an accented dotted crotchet appearing immediately before a bar line - another common occurrence. This relates also to the fact that a dotted crotchet placed in this way is in essence usually an anticipated crotchet, and the classical equivalent would often have been a crotchet rest followed by three crotchets leading into the next phrase. The phrase illustrated here provides a useful context in which to compare contrasting jazz styles. The combination of the precise placement of the dotted crotchet, the strength of the accent on it, and the expression (staccato, tenuto, marcato, etc) of the trailing crotchets can be varied to produce a very laid-back style, or one with an immense drive and feeling of urgency.



Dotted crotchets lying on the beat are quite different in character and are easily seen as being simply a crotchet tied to a following quaver with the corresponding swing interpretation.

Semiquavers

Groups of four semiquavers are usually played essentially straight.

Accent and articulation

The discussion here has been primarily of rhythm, which is where the notes start (ie where they fall in the bar). Equally important to the swing/jazz feel is the relative weight or accent placed on each note, the attack, and the sounded duration, as well as a myriad of other subtle ways one may express a note musically. In many ways these are even harder to quantify precisely, and an appreciation of them can only be gained by listening. The expression will of course depend on whom you listen to. (This author's heroes and role models form a long list with Jelly Roll Morton's Red Hot Peppers, Bix Beiderbecke, Louis Armstrong, Clarence Williams, Lester Young, and Billie Holiday all close to the top.)

Triplet feel

Finally let us again emphasise that the triplet model is far from accurate in most styles of jazz. In fact there are often better approximations for the mathematically minded or the synthesiser enthusiast. See [Can jazz rhythms be quantified?](#)

See also

[Swing](#)

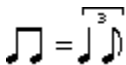
Can jazz rhythms be quantified?

The short answer is "no". However, if one wants to do better than the triplet approximation discussed under [Jazz rhythms](#) there is in fact quite a lot one can do.

Triplet feel

The triplet model discussed in [Jazz Rhythms](#) is far from accurate in most styles of jazz. Consecutive quavers are not universally played as $2/3$ and $1/3$ of a crotchet. One can test this by writing a MIDI file in 12/8 time and playing it with metronomic accuracy on a synthesiser. It sounds like classical 12/8 time and not like jazz.

There are two reasons for this. One may be that pairs of quavers are rarely played exactly the same to the micro-second in any given piece. This is a general problem in synthesising any style of music and one of the main reasons why live and synthesised music sound completely different. It is relatively hard to do anything about this with synthesised music.



More importantly however the 2:1 ratio of consecutive quavers ($2/3$ and $1/3$ of a crotchet) is quite simply a very poor approximation to many styles of jazz and popular music. (For this reason this author prefers verbal instructions like "gentle swing" to the pictorial triplet feel indication.)

Not quite triplet feel

To see how jazz swing styles have evolved, it is an interesting exercise to listen to well known tracks by The Original Dixieland Jazz Band (1917-19), Jelly Roll Morton's Red Hot Peppers (ca 1926), and the Glen Miller Orchestra (ca 1940). Try one track of each in different orders. The ODJB tracks constitute the first recordings to be generally classified as Jazz. The quavers (and dotted quavers) are played almost straight. In Jelly Roll Morton's recordings the quavers are definitely swung: the first of a pair is longer than the second, but nowhere near twice as long. The term "swing" was not coined at the time of either of these recordings, but will have been a familiar term to the Glenn Miller Orchestra whose quavers are often a far closer approximation to the triplet representation.



With modern synthesisers it is relatively straightforward to experiment with different quaver ratios, for example the 9:7 ($9/16$ and $7/16$ of a crotchet) shown here. The result is that different pieces sound better with different swing feels. Of course it would be quite impractical to give instructions like the one here and expect them to be played literally, and so it once again comes down to the musicality of the player. However with synthesised music, experimenting with appropriate quaver ratios can give a much improved feel to the piece, (albeit still too metronomic).

See also

[Swing](#)

Jazz Rhythms

Note durations in 17th and 18th century music



Note durations were not always played precisely as written. In particular the pair of notes illustrated here would often be played with the dotted quaver longer than its written value and the semiquaver starting late, and shorter than its written value so that the total crotchet duration is unchanged. This example is exactly contrary to the interpretation of this rhythm in 20th century jazz writing, where the dotted quaver is often shortened. (See [Jazz Rhythms](#))

This is largely outside the scope of **MOZART**, which does not (currently) make any allowance for this phenomenon when saving MIDI files. For further information on early music styles see, for example, Dolmetsch and references therein.

Reference

Arnold Dolmetsch, "The Interpretation of the Music of the Seventeenth and Eighteenth Centuries", University of Washington Press, ISBN-0-295-78578-0

MIDI

MIDI stands for **Musical Instrument Digital Interface**.

It is a set of music instructions, of standardised format, which may be passed among computers and electronic musical instruments (MIDI devices).

A set of MIDI instructions for playing a piece may be stored in a MIDI file (typically with the **.mid** extension on a PC) which may be sent to a MIDI device by a program which plays MIDI files (for example the Microsoft Windows Media Player).

MIDI devices

This can only be done if the computer has sound capabilities, which on a PC typically means a "sound card" which allows both MIDI output and synthesis of sound. (The sound card in this case is both a device for transmitting MIDI instructions to MIDI devices and a MIDI device itself.)

Until the advent of "multimedia" PCs sound capabilities have not been standard on PCs and a sound card is a plug-in extra.

MIDI Channels and voices

The MIDI standard allows for up to 16 **channels**, each of which may be polyphonic (ie play simultaneous notes like a chord on a piano).

Each **channel** has a corresponding **voice** (or **patch**) which may, or may not, change during a piece. For example channel 5 may be synthesising a trumpet sound and channel 6 a clarinet. The first and second clarinet parts of an orchestral piece can both be sent to channel 6 in this case. Later in the piece, one may wish to send the MIDI instruction to change channel 6, for example to a tuba voice.)

Note that some synthesisers only respond to some of the 16 channels, for example 1 to 11 or possibly 13 to 16.

Each **patch** is simply denoted by a number in the range 1 to 128. There is little consistency among synthesisers regarding what sound is generated on what patch number. Recently, however, there is a tendency for synthesisers on computer sound cards to generate a standard set of voices. The standard is denoted "**general midi**".

Accidentals

Accidentals are signs in front of notes which modify the pitch chromatically. In this way one may define notes which are not part of the scale as defined by the key signature.

The following signs are accidentals:

#

(Sharp)

b

(Flat)

♮

(Natural)

×

(Double sharp)

bb

(Double flat)

Accidentals modify the pitch of a note and remain in force until the end of a bar, or until negated by another accidental on a note of the same pitch (which may signal a return to the diatonic pitch).

Anacrusis

An anacrusis is an incomplete introductory bar in a piece. This feature is often used to lead into the first phrase.

Clefs

Four pitched clefs are supported: Treble, Bass, Alto, and Tenor.



The Treble clef designates the next to bottom line of the stave as the G above middle C.



The Bass clef designates the next to top line of the stave as the F below middle C



The Alto and Tenor clefs are identical in appearance, but are placed differently on the stave. In each case middle C is the central line through the clef symbol. For the Alto clef this is the central line on the stave; for the Tenor clef it is the next to top line of the stave.

Diatonic

Diatonic notes are notes which are part of the scale as defined by the key signature. For example in the key of **G Major** (key signature 1 sharp), the diatonic notes are

G A B C D E F# G

Non-diatonic notes (chromatic notes) are signalled by accidentals. (For example **C** **MOZART** or **F** **MOZART** in the above key.)

Enharmonic

The term "enharmonic" refers to notes with different names which are at the same pitch on the tempered scale. For example G[♯] and A[♭] are enharmonic notes. The name "G[♯]" is more common than "A[♭]" because G[♯] is closer to the natural G than A[♭] is to the natural A. In the same way, F[♯] is closer to the natural F than G[♭] is to the natural G. The name "F[♯]" is more common than "G[♭]".

Multiplet

A "multiplet" is a set of notes each of which lasts for a non-standard fraction of a beat.

For example, in simple time, a crotchet may be split into three equal parts. This is written as three quavers - a quaver **triplet** - and labelled with a "3", to indicate that each quaver takes one third of the crotchet duration. Similarly a minim may be split into a crotchet triplet.

In compound time **doublets**, where a dotted crotchet is split into two even halves, are often written as two quavers labelled with a "2" (even though in principle this could be written as two dotted quavers).

More generally an arbitrary splitting of a note into n even parts forms (what we shall denote as an) an **n-plet**. For example 5 semiquavers in place of 4 is not uncommon.

US English/UK English Dictionary

UK English

US English

Note durations:

Breve	Double whole note
Semibreve	Whole note
Minim	Half note
Crotchet	Quarter note
Quaver	Eighth note
Semiquaver	Sixteenth note
Demisemiquaver	Thirty-second note
Hemidemisemiquaver	Sixty-fourth note

See also: [Why have an English-English dictionary?](#)

Why an English-English Dictionary?

See also [US/UK-English dictionary](#)

This help system is written in the author's native language - English. However musical terms used in various parts of the English-speaking world differ significantly, and American responses to enquiries on the Internet indicate that European English terms (in particular for note durations) may not be universally understood in the US (where the naming convention is probably more logical!). There is therefore a case for an English-English dictionary for "two nations separated by a common tongue".

This glossary is intended to make the help system, and perhaps the dialogues (dialogs) more accessible to non-European English speakers.

It may also help those for whom English is not the mother-tongue. For example German terms for note values translate literally into the American.

Other language versions are not ruled out, but not currently planned.

Finally: as the author is not fluent in American English, any corrections or additions will be welcome from those who are - especially registered users!. Thanks to all those who responded to the author's request on the Internet for help on this topic!

Editing swing style

The swing style editor, invoked by the swing command, allows you to select a swing style for the music in the active window. When saving a MIDI file or playing the tune, this is used to compute modified note durations, but **only if the swing radio button is selected**. If the **play straight** option is selected then the swing style is ignored, and the MIDI file is saved (or the tune played) with classical note durations. For information, the menu item is ticked when swing is switched on.

The swing style does not affect the visual appearance of the music, either on the screen or the printer.

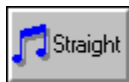
Swing factor

MOZART

The swing model defines a **swing factor** as a number in the range 0 to 16. Zero corresponds to a straight classical interpretation with even quavers, and 16 to "triplet feel" where consecutive quavers have durations in the ratio 2:1 (2/3 of a crotchet and 1/3).

MOZART

Intermediate values correspond to playing quavers not entirely evenly, but more evenly than a literal triplet interpretation. **For example** swing factor 6 corresponds to a 9:7 ratio (9/16 of a crotchet and 7/16). This, or other intermediate values, may correspond more closely to some styles of jazz than a literal triplet interpretation.



The **straight** button is a shortcut to setting a swing factor of zero, in which case the tune plays straight whichever one of **swing** or **play straight** is selected.



The **triplet feel** button is a shortcut to setting a swing factor of 16.

Editing the start of the score

Whenever a new tune is created from scratch the score must be defined. Editing the score involves specifying the key and time signatures at the start of the piece, the tempo and the number of staves on the score. These parameters and others, including the clef at the start of each staff may be edited individually once the score has been created with the start clef, start key, and start tempo commands.

The key signature panel shows the names of major and minor keys corresponding to the number of sharps and flats selected.

The selected tempo does not affect the appearance of the music but does determine the speed at which a saved MIDI file will play.

Note: The time signature at the start of the piece is set when you create a new tune; this may not subsequently be changed, as this would in general change the bar structure of the piece completely, in an unmeaningful way. (Changes in time signature may of course be introduced within the piece.)

Command:

New tune

Editing MIDI options

MIDI files may be saved with selected voices (patches) on each channel, and each part directed to a specified channel. This is done with the three lists shown in the editing box: the **part list**, the **channel list** and the **patch list**. To assign a patch to a channel : select the channel and the patch from the respective lists and press the patch button. To assign a channel to a part select the part and the channel from the appropriate lists and press the part button.

Command:

MIDI options

Duplicating one or more parts

One or more parts of a tune may be duplicated in a separate music window. To do this simply select the parts to be duplicated from the list and press Ok. This procedure is the first step in printing individual parts from a score, which typically involves: **(a)** Duplicating one part into a new music window; **(b)** Editing the duplicate part - typically to reset the note spacing; **(c)** Saving the new music); **(d)** Printing the duplicate.

Command:

Duplicate

Editing text

The text edit box is used to enter and edit titles and text items (eg "andante") in the music. It is invoked by the text edit command. The text may include carriage returns and the Enter button does not therefore exit the edit field, but the button order is arranged so that Tab followed by Enter accepts the text. The font button offers a choice of Truetype fonts. The currently selected point size of a five-line stave is shown for comparison with selected text size.

Selecting a clef

The clef selector is used to select a clef, either for inserting/editing clef changes in the music or for editing the clef on one of the staves at the start of a piece. Any music following an inserted or edited clef symbol may be transposed automatically by a number of octaves so that it fits on the staff. A clef change may only be entered after a bar line.

Commands:

Start clef

Change clef

Changing key

The key selector box is used to edit the key signature at the start of a piece or to insert/edit key changes within the music. The transposition option determines what happens to the music (if any) following the key change. A key signature change may only be entered after a barline or clef symbol.

Key changes are only successful if the music stays within the allowed eight-octave range and if the music stays within the range permitted by the current stave spacing.

Commands:

Start key

Change key

Changing time signature

The time signature selection box allows the introduction of a change of time signature. This is only permitted after a bar line, clef change, or key change. Time signature changes may only be appended at the end of the piece.

Command:

Change time

Editing tempo

The tempo selector box is used to edit the tempo at the start of a piece or to insert/append tempo changes. Tempo changes are only permitted after bar lines, clef changes, key signature changes or time signature changes. Tempo markings determine the tempo at which a saved MIDI file will play.

Commands:

Start tempo

Editing the screen music font

Using the screen font editor, invoked by the view music font command, you can select from raster and scalable music font for the screen, and set the size of either. The point size of the currently selected printer stave is shown in the box for reference. The zoom factor gives an indication of the relative sizes of screen and printer fonts.

The **standard view** button is a shortcut to selecting the raster font at its natural size. This has proved convenient for editing on a standard VGA screen. Selecting the raster font at other sizes is possible but does not give the most beautiful image.

The **music font size** is defined as the height of a standard five-line stave.

The zoom in and zoom out commands are a quick way to vary the screen music font size.

Inserting bars

This dialogue allows you to insert a number of bars before the bar containing the caret, or before the barline at which the caret is placed. The bars may contain whole bar rests or be filled with hidden rests ready for overtyping. The dialogue is invoked by the Insert bars command.

Editing pitch

This dialogue is invoked by the pitch change command, and allows you to edit the pitch of a selected block, or a single note if no block is selected. (Although the latter is more conveniently done more directly with the caret by entering notes and rests). Simply select the interval by which the pitch is to be changed from the list box, and the direction of the change from the radio buttons.

Inconsistent page format

MOZART is very fussy about the page format. Each piece of music "remembers" details of the printer page for which it was created. These details include pixel dimensions and page dimensions. Consistency of the music page and the current printer page is checked when a file is opened and when a file is printed. Before completing either action a page reformat is offered with this dialogue. **Cancel** aborts the action; **No** continues the action with no reformat; **Yes** brings up the page reformat dialogue giving the user complete control over the reformatting.

Formatting the music page

This dialogue is invoked by the page format command, and facilitates overall formatting of the music on the page. The **preview box** on the left gives a sketch showing how the staves will be laid out on the page. The front page may be formatted differently from the others and the radio buttons to the right allow you to switch between a sketch of the front and subsequent pages. The current **music page** is shown in dark grey, and includes the staves and a rectangle showing the edge of the page. The **page size of the current printer** is shown as a white rectangle. If this is the same size as the page for which the music is formatted, then it will lie over, and hide, the music page rectangle.

The **dimensions** of the printer page and music page are shown in the currently selected units which can be changed using the units selector box on the dialogue.

The **page** button sets the music page to same size as the printer page. (See "the music page and the printer page".) If this is not possible without resetting the stave width or spacing a warning is given.

The **stave width** button brings up the stave width dialogue allowing you to change the stave width and left and right margins.

The **score depth** button brings up the score depth dialogue allowing you to change the spacing between staves and score lines, and allowing you to set the space available for headers, footers, and titles.

The **font** button brings up the music font editor allowing you to change the music font on the printer (or the font size which also determines the physical size of the staves).

Setting the stave width and left/right margins

This dialogue allows you to set the stave width and left and right margins. These three widths add up to the page width for which the music is formatted. The units selector gives a choice of units in which to display the stave and margin widths.

Note: changing the stave width may result in a reformatting of the music which moves line changes and removing any right justification which has been performed.

The **centre** button centres the stave horizontally on the page, equalising left and right margins. This operation does not affect the stave width.

Commands:

This dialogue is invoked from the stave width command, or from the page format dialogue.

Setting the stave spacing and space above/below the music

This dialogue allows you to set the stave and score spacing and the space for headers, titles, and footers above and below the music. These spacings are different on the first page from those on subsequent pages and the radio buttons allow you to show/edit either or both sets of dimensions. The number of score lines which will fit on the page is also shown. The units selector gives a choice of units in which to display the vertical spacings on the page.

The **centre** button centres the staves vertically on the page.

Commands:

This dialogue is invoked from the score depth command, or from the page format dialogue.

Selecting the music font / font size on the printer

This dialogue allows you to change the music font or font size on the printer. When the font size is changed you may reformat the page in one of two ways, as follows. **Preserve stave** preserves the stave width in standard units (multiples of the width of a crotchet note bulb) and so the bars lines and end-of-lines will remain in the same place. **Preserve margins** maintains the size of the left and right margins in physical units (mm/inches) and may result in the music being reformatted so that the bar lines and end-of-lines change. In particular this latter option may not preserve right justification.

The **music font size** is defined as the height of a standard five-line stave.

Commands:

This dialogue is invoked from the music font comand, or from the page format dialogue.

Units

Page dimensions are shown in various dialogues in the currently selected units. (The selected units affect the presentation of these numbers only, and do not affect the music in any way.)

Selectable units include:

mm	(millimetres)
inches	(1 inch = 25.4 mm approximately)
points	(72 points = 1 inch)
pixels	(on the printer for which the music is formatted)
"standard" units.	

Standard units are defined in terms of the note bulb on a crotchet. The bulb is one horizontal unit wide and two vertical units high. Thus notes to the right of the caret will move one unit horizontally when a space is inserted or deleted, and a note moves one unit vertically when it is moved by one degree of the scale. Standard units may be the most convenient for judging the score format.

A units combo box appears on various format dialogue boxes. The selected units are global and whatever was last selected will appear next when any such dialogue is invoked.

Global preferences

This dialogue allows you to set the global preferences itemised below. It is invoked by the global preferences command.

The default MIDI channel: the channel to which midi output is directed if not explicitly set elsewhere.

The presence or absence of the **status bar**.

Whether **new music** windows are automatically **maximised**.

Visible items

This dialogue allows you to set which optional non-printing items are rendered visible on the screen, and to delineate various parts of the page, which may be separated by coloured lines. To invoke the dialogue use the visble items command.

Various control items which are invisible in the printed music can be shown, optionally, on the screen. These include ghosts, line feeds, hidden extra bar lines, indicators of the start and end of the music and of the start and end of multiplets. All of these are introduced by **MOZART** essentially as house-keeping items. Rendering them visible on the screen may aid editing significantly, especially ghosts which appear as light grey rests.

You may wish to switch all of these off in order to copy a clean image to the clipboard.

Recommendation: show at least ghosts and the end of the music during normal editing.

Contents

This contents page lists several fairly broad topics. Most of the entries will themselves be a list of subtopics allowing you to find more precisely what you want.

General Information

[What is Shareware, How to Register MOZART, and who wrote it](#)

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[Music topics index](#)

[Sound system \(MIDI\) topics](#)

Shareware and Registration Index

MOZART is not free software, but is distributed as "Shareware". The topics listed below describe what Shareware is, tell you how to register your copy of the program, and tell you a little about the author.

[What is shareware?](#)

[How to register your copy of MOZART](#)

[MOZART versions available](#)

[Contacting the author](#)

[About the author](#)

What is Shareware?

Shareware distribution gives users a chance to try software before buying it. If you try a shareware program and continue using it, you are expected to register. Individual programs differ on details -- some request registration while others require it; some specify a maximum trial period. With registration, you get anything from the simple right to continue using the software to an updated program with printed manual.

Copyright laws apply to both Shareware and commercial software, and the copyright holder retains all rights, with a few specific exceptions as outlined below. Shareware authors are accomplished programmers, just like commercial authors, and the programs are of comparable quality. (In both cases, there are good programs and bad ones!) The main difference is in the method of distribution. The author specifically grants the right to copy and distribute the software, either to all and sundry or to a specific group. For example, some authors require written permission before a commercial disk vendor may copy their Shareware.

Shareware is a distribution method, not a type of software. You should find affordable software that suits your needs, whether it be commercial software or Shareware. The Shareware system makes fitting your needs easier, because you can try before you buy. And because the overhead is low, prices tend to be low also. Shareware has the ultimate money-back guarantee -- if you don't use the product, you don't pay for it!

See also:

[How to register your copy of MOZART](#)

How to Register your copy of MOZART

MOZART is distributed to you by a method known as shareware. Shareware is not free software but is distributed so that you may try it out before deciding whether to buy it.

If you find **MOZART** useful after a trial period not exceeding 30 days you must pay for it. The registration form accompanying the software tells you how. On registration you will receive a registered copy of the shareware product, which will omit the insistent reminders that you have not registered. The form also tells you about options including how to get the more powerful (non-shareware) *virtuoso* edition.

See also:

[What is shareware?](#)

[MOZART versions available](#)

MOZART versions available

MOZART comes in three forms:

the Unregistered Shareware (evaluation) edition;
the Registered Shareware Edition (Standard Edition);
the *Virtuoso* non-Shareware Edition.

The **Unregistered Shareware evaluation edition** is freely distributable, as long as the package is distributed as a whole. Feel free to copy it to your friends in this form. If you have the evaluation version and wish to go on using it after a trial period not exceeding 30 days, then you must register it.

On registration, you may simply register the Shareware program, obtaining the **Registered Shareware (Standard) Edition**, or alternatively obtain the more powerful ***Virtuoso Edition***, which is not distributed as shareware. The Standard and *Virtuoso* Editions are licensed for one computer only and may **not** be further distributed. For information on obtaining a "site licence" to run **MOZART** on a number of computers, [contact the author](#).

The Standard edition will write tunes with up to 3 parts and staves.

The *Virtuoso* edition will write tunes many more parts and staves (up to 64 or the maximum number which will fit on a single printer page - whichever is the lower).

Both registered versions come with a more extensively illustrated help system and a with a larger selection of sample tune data files. They omit, of course, the registration reminders which the evaluation version puts on the screen and on printed music.

See also:

[How to register your copy of MOZART](#)

Contacting the author

The author of **MOZART** may be contacted by post:

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or on internet:

dave@musical.demon.co.uk

See also:

[About the author](#)

About the author

(...and his enthusiasms, penchants, and proclivities).

Dave Webber, the author of **MOZART** is a professional physicist, mathematician and software designer, and a keen amateur saxophonist and arranger. The program started life as a tool to facilitate this last activity, but rapidly took on a life of its own, becoming a major activity.

He uses this program to arrange music for various instrumental groups and, if you have registered your copy, will probably find that any suggestions you have for improvements will help him too. The objective is to produce really attractive printed music entered from the computer (QWERTY) keyboard as efficiently, and with as little difficulty, as possible.

The sound capabilities are fun, but intended only as an aural preview (odd expression!) - **MOZART** is primarily intended as an aid to producing live music. It is designed for jazz and swing as much as classical music.

(The program was nearly called "Bix" but there seems to be something else called that, and "Jelly Roll" seems to convey the wrong impression despite the fact that nothing will ever beat his 1926 Red Hot Peppers' recordings. Wolfgang Amadeus was a cool experimenter in writing for the latest musical hardware - in his day it was the clarinet, the author's first love - and so Wolfi gets his name on the title bar.)

And, yes you classical freaks, the dots **are** important for jazz. (You wouldn't have got far in Fletcher Henderson's or Duke Ellington's bands without being able to read!) This brings us to an important new musical contribution made by **MOZART**. In jazz or swing you often get told to play the quavers with a "triplet feel". To anyone who does feel the rhythms, it doesn't feel like triplets. If you have a sound card, **MOZART** allows you to try different quaver weightings to see which come closest to the right feel. It's a futile exercise, but at least it should convince you that triplets sound like triplets - not like jazz. (See [jazz rhythms](#).)

Help topics

Various help topics are accessible directly from **MOZART**'s help menu. If you are unfamiliar with the Windows hypertext help system click on "How to use help" which is the general windows topic. All the rest are specific this application.

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[Editing commands](#)

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Introduction

MOZART is a music processor designed to work just like a word processor, but for printing sheet music. It is a "multiple document interface" (MDI) Windows program conforming to the usual standard commands. Anyone who has used a Windows word processor should therefore find many of the standard operations such as opening, closing, and scrolling the windows entirely intuitive.

Within the **MOZART** frame window you may open as many music windows as desired, and edit the music within any of them by bringing the appropriate one to the top. All editing is done with the usual computer keyboard. The music may be saved in files (with default extension ".mz") which may be opened again for subsequent editing.

MOZART is not a music sequencer, being primarily for producing printed music for instrumentalists. However, on systems with sound (in particular those with MIDI synthesis capability), the music may be played, either with straight classical rhythmic interpretation or in a "swing" style.

Some of the advantages of **MOZART** over hand written music include: the ability to edit out errors easily; the ability to enter passages quickly by copying a similar passage and editing it; the ability to screen the music for mistakes by listening to it; the ability to transpose music into new keys very easily.

Acknowledgements: **MOZART** has been a number of years in the making, and would either have remained simply its authors hobby or have died a death long ago without the help and encouragement of a number of other people. Particularly worthy of thanks in this respect are: Chris Marriott who first conned me into attempting a WYSIWYG music processor, but who made up for this with constant help and advice about Windows programming; Rodney Young who overcame much frustration testing early versions on his madrigals and provided much musical advice (and one or two of the sample tunes); and my patient wife Margaret - "At least it keeps him off the streets and out of the pub.". Thanks also to my colleagues of the saxophone ensemble "Sax Appeal" who leave me in no doubt when a new feature is not as readable on the printed parts as it ought to be.

Getting started

This Section is an introduction to getting started writing music with **MOZART**. As you become more familiar with the basic editing features, [the index of editing commands](#) (which is directly accessible from the help menu) will guide you through the available options. [Context sensitive help](#) is also available on all menu items.

When the frame window opens there is initially no music window. Many of the menu items are disabled as they apply only to the active music window.

To start a new tune select the **File** menu and click on **New...**

This invokes the [new file dialogue](#) which invites you to define the parameters of your score. Use the spin buttons in the various panels to select the key, the time, the tempo, and the number of parallel staves on the score. (**In Version 1:** the tempo setting will not affect the visual appearance of the music; the number of staves on the score and the time signature cannot be reset later; one part may be entered on each staff.)

The clef symbols on each staff may now be reset. Click near the start of the desired staff or [use the cursor keys](#) to move the caret onto the staff of interest. Then use the [initial clef](#) command to reset the clef symbol on that staff.

When the clefs are as desired you can enter notes and rests with one part on each staff.

Editing an existing tune is done in exactly the same way. To edit an existing tune: instead of **New...** select **Open...** from the **File** menu. (Note that more than one music window may be open simultaneously.)

To append notes [move the caret](#) to the right of any music items on the staff and to the desired pitch on the staff and [enter a note or rest](#).

The duration of the note or rest which will appear is shown at the right of the status bar beneath the main frame window. [This may be changed](#) from the keyboard or with the mouse before a new note or rest is entered.

Entering notes in this way involves the most common operations: moving the caret up and down to determine pitch; changing the duration of the "current note" in the Note Window; entering notes and rests. The keyboard interface has been designed to make these operations as easy as possible using left and right hands without excessive movement.

You may not enter a note which is too long for the remaining space in a bar. When notes to the full duration of the bar have been entered in any part, the barline will appear automatically. Furthermore tails on quavers and shorter notes may join in a suggested default grouping. (If you don't like the default it may be edited. See [Joining and unjoining tails ; Joining tails in the bar](#))

To enter a part on a parallel staff move the caret to that staff and enter notes in any bar

in the same way. The light grey rests which pad parallel parts are ghosts - place holders which do not print, and which are typed over as if they are not there at all. As music is entered in bars containing ghosts, they will adjust automatically so that the value of the bar is preserved.

Accidentals are entered by sharpening or flattening the current note before entry.

Dotted notes are entered by using the dot/double dot command after the note is entered.

You are advised to save your work at regular intervals as it is entered.

The above description covers the basics of entering and editing music. Once the music is present the pitch of notes may be edited, both diatonically and chromatically, and durations of notes may be changed by splitting and merging - thus preserving the value of the bar. Barline styles are also very easily edited and symbols are easily respaced on the staff. Many more symbols including dynamics, text, accents, repeats... are available. (See index of editing commands)

The range of pitch on each staff is limited by the staff spacing. The staff spacing may be increased to allow a wider range. (See Page format topics).

Further features are highlighted by the supplied data (.mz) files, most of which contain some text at the top to indicate how the results were obtained.

Note: whilst every attempt has been made to render it unnecessary, it is always possible to refresh the music window display with the Refresh/reformat window contents commands.

Index of commands

Entering and editing music from the computer involves using the keys and/or the mouse. This is an index of the keys and commands.

File commands: see [File commands](#)

Help commands: see [Help topics](#)

Printer commands: see [Printer commands](#)

Window commands: see [Window commands](#)

Bars

[Bars: First and second time](#)

[Bars: Inserting](#)

[Bars: Multiple bars rest](#)

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[Barline: numbering](#)

[Barline: style](#)

Block selection

[Selecting music](#)

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Clef, key signature, and time signature

[Clef change](#)

[Clef: initial](#)

[Key signature change](#)

[Key signature: initial](#)

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[Delete space](#)
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MIDI

[MIDI options](#)
[Play music](#)
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Navigation

[Caret mode](#)
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Notes and rests

[Accents](#)
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[Converting notes to rests and vice versa](#)
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Spacing items

[Spacing: compressing bar](#)
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Text

Text

See also

File management

Multiplets

Splitting and merging notes and rests

Windows, Files, and the Printer

Topics:

File management

Creating duplicate files

Printing

Commands:

Window commands

File commands

Printer commands

Window commands

Duplicate

Help

Next music window

Previous music window

Refresh and/or reformat window contents

Tile music windows

Cascade music windows

Close music window.

Exit

File commands

Duplicate music file

New music file

Open clipboard

Open music file

Save music file

Save MIDI file

File management

File types

The following types of data file are used: Music files (***.mz**), MIDI files (***.mid**), the help file (**MOZART.hlp**) and the initialisation file (**MOZART.ini**).

Music files are the primary data files in a format unique to **MOZART** and may be both saved and read in. **MIDI files** are in a standard MIDI format and may be generated from the written music and saved. The help and initialisation files are standard auxiliary files in the format required by Microsoft Windows.

See also:

[Creating duplicate files](#)

[File commands](#)

Printer commands

Print

Print setup

Printing

Printing is done via the print command.

A printer may be selected and configured using the print setup command.

Important: changing printer or printer configuration does not affect the music format which "remembers" the printer/configuration for which it is created. The music must be separately reformatted for the current printer. (The print command invokes a warning and offers the opportunity to do this if the music is not formatted for the current printer.)

See

The Music Page and the Printer Page
The Page Format dialogue box.

Page format topics

The following topics deal with the format of the music on the page and how the format is edited.

[Page format - general description](#)

[Formatting the page](#)

[Selecting the music font / font size on the printer](#)

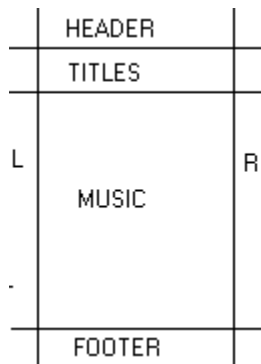
[Setting the stave spacing and space above/below the music](#)

[Setting the stave width and left/right margins](#)

[The music page and the printer page](#)

[Score and staves](#)

Page format - general description

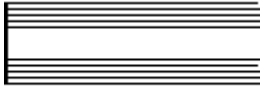


Horizontally, the page is divided into a left margin, the main stave region where music is printed, and a right margin. **Vertically** there are up to four regions: space for a header; space for titles; the music space for one or more score lines; space for a footer.

See also

[Page format topics](#)

The Score and staves



A score consists of either one stave or a set of parallel staves on which the music is written. Here a two-stave score is illustrated. Each stave carries one part of the music. When you create a [new tune](#), you are invited to specify some of the score details. These include the number of staves on the score and the initial key signature, time signature and tempo.

The pitch of a note is determined by the vertical position on the stave and the [clef](#) symbol.

Each [page](#) may contain one or more lines of the score.

See also

[Editing the score](#)

[Page format topics](#)

The music page and the printer page

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documents preserve their own page size - that for which the music was last formatted. This is independent of the printer page size which is set with **Print setup**.

Trying to load or print music which is not formatted for the current printer will offer the option of reformatting the page format dialogue. This dialogue can be invoked at any time from the page format command

The page format dialogue offers the option of fitting the music page size to that of the current printer.

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is especially careful to perform no operation automatically which might change the width of the staff, as this would destroy any right justification of the final barline on the line. Experience suggests that the optimum insertion of spaces to achieve this justification whilst maintaining a pleasing appearance of the music can be a painstaking business.

Navigation topics

Navigation topics describe the use of the caret and the scroll bars in music windows.

[The Caret](#)

[Caret modes](#)

[Using the caret in normal mode](#)

[Using the caret in highlight mode](#)

[Scrolling](#)

The Caret

The caret is the little cross (+) which is moved around the music with the arrow keys. It determines the current position in the music. At a given moment it is at a given point in a given part on the music. The caret may be on an item, by an item (ie horizontally aligned with an item in the current part), or between items. The effect of editing operations depend in general on the position of the caret.

Caret modes

There are two modes of caret operation: normal mode and highlight mode. All the movements are possible in normal mode but some are not active in highlight mode. The caret may also be repositioned by clicking the mouse on the music.

Caret movement

Caret movement is accomplished with the **arrow keys** (alone or with **Ctrl**), and **HOME** and **END** (also alone or with **Ctrl**).

Caret movement with the **Shift key** added selects a block of music.

See also

[Navigation topics](#)

[Caret modes](#)

[Using the caret in normal mode](#)

[Using the caret in highlight mode](#)

[Selecting music](#)

[Selecting one or all parts](#)

Caret Modes

The caret may be used in either of two modes. The caret toggle key switches the caret between the two modes.

In "normal mode" the caret appears as a cross (+) and the arrow keys move the caret around the stave. The caret may be on an item, or either horizontally or vertically aligned with an item, or anywhere between items on the stave. Some operations have a different effect depending on the position of the caret. For example "delete" will delete space from items if the caret is not horizontally aligned with an item, and delete the item if the caret is aligned with an item.

In "highlight mode" the caret appears as a highlighted item. The caret is always on an item in this mode; it cannot be between, above or below items. The left and right arrow keys move the caret directly to the next; the up and down arrow keys are not used in this mode (although Ctrl+**MOZART** and Ctrl+**MOZART** have the same effect in both modes).

Normal mode is the most generally useful one. Highlight mode is particularly useful for ensuring that the caret is on a particular item when a number of items are either close together or at the same horizontal location - for example a dynamic mark immediately below a note.

See also

[Navigation topics](#)

[Caret](#)

[Using the caret in normal mode](#)

[Using the caret in highlight mode](#)

Using the caret in normal mode

The caret may be used in either of two modes. The caret toggle key switches the caret between the two modes.

Most operations are most easily achieved in normal mode, which is the default. In normal mode the caret appears as a cross (+) on one of the staves.

However, for editing operations it is important whether the caret is by an item (horizontally aligned with it) or not, and in normal mode it is not always entirely clear whether or not it is. For example the caret must align with the start of text items if these are to be located. Sometimes different items will be at the same horizontal location, and some editing operations (eg delete) will be ambiguous if the caret is merely at that location. For such operations highlight mode is recommended, as it locates items precisely.

See also

[Navigation topics](#)

[Caret](#)

[Caret modes](#)

[Deleting items](#)

[Using the caret in highlight mode](#)

Using the caret in highlight mode

The caret may be used in either of two modes. The caret toggle key switches the caret between the two modes.

Some operations are greatly facilitated with the caret in highlight mode. In this mode the caret is always on an item, never between items, and the caret appears as a highlighted item. It is clear which of a number of possible items the caret is on.

Individual items may therefore be deleted more easily in highlight mode.

If the item associated with the caret may be drawn at different vertical pitches on the stave, then moving the caret up and down drags the item with it. This is useful for repitching notes, as well as precisely positioning other items including text and dynamic markings.

See also

[Navigation topics](#)

[Caret](#)

[Caret modes](#)

[Deleting items](#)

[Using the caret in normal mode](#)

Scrolling

The **Page Up** and **Page Down** keys are scroll commands. These may be used in conjunction with **Ctrl** and/or **Shift**. Scrolling does not move the caret. The mouse interface uses the standard vertical and horizontal scroll bars.

See also

[Navigation topics](#)

MIDI topics

The following topics apply largely to computers with a sound cards. However saving MIDI files is possible on any system, although they can of course only be played on systems with sound.

[MIDI](#)

[MIDI options](#)

[Playing music](#)

[Saving MIDI files](#)

[Saving MIDI files with swing](#)

MIDI options

MIDI options at the start of a tune

MIDI options including patch and channel assignments may be set at the start of a tune using the MIDI options command.

See also

Editing MIDI options

Playing music

Music can be played on computers with sound capabilities. This can be done in different ways. To save music to disk in standard MIDI format use the save MIDI command. The Windows media player (for example) can then be used to play the file thus created.

To play the music directly from the active music window use the MIDI play command. This does not create a permanent MIDI file. Music started in this way can be stopped with the MIDI stop command.

If a block is selected the MIDI play command plays the selected block, otherwise it plays the whole tune.

See also

MIDI options

Saving MIDI files

Saving MIDI files with swing

Saving MIDI files

The [save MIDI](#) or [save MIDI as](#) commands save a standard MIDI files computed from music in the active window. This file can be played on a computer with sound capabilities, for example using the Microsoft Windows Media Player.

MOZART does not read MIDI files.

See also

[MIDI](#)

[MIDI options](#)

[Swing](#)

Saving MIDI files with swing

To save a MIDI file with swing you must set the swing style (See [Editing swing style.](#)) [Save MIDI](#) will then save a MIDI file with swing.

By default swing is disabled on a new tune. If swing is disabled the notes are always interpreted as having exactly their standard lengths when a MIDI file is created. Saving MIDI files with swing enabled takes a little longer than without as the program must compute the desired note lengths as it saves the file.

The swing style allows quavers to be played with different relative durations.

See also

[MIDI options](#)

[Swing](#)

[Jazz rhythms](#)

[Can jazz rhythms be quantified?](#)

View topics

Various options are available for viewing the music on the screen. Topics and commands listed here deal with this.

Topics

Music font (screen)

Visible items and delineation

Commands

Music font : select screen

Visible items

Zoom in

Zoom out

Music Font

Two music fonts are available (ie fonts containing the musical symbols) - a raster font and a scalable font.

For good quality printing, the scalable font is recommended, and this is the default for printer output. The font is embedded in **MOZART** and need not be loaded manually.

The raster font can be used at different sizes, but, at all but its natural size this is accomplished by stretching the bitmaps in a primitive way, resulting in a poor image. However, on a standard VGA screen the raster font at its natural size may provide a clearer image than the scalable font at the same size, as the latter is not optimised for small images on low resolution devices.

The raster font on the screen (at its natural size) may therefore be the best option, and is the default. It is designed to let you see as much music as possible when editing, subject to the constraint that minims and crotchets on a line must be distinguishable.

Note that the screen and printer fonts may be chosen independently for the above reasons. If you change the size of the screen font, the view of the page on the screen changes proportionally so that it still gives a reasonably accurate representation of what will appear on the printed page. The representation is optimised by selecting the same font on screen and printer.

A page preview may therefore be obtained by zooming out to the minimum size, with the font set the same for the printer and screen. But be careful, you may still edit the music even if the font is too small to see what you are doing properly.

Commands

[View music font](#)

[Zoom in/out](#)

See also

[Editing the screen font](#)

[Stave point size](#)

[View topics](#)

Editing topics: index

The following topics deal with creating and editing music.

Topics

[Bars](#) and [Barlines](#)

[Caret](#)

[Deleting items](#)

[Entering notes and rests](#)

[Entering other items](#)

Commands

[Music editing commands index](#)

Entering notes and rests

Notes and rests may be appended at the end of the music or entered at the start of a ghost region in any bar using the note enter and rest enter keys.

Appending notes and rests

To append a note or rest to the end of the music, move the caret to the end of the music and press the enter note or enter rest key.

The duration of the appended note or rest will be that of the current note, shown on the status line.

Entering new notes in the middle of a tune

If the caret is in a blank region in the middle of a tune notes may be entered in the same way as appending.

Editing existing notes and rests

When the caret is by a note or rest the enter note and enter rest operations edit the existing note or rest, replacing it with a note at the pitch of the caret or a rest. In either case the new item has the same duration as the existing one. In this case the effect of these operations is exactly the same as converting to a note or rest.

(If the caret is by a ghost, however the operations are different: the enter note operation overwrites the space with a note of the duration of the current note as defined above.)

See also

Caret

Converting ghosts to notes and rests

The current note

Entering accidentals on new notes

Entering whole bar rests

Entering whole bar rests

The whole bar rest command converts all the notes rests and ghosts in a complete bar to a whole bar rest, which appears (in any time signature) as a semibreve rest drawn centrally in the bar. Repeating the command replaces the whole bar rest by one or more rests to the appropriate value, which may then be edited as above.

Converting between Notes, Rests, and Ghosts

The note convert key converts a rest or ghost by the caret to a note of the same duration at the pitch of the caret.

The rest convert key converts a note or ghost at the caret into a rest of the same duration.

(**Cf:** the delete key converts a note or rest at the caret to a ghost of the same duration.)

If a block is selected then all the ghosts in the block are converted by this operation, but rests and notes are not. This allows, for example, rapid conversion of ghosts to rests before printing, without converting all the notes in the selected block to rests.

See also

Delete

Entering notes and rests

Ghost

Entering multiple bars rest

The multiple bars rest command converts a sequence of individual bars rest to a single multiple-bars-rest symbol and back again.

The caret must be in the section to be converted, and there must be no other symbols within the bars, but rests.

This option is only available if the music is on a single stave.

There must be **no** selected block. To limit the extent of a multiple bar rest use double bar lines (which may be removed afterwards if desired).

The "current" note

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The "current" note is shown on the status line at the bottom right, in two panels: the note duration panel on the extreme right and the accidental panel immediately to its right.

Note duration

When a new note or rest is entered, its duration will be given by the duration of the current note.

To change the duration of the current note, click on the note on the status line with left (shorten) or right (lengthen) mouse buttons, or use the lengthen/shorten note keys on the computer keyboard. The next note or rest entered will have the selected duration.

Accidentals

When a new note is entered, it may be a semitone sharper or flatter than the diatonic note at the pitch of the caret, or it may be diatonic. Which of these will be effected is indicated by the accidental panel. **NB:** the accidental which is drawn in the music depends on the key signature and the pitch indicated by the caret: eg flattening the fourth degree of the scale in the key of F will result in BMOZART although the accidental panel shows MOZART.

To change the current accidental, click on the accidental panel with the left (flatten) or right (sharpen) mouse button, or use the flatten/sharpen keys while the caret is appended at the end of the music or in a blank region.

See also

[Entering notes and rests](#)

Modifying accidentals on existing notes

Modifying the pitch chromatically

To modify an existing note chromatically, put the caret by the note and use the sharpen/flatten keys.

If the caret is not horizontally aligned with a note in the current part, then the following note will be affected unless the caret is (a) appended at the end of the music or (b) in a blank region, in which case the current note is modified.

If a **block** is selected this operation applies to all the notes in the selected block.

Displaying optional accidentals

If an accidental sign is unnecessary because the note has diatonic pitch or a previous note at the same pitch in the bar has been modified chromatically, one may still wish to display the accidental sign as a reminder to the performer. This is accomplished with the accidental display (toggle) key which renders optional accidentals visible or invisible. (There is no effect on compulsory accidentals, which must be removed by sharpening or flattening the note as appropriate.)

The accidentals in the current bar may be reset to default visibility (ie only the necessary ones) with the accidental default visibility key. This toggles the visibility of all the optional accidentals in the bar.

If a **block** is selected, either of these operations apply to all the notes in the selected block.

See also

Enharmonic limitations

Entering accidentals on new notes

Entering accidentals on new notes

The "current note" determines whether a new note will be entered at the diatonic pitch of the caret, or a semitone sharper or flatter than the diatonic pitch of the caret.

If the caret is at the end of the music or in blank space in the middle of the music, the current note is sharpened or flattened with the sharpen and flatten keys.

If the caret is by a note on the stave then the sharpen and flatten keys apply to that note.

See also

[Enharmonic limitations](#)

[Modifying accidentals on existing notes](#)

Enharmonic limitations

MOZART has the following enharmonic limitation. Each diatonic note may be sharpened or flattened by only one semitone. Thus, for example, in the key of G major, where the diatonic notes are

G A B C D E F MOZART G

the second degree of the scale may be chromatically modified to become **AMOZART** or **A**

MOZART, but **A**

MOZART and **A**

MOZART are not available in this key. On the other hand, in this key **F**

MOZART may be modified only to **F**

MOZART or **F**

MOZART.

This should not prove a problem. The non-existence of a triple-sharp means that the **F MOZART** in this case cannot be chromatically modified two semitones upward. This limitation simply makes this true for all degrees of the scale in any key. Enharmonic alternatives which are modified by no more than one semitone from the diatonic pitch are always available.

Multiplets

To enter a multiplet first enter a note in the usual way. Put the caret by the note and use the [multiplet](#) command. Alternatively the [triplet](#) and [doublet](#) command are available as shortcuts for the commonest cases in simple and compound time respectively.

The multiplet created in this way will consist of the required number of identical notes. This may be modified if desired by splitting or merging notes within the multiplet, or converting notes to rests.

See also

[Multiplet](#)

[Converting notes to rests](#)

[Deleting multiplets](#)

[Splitting and merging notes and rests.](#)

Deleting multipliers

To delete a multiplier, simply merge the notes (and rests) within it until it consists of a single note. This will automatically be replaced by an item of the manifestly correct duration.

Splitting and merging notes and rests

Splitting notes and rests

A note, rest, or ghost on the stave may be split into two (for example a crotchet into two quavers) by putting the caret by the note and using one of the split commands.

Merging notes and rests

Two notes on either side of the caret may be merged (for example two quavers into a crotchet) with the merge command. Merge also applies to rests and ghosts.

The resultant item is a note, rest, or ghost according to the first of the two items merged.

See also

[Multiplets](#)

Entering items other than notes and rests

Barline style

Clef

Dynamics

Key signature

Tempo

Text

Time signature

Entering and editing clef symbols

Clef symbols are selected and edited with the clef edit box.

The clef at the beginning of the music on the current stave is edited with the start clef command. Stave changes may be introduced and edited with the change clef command.

Changes of clef, key, and time signer within a piece may be introduced individually or together. They may only occur after a bar line - either a standard barline or an "extra" barline.

Such a change or sequence of changes is terminated by a hidden barline to aid formatting computation. This may be shown on the screen but does not appear on the printed copy. No symbols other than clef, key and time signature changes may be inserted between the barlines containing the change or sequence of changes.

Inserting and editing key signatures

Key signatures are selected and edited with the key selector box.

The starting key signature of a piece may be edited with the start key signature command. Changes of key signature may be introduced/edited in the piece with the change key signature command.

Changes of clef, key, and time signature within a piece may be introduced individually or together. They may only occur after a bar line - either a standard barline or an "extra" barline.

Such a change or sequence of changes is terminated by a hidden barline to aid formatting computation. This may be shown on the screen but does not appear on the printed copy. No symbols other than clef, key and time signature changes may be inserted between the barlines containing the change or sequence of changes.

Inserting and editing time signatures

Time signatures are inserted and edited using the time selector box. A time signature change may be appended at the end of a piece before entering further music in the new time signature. Use the change time signature command. Time signature changes may only be deleted if all subsequent music items are deleted first, leaving the time signature change at the end of the piece.

Changes of clef, key, and time signature within a piece may be introduced individually or together. They may only occur after a bar line - either a standard barline or an "extra" barline.

Such a change or sequence of changes is terminated by a hidden barline to aid formatting computation. This may be shown on the screen but does not appear on the printed copy. No symbols other than clef, key and time signature changes may be inserted between the barlines containing the change or sequence of changes.

Tempi

Tempi are inserted and edited with the tempo selector box.

To edit the initial tempo use the start tempo command.

Entering and editing text

To enter a text item, (for example "andante"), position the caret (in normal mode) at the point where the text is to be entered, and use the text command, which invokes the text edit box. The text will appear starting at the caret.

Other text operations are more easily performed by locating the caret on the text in highlight mode. Having done this:

- to delete the text use the delete command.

- to reposition the text vertically move the caret up or down.

- to edit the text or change the font, use the text command to bring up the text edit box.

Some specific items are entered explicitly, rather than as "text". These include dynamic markings (ppp, ff, etc) and bar numbers.

See also:

Entering and editing dynamics

Numbering barlines

Entering and editing dynamics

To enter a dynamic marking, (for example "ppp"), position the caret (in normal mode) at the point where the dynamic is to be entered, and select the appropriate dynamic marking with dynamics command. The dynamic marking will appear at the caret.

Other dynamics operations are more easily performed by locating the caret on the dynamic marking in highlight mode. Having done this:

- to delete the dynamic marking use the delete command.

- to reposition the dynamic marking vertically move the caret up or down.

- to change the dynamic marking, use the dynamics command to select an alternative.

Bar lines

MOZART has two different classes of barline.

Normal barlines occur at points determined by the key signature in force. These are taken care of automatically, appearing when a new bar is filled and disappearing when all following notes are removed.

"Extra" barlines can be added between the normal ones. These may be deleted. (These may be used to separate vocal lines of a verse, or to indicate the beginning or end of a repeat section which does not occur at a normal barline.)

Either kind of barline may appear in different styles for example as a single or double barline, and with or without repeat marks for the start and/or end of a section.

See also

Editing barline styles

First and second time bars

Numbering barlines

Numbering barlines

A barline number may be shown/hidden, at the start of the bar containing the caret, with the bar number (toggle) command.

See also

[Introducing and deleting first and second time bars](#)

Editing barline style

Bar lines may be drawn in various ways. The standard style is a single bar. This can be changed to a double bar (and back again) with the barline edit key and repeat sections may be begun before and after a bar line using the repeat section key, which enters and removes the repeat dots.

Commands

Barline: style

See also

Introducing and deleting first and second time bars

Numbering bar lines

Introducing and deleting first and second time bars

First, second, and subsequent time bars are introduced and removed with the first and second time bar keys.

Introducing a first time bar

A first time bar bracket must be introduced first. With the caret on a barline in a repeated section (ie somewhere before a barline with end-of-repeat-section dots on it) use the first time bar key. The first time bar bracket will start at the caret and end at the repeat bar.

Introducing a second time bar

After a first time bar has been introduced a second time bar is introduced by putting the caret on a barline after the end of the first time bar and using the second time bar key. The second time bar bracket will extend from the end of the first time bar to the caret.

A third time bar (and one or two more if absolutely necessary!) can be introduced in the same way as the second time bar using the second time bar key with the caret at a barline after the end of the second time bar.

Editing and deleting first and second time bar markings

Using the first time bar key with the caret at the start of a first time bar deletes the first time bar brackets, the following second time bar bracket, and all subsequent brackets in the consecutive set.

Using the first time bar key with the caret at a barline within a first time bar simply moves the start of the first time bar bracket to the caret.

Using the second time bar key with the caret at the end of a second, third or subsequent time bar bracket deletes that bracket and all subsequent ones in the set.

Using the second time bar key with the caret within the last time bar simply moves the end of the last time bar to the caret.

Commands

First and second time bar keys

Deleting

The delete key deletes items or space between items depending on the position of the caret.

Space may only be deleted if items are not at their minimum separation. Minimum separation may depend on items in parallel parts.

When **notes** or **rests** are deleted, they are simply converted to ghosts which represent a space in the music with the appropriate duration. Ghosts may be overwritten with new notes.

Caret position

Other items are removed altogether. When items are close together it is important to ensure that the caret is by the item to be deleted. With the caret in normal mode this may not always be clear. (For example a text marking or a dynamic marking and a note may not be separated horizontally.) It is therefore convenient to use highlight mode when deleting items.

Undeleteable items

Some items may not be deleted. These include (normal) bar lines (which are appended and removed from the end of the music automatically as required), the initial clef, key and time signature, and a change of time signature unless this is the very last item in the piece. (If a change to 4/4 were to be replaced by a change to 3/4 the program would not know what to do with the subsequent 4/4 bars.)

See also

[Deleting multiplets](#)

[Using the caret in highlight mode](#)

Ghosts or hidden rests

A **ghost** or **hidden rest** is a place holder in the music which ensures that the full length of a bar is preserved (if one includes the value of the ghosts). Ghosts are not printed. Ghosts are optionally rendered visible on the screen using [visible items dialogue](#) and will appear as light grey rests.

When a note or rest is deleted from the middle of a tune, it is simply replaced by a ghost.

A sequence of consecutive ghosts is herein denoted a "ghost sequence", "ghost region", or "blank region". It constitutes a [blank region](#), which has yet to be written, in the middle of a tune. A bar containing only ghosts is referred to as an **empty bar**.

A ghost region may be overwritten with notes and rests, which are entered in the normal way.

An individual ghost may be converted into note or rest with the [convert-to-note/convert-to-rest](#) keys.

Ghosts are not normally left in a completed tune because, as noted above, they will not print and the printed bars will therefore appear incomplete. One exception is an [anacrusis](#) which is created as a leading bar starting with ghosts.

See also

[Bar structure](#)

[Converting between notes, rests and ghosts](#)

[Entering an anacrusis](#)

[Entering notes and rests](#)

Bars

[Anacruis: creating](#)

[Bar structure](#)

[Ghosts](#)

See also:

[Barlines: numbering](#)

[Barline: style](#)

Bar structure

Bar lines are added automatically when a bar is full, and deleted automatically when all music is removed from after the last barline.

The time value of a bar is made up of notes and rests. In written music, the duration of the notes and rests in a bar must add up to the duration of the bar, according to the time signature currently in force.

All bars must have the correct value, except for the final bar while it is being written.

Ghosts

In order to preserve the correct value of a bar when notes or rests are deleted **MOZART** introduces the concept of a hidden rest or "ghost". These are not printed, and thus appear as gaps in the music. They may be made to appear on the screen with the appropriate "view" option. When visible they appear as light grey rests. This is the recommended default option.

Bar completion

When notes are appended at the end of a tune and a bar is completed, the bar line is added automatically. Parallel parts which are not completed will be padded with ghosts to the correct value, so that the length of the bar in each part is correct. These may be overwritten later by entering notes into the other parts.

Bar insertion

Bars may be inserted in the body of the music with the Insert bars command, which invokes the insert bars dialogue to select the number of bars to insert.

See also

Anacrusis

Bars

Creating an anacrucis

An anacrucis is formed by entering a complete bar at the beginning of the piece, and then deleting unwanted notes or rests from the beginning. Depending on the view options these may appear as ghosts, but are not printed.

Blank regions

A **blank region** in the music is created when notes are deleted. Also when a bar is completed in one part (on one staff) at the end of the music, a blank region is created in any parallel parts.

Blank regions are implemented as sequences of ghosts (hidden rests) which hold a place of given duration in a bar. Blank regions may be overwritten with music.

Synonyms: ghost sequence, ghost region.

Point size

In type setting of standard print, the height of the capital letters is conventionally quoted in **points**. One **point** is one seventy-second of an inch: for example 72-point text has capitals one inch high - or (possibly more accurately) lines of text are one inch apart. Typewriters usually use a 12pt font (six lines to the inch) and this is now a common standard for computer printed letters and other documents.

(For those unfamiliar with the archaic units to which the English-speaking world sadly still clings: 1 inch = 2.54cm approximately.)

It has proved convenient in **MOZART** to quote the music font size in terms of the distance (in points) between the top and bottom lines of a five line stave. In this way one can judge the relative sizes of text and staves on the printed page.

Using the clipboard

The copy command copies the selected block of music to the clipboard.

The cut command copies the selected block of music to the clipboard and removes it from the tune. No barlines are removed in this process which leaves empty bars .

The paste command pastes music from the clipboard into the tune. There must be a large enough empty bars in the tune, starting with the one containing the caret, to receive the music from the clipboard. If the clipboard contains music with more than one part, the number of parts on the clipboard must match the number of parts in the tune.

The tune on the clipboard can be pasted into a new window using the open clipboard command.

Note: The above commands place the full music information on a private clipboard which does not persist when **MOZART** is terminated. In contrast the Copy Image command puts music on the Windows Clipboard in standard bitmap format, which can be pasted into Windows Paintbrush and most word processors.

Exporting Images

The Copy Image command copies the entire visible area of the active music window to the Windows clipboard in bitmap format.

This can be pasted into a wide variety of other programs including Windows Paintbrush, Windows Write, Word for Windows, WordPerfect for Windows and so on. The ability to paste into a word processor allows you to have snippets of music in a text document.

Some ideas for getting the best results:

Switch the screen font to the scalable TrueType option. Make it as large as possible consistent with being able to see the music you want to copy.

Make sure the visible items options are set to include only those that you want on the image.

Adjust the size of your music window so that it shows only the area you want to copy. Touching up of the image can be done by pasting into Windows Paintbrush - this includes removing extraneous material from the edge of the image.

If the bars you want to show are in the middle of a line and you want to keep them together with the appropriate clef, key signature, and time signature, then duplicate those bars in another window and copy the image of the new window.

If you want to save a bitmap file, paste into Windows Paintbrush and save from there in .bmp format.

NB Bitmaps pasted into Word processors do not always look wonderful on the screen. It should be better on the printer (although not of the same quality as **MOZART**'s own print-out).

