



Version history

Known issues & solutions

February 2018

Steinberg Media Technologies GmbH

Table of contents

Dorico 1.2.10	3
Improvements	3
Issues resolved	8
Dorico 1.2	13
New features	13
Improvements	46
Issues resolved	61
Dorico 1.1.10	65
Improvements	65
Issues resolved	72
Dorico 1.1	76
New features	76
Improvements	94
Issues resolved	109
Dorico 1.0.30	118
Improvements	118
Issues resolved	123
Dorico 1.0.20	128
Improvements	128
Issues resolved	133
Dorico 1.0.10	137
Improvements	137
Issues resolved	142
Dorico 1.0.0	148
Known issues and solutions	149

Credit notice

Steinberg, Dorico, WaveLab, Cubase, Nuendo, ASIO and VST are registered trademarks of Steinberg Media Technologies GmbH. VST Sound is a trademark of Steinberg Media Technologies GmbH. Windows is a registered trademark of Microsoft Corporation in the United States and other countries. Mac, Mac OS and OS X are trademarks of Apple Inc., registered in the U.S. and other countries. All other product and company names are trademarks and registered trademarks of their respective holders. All specifications are subject to change without notice. Made in Germany. Copyright © 2018 Steinberg Media Technologies GmbH. All rights reserved.

Dorico 1.2.10

9 February 2018

This version contains the following improvements and issue resolutions.

Improvements

Barlines

Wings on repeat barlines. A new option **Wings on repeat barlines** has been added to the **Barlines** page of Engraving Options. When set to **Show wings**, repeat barlines will show wings above and below each barline section, to emphasize the repeat structure. (STEAM-7385)

Barlines at the end of system and flow. New options have been added to the **Barlines** page of Notation Options allowing you to specify whether the right-hand barline at the end of the system, and the final barline at the end of the flow, should follow the same barline joins as other barlines across the width of the system, or should instead join all staves from the top of the system to the bottom (like the systemic barline at the start of the system).

It is also possible to specify that the barline to the left of a time signature should join all staves in the system by activating the new **Barline joins all staves** property in the **Time Signatures** group of the Properties panel. (STEAM-7372)

Clefs

Clef changes to treble G clef, alto or tenor C clef, and bass F clef are now drawn using the appropriate optical variant glyph from Bravura. Optical variants are special glyphs that are designed for use at a particular size: in text typography, caption variants are designed for reproduction at smaller sizes than normal, while display variants are for larger sizes. In Bravura, the three main clefs have optical variants designed for reproduction at between two thirds and three quarters normal size, so that the stroke thickness is consistent with full-size clefs.



Dorico 1.2



Dorico 1.2.10

The result is that clef changes now have a visual weight more consistent with full-sized clefs. (STEAM-7359)

Dynamics

Vertical position relative to lyrics. A new option **Vertical position of dynamics relative to lyrics** has been added to the **Dynamics** page of **Engraving Options**, allowing you to specify whether dynamics should go outside lyrics (the default) or inside them. (STEAM-7352)

Inputting niente dynamics. You can now input gradual dynamics that start from silence (*dal niente*) or end in silence (*al niente*) directly via the **Shift+D** popover, for example by typing **n<** or **>o**. (STEAM-7355)

Lyrics

Verse numbers. A new **Show verse number** property has been added, allowing you to override whether a verse number should be shown for the selected lyric. Furthermore, a new **Lyrics verse numbers font** style has been added, allowing you to specify a specific font for verse numbers if necessary. (STEAM-7398)

Noteheads

Choosing noteheads. The **Edit ▶ Noteheads** submenu has been split into submenus based on a broad categorization of the shape of each notehead type, to make it easier to locate a specific notehead type from the list available. (STEAM-7354)

Round and square double whole noteheads. A new option **Appearance of double whole (breve) notehead** has been added to the **Notes** page of **Engraving Options**. For the default and larger notehead types, this allows you to choose between the round and square appearances for notes of this duration. (STEAM-7353)

Percussion

Playback of playing techniques. The edits made in the **Playback of Articulations and Tremolos** section of the **Percussion Instrument Playing Techniques** dialog are now correctly reflected in playback. (STEAM-7130)

Playback of ghost notes. Ghost notes are now played back at a lower dynamic automatically. (STEAM-7312)

Rests in five-line staff presentation type. A new option **Rests at start and end of voices in five-line staff presentation** has been added to the **Percussion** page of **Notation Options**. Setting this option to **Pad voice with rests** will allow Dorico to ensure that if a single up- or down-stem voice is active at the start or end of the flow, a corresponding voice with the opposite stem direction will be padded with rests. The alternative, **Do not pad voice with rests**, preserves the behavior of Dorico 1.2. (STEAM-7310)

Notes at the same staff position. Noteheads using different notehead types belonging to different percussion instruments but at the same staff position when using the five-line staff presentation type now correctly consider the notehead types in use when determining whether or not the noteheads can be directly superimposed. (STEAM-7243, STEAM-7280)

Playing techniques

When typing into the **Shift+P** popover, presets from the **Playing Techniques** panel are now suggested, and can be selected using the arrow keys and input by typing **Return**. (STEAM-7358)

Play mode

Choosing which instruments play back. When starting playback from the selection (default key command **P**), Dorico will now play back only those instruments in which a note or other item is selected; if only a single note or other event is selected, however, Dorico will play back all instruments that are not currently muted in the Mixer. (STEAM-7338)

If you want to be able to repeatedly play back the same combination of instruments without having to make an appropriate selection before playback each time, you can use **Play ▶ Solo Selected Instruments** (key command **Alt+S**) as a quick way to solo these instruments (and mute all others) in the Mixer. To reset the solo state so that all instruments play back, choose **Play ▶ Deactivate All Solo States** (key command **Shift+Alt+S**). You can also reset all muted channels in the Mixer by choosing **Play ▶ Deactivate All Mute States** (key command **Shift+Alt+M**). (STEAM-7316)

Slurs

The way that Dorico draws slurs and ties has been improved, which makes short slurs and ties in particular look subtly better:



Dorico 1.2



Dorico 1.2.10

Previously, these curves were drawn using a central skeleton line the width of the slur endpoint, and then a second line tapered from a point (centered on the skeleton line), which meant that for short slurs and ties there could be a perceptible change in angle when the width of the tapered line exceeds the width of the skeleton line.

Now, slurs and ties are drawn as a single path with no skeleton line, which means that their shape is smoother and more regular. (STEAM-7315)

System dividers

Dorico can now draw system dividers, the bold, oblique lines positioned either at the left or, less commonly, at the right margin in between each pair of systems on a page. A new **Show system dividers** option has been added to the **Staves and Systems** page of Layout Options: this option is switched off for both score and part layouts when you start a default empty project, but it is switched on for score layouts in projects created from templates for larger ensembles.

A new **System Dividers** page has been added to the **Engraving Options** dialog, with the following options to control their appearance:

- Choose system divider appearance: default, long, and extra long.
- Choose whether system dividers should be drawn either or both at the left and right side of the frame.
- Specify an inset from either frame edge when drawn on the left or the right.

System dividers cannot be selected or moved, but they are always vertically centered between each pair of systems on a page. System dividers do not appear following the last system of a flow, even when another flow starts in the same frame. (STEAM-7387)

Tempo

When typing into the **Shift+T** popover, preset tempos from the **Tempos** panel are now suggested, and can be selected using the arrow keys and input by typing **Return**. Immediate tempos include a quarter note (crotchet) metronome mark: this does not yet take account of the prevailing time signature at the point at which the tempo is to be input, so you may want to adjust the beat unit of the tempo by editing the suggested text before you hit **Return**. (STEAM-7377)

Text

Tokens for date and time. New tokens for displaying the current date and time, and the date and time at which the project was last saved, have been added. Like all tokens, these can be used in any text frame, but they have no effect in individual **Shift+X** or **Shift+Alt+X** text items.

The following tokens display the current date and time:

Token	Description	Example
{@date@}	Standard date and time string (locale dependent)	Sun Dec 31 11:10:12 2017
{@dateyear@}	Four-digit year	2017
{@dateyearshort@}	Two-digit year	17

Token	Description	Example
{@datemonth@}	Full month name (locale dependent)	October
{@datemonthshort@}	Short month name (locale dependent)	Oct
{@datemonthnum@}	Month as a decimal number, range 1-12	10
{@dateday@}	Full weekday name (locale dependent)	Friday
{@datedayshort@}	Abbreviated weekday name (locale dependent)	Fri
{@datedaynum@}	Day of month as decimal number, range 1-31	24
{@dateymd@}	ISO8601 date	2017-12-31
{@datemdy@}	Month day, year	December 31, 2017
{@datedmy@}	Day month year	31 December 2017
{@datetime@}	Time representation (locale dependent)	11:10:12
{@datetimeHHMM@}	Hours:minutes, hour in 24-hour clock range	23:10
{@datetimeHHMMSS@}	Hours:minutes, hour in 12-hour clock range	11:10
{@datetimehour24@}	Hour in 24-hour clock range	23
{@datetimehour12@}	Hour in 12-hour clock range	11
{@datetimeminute@}	Minute as decimal number, range 00-59	10
{@datetimesecond@}	Second as decimal number, range 00-59	44

The following tokens display the date and time at which the project was last saved:

Token	Description	Example
{@projectdate@}	Standard date and time string (locale dependent)	Sun Dec 31 11:10:12 2017
{@projectdateyear@}	Four-digit year	2017
{@projectdateyearshort@}	Two-digit year	17
{@projectdatemonth@}	Full month name (locale dependent)	October
{@projectdatemonthshort@}	Short month name (locale dependent)	Oct
{@projectdatemonthnum@}	Month as a decimal number, range 1-12	10
{@projectdateday@}	Full weekday name (locale dependent)	Friday
{@projectdatedayshort@}	Abbreviated weekday name (locale dependent)	Fri
{@projectdatedaynum@}	Day of month as decimal number, range 1-31	24
{@projectdateymd@}	ISO8601 date	2017-12-31
{@projectdatemdy@}	Month day, year	December 31, 2017
{@projectdatedmy@}	Day month year	31 December 2017
{@projectdatetime@}	Time representation (locale dependent)	11:10:12

Token	Description	Example
{@projectdatetimeHHMM@}	Hours:minutes, hour in 24-hour clock range	23:10
{@projectdatetimeHHMMSS@}	Hours:minutes, hour in 12-hour clock range	11:10
{@projectdatetimehour24@}	Hour in 24-hour clock range	23
{@projectdatetimehour12@}	Hour in 12-hour clock range	11
{@projectdatetimeminute@}	Minute as decimal number, range 00-59	10
{@projectdatetimestecond@}	Second as decimal number, range 00-59	44

Issues resolved

ID #	Component	Issue
STEAM-7277	<i>Articulations</i>	Small articulations (such as staccato, tenuto, etc.) on percussion grids are better centered between grid lines that are only separated by a single space.
STEAM-7292	<i>Articulations</i>	The positioning of large articulations on percussion grids whose lines are separated by a single space has been improved.
STEAM-7395	<i>Articulations</i>	Removing a <i>laissez vibrer</i> tie now causes the positions of articulations on that note to be updated immediately, if necessary.
STEAM-7487	<i>Brackets & braces</i>	Brackets now correctly take into account the protrusion of barlines beyond the outermost staff line on percussion staves using the grid or single line presentation types.
STEAM-7286	<i>Chord symbols</i>	A problem whereby chord symbols with overridden appearance containing user-defined components could not be promoted to become project defaults has been resolved.
STEAM-7297	<i>Chord symbols</i>	A problem whereby slashes or opening parentheses can be positioned too close to the chord symbol component immediately to its left has been fixed.
STEAM-7300	<i>Chord symbols</i>	Using undo will now only remove the last chord symbol input, not all chord symbols input in the last editing session.
STEAM-7331	<i>Chord symbols</i>	Adding a chord symbol to the list of project-default chord symbols in the Project Default Chord Symbol Appearances dialog no longer sometimes causes a crash.
STEAM-7335	<i>Chord symbols</i>	Chord symbols are now correctly displayed for all flows in Play mode, rather than for only the first flow in the project.
STEAM-7314	<i>Cues</i>	Multi-voice cues no longer force the stems of all voices into a single direction when the cue ends within the same bar as music in the destination instrument.
STEAM-6537	<i>Dynamics</i>	Hyphenated gradual dynamics (e.g. <i>cre – scen – do</i>) whose ends coincide with an immediate dynamic at the start of the following system now draw correctly.
STEAM-7470	<i>Dynamics</i>	Entering only spaces into the Shift+D popover and hitting Return could cause a crash; this has now been resolved.
STEAM-6758	<i>Flows</i>	Split Flow no longer goes wrong if the top staff is empty.
STEAM-7118 STEAM-7293	<i>Flows</i>	Split Flow now works correctly on unpitched percussion instruments.

ID #	Component	Issue
STEAM-7348	<i>Flows</i>	When importing a flow that contains arpeggio signs into an existing project, the arpeggio signs in the imported flow now draw correctly.
STEAM-7402	<i>Holds and pauses</i>	Changing the Attach to barline property for a fermata now correctly updates its drawn position immediately.
STEAM-7333	<i>Localization</i>	Clicking Save as Default in any of Dorico's options dialog no longer fails with an error if your user folder contains accented characters (Windows only).
STEAM-7401	<i>Lyrics</i>	Lyric hyphens are no longer incorrectly centered between syllables when translation lines are present.
STEAM-6694	<i>MusicXML import</i>	MusicXML files exported from Finale that use non-standard staff positions for drum kit instruments now import more reliably.
STEAM-7379	<i>MusicXML import</i>	Importing a MusicXML file that contains custom instruments into an existing Dorico project no longer causes a crash.
STEAM-5308	<i>Note input</i>	Using Edit ► Cut now always clears the selection, to avoid the possibility of unexpectedly pasting in the same location.
STEAM-6918	<i>Note input</i>	Using the left/right arrow keys to move the caret left and right now correctly navigates to the next rhythmic grid position or the nearest note on percussion instruments in both directions.
STEAM-7291	<i>Note input</i>	Attempting to use Alt +up/down arrow to move a note to another percussion instrument in a kit no longer causes a crash if a rest is also selected.
STEAM-7298 STEAM-7272	<i>Note input</i>	Using Backspace on a percussion instrument using the grid or five-line staff presentation type now correctly deletes tuplets in all instruments that contribute to the kit voice.
STEAM-7329	<i>Note input</i>	Inputting rests using the MIDI keyboard now works reliably, regardless of whether notes have already been input using the MIDI keyboard in that session.
STEAM-7365	<i>Note input</i>	A problem whereby clicking an item in one of the panels while the popover for that type of item is open could cause a crash has been resolved.
STEAM-7368	<i>Note input</i>	Switching off Enable MIDI input in preferences now also prevents notes from being echoed when played on your MIDI keyboard.
STEAM-7381	<i>Note input</i>	Transposing using the Shift+I popover no longer sometimes incorrectly fails to transpose all of the selected notes.
STEAM-7383	<i>Note input</i>	A problem whereby cross-staff material could be pasted to the wrong staff when the layout contains a percussion kit has been resolved.
STEAM-7448	<i>Note spacing</i>	Handles for editing note spacing now appear correctly when the only instrument in the system is a single line percussion instrument.
STEAM-7299	<i>Notes</i>	The width and length of a stem is now correctly disabled by the actual size of its largest notehead, rather than incorrectly always following the Custom scale property.
STEAM-7492	<i>Ornaments</i>	Trill stop lines are no longer incorrectly offset when nudging a trill vertically in Engrave mode.
STEAM-7373	<i>Page layout</i>	The option to hide one staff of a multi-staff instrument now respects the choice of whether empty staves should be hidden on all systems, or only on systems after the first.

ID #	Component	Issue
STEAM-7376	Page layout	A problem whereby an edit on an earlier system could cause the positions of items such as lyrics on a later system to move has been resolved.
STEAM-6618	Pedal lines	Pedal lines created from a selection on the lower staff of the piano are now correctly selected after creation.
STEAM-7218	Percussion	Inputting an open hi-hat note on a drum kit via MIDI input now automatically adds the open playing technique event.
STEAM-7255 STEAM-7396	Percussion	It is now possible to copy and paste material between pitched and unpitched instruments.
STEAM-7258	Percussion	When Use staff position is set for drum kit input in Preferences, Dorico now auditions the correct instrument during MIDI input, rather than the instrument assigned to the input key.
STEAM-7278 STEAM-7279 STEAM-7302 STEAM-7304	Percussion	A number of problems related to copying and pasting music between percussion instruments, or pasting music that includes material from percussion instruments, have been fixed.
STEAM-7284	Percussion	Open/closed playing techniques on hi-hat, and other similar playing techniques on percussion, now play back correctly regardless of the order in which they are created.
STEAM-7307	Percussion	Percussion maps that define sounds for Single instruments now work correctly.
STEAM-7341	Percussion	4-line percussion instruments now import correctly from MusicXML files.
STEAM-7367	Percussion	A problem whereby duplicating a player holding a percussion kit that has been imported from another project could, in rare circumstances, cause a crash has been resolved.
STEAM-7406	Percussion	Using Duplicate Player to make a copy of a player with a custom percussion kit now correctly duplicates custom playing techniques.
STEAM-7437	Percussion	Changes made to percussion playing techniques are now immediately reflected for percussion instruments shown using a single line.
STEAM-7446	Percussion	The positioning of rhythm dots on percussion kits using the grid presentation type has been improved.
STEAM-7467	Percussion	The positioning of rests in music written using multiple voices on the grid presentation type has been improved.
STEAM-7498	Percussion	Dorico no longer attempts to move beams to avoid noteheads on percussion kits using the grid presentation type.
STEAM-7499	Percussion	The positioning of tuplet brackets on percussion kits using the grid presentation type has been improved.
STEAM-7281	Performance	Dorico now filters out all continuous controller and system exclusive messages output by connected MIDI input devices unless they are explicitly mapped to a command using MIDI learn.
STEAM-7442	Platform support	Dorico will now run correctly from a case-sensitive file system (Mac only).

ID #	Component	Issue
STEAM-7274	<i>Play mode</i>	Selected notes in the drum editor in Play mode now show their notated duration.
STEAM-7283	<i>Play mode</i>	The playhead no longer sometimes ends up detached from the main event display on the ruler.
STEAM-7378	<i>Playback</i>	It is no longer necessary to reopen the project to hear the correct playback for a multiple-note tremolo after removing a single-note tremolo from the same notes.
STEAM-5729	<i>Playing techniques</i>	Resetting to the natural bowed sound using the <i>arco</i> playing technique from <i>pizz.</i> now works reliably.
STEAM-7342	<i>Playing techniques</i>	Left-hand pizzicato playing techniques are no longer incorrectly turned into thumb position indicators when opening projects last saved in Dorico 1.1.10 or earlier.
STEAM-7393	<i>Print mode</i>	Pages for booklets printed via manual duplexing are now printed in the correct order.
STEAM-7327	<i>Project files</i>	Projects that contain imported graphics no longer get larger each time they are saved because the graphics are duplicated on each save.
STEAM-7362	<i>Project files</i>	User defaults set for the Accidentals page of Notation Options are now correctly applied when starting a new project.
STEAM-7380	<i>Slurs</i>	The Engraving Options for ideal shoulder for short and long slurs were being applied incorrectly. This problem has now been resolved.
STEAM-7386	<i>Slurs</i>	Slurs on grace notes are no longer scaled twice, causing them to be drawn too thin.
STEAM-4762	<i>Tempo</i>	Gradual tempo changes no longer jump to an incorrect vertical position when they are on the same system as an immediate tempo change.
STEAM-5547	<i>Tempo</i>	Gradual tempo changes that span multiple systems no longer move vertically on all systems when a single segment has to be moved to avoid a collision.
STEAM-6240	<i>Tempo</i>	Switching to galley view no longer sometimes causes tempo text that has been moved in Engrave mode to jump to the wrong position.
STEAM-6709	<i>Tempo</i>	When moving the start of a gradual tempo change left or right in Engrave mode, the dashed or dotted line to the right of the initial text no longer moves unpredictably.
STEAM-7388	<i>Tempo</i>	A problem whereby gradual tempo items would not always draw the appropriate dashed or dotted line after opening a project has been resolved.
STEAM-7363	<i>Text</i>	Text tokens using the <code>{@layoutName@}</code> token now correctly update right away when instruments are added to or removed from a player.
STEAM-7364	<i>Text</i>	System text items (key command Shift+Alt+X) no longer move unpredictably in Engrave mode when nudged with Alt +arrows.
STEAM-7431	<i>Text</i>	Edits made to text items attached to percussion kits using the grid or 5-line staff presentation type are now reflected immediately.
STEAM-7444	<i>Text</i>	Under some circumstances, scrolling the score immediately after editing text could cause Dorico to hang; this has now been resolved.

ID #	Component	Issue
STEAM-7313	<i>Ties</i>	The new engraving options for the minimum lengths of ties added in Dorico 1.2 are now correctly reloaded when reopening a project in which they have been edited.
STEAM-7465	<i>Ties</i>	The placement of ties on percussion kits using the grid presentation type has been improved.
STEAM-7311	<i>Tremolos</i>	Attempting to create a two-note tremolo with an implicit rest no longer causes a crash.
STEAM-7161	<i>Tuplets</i>	A problem whereby triplet brackets could be incorrectly forced flat has been fixed.
	<i>User interface</i>	When using millimeters as the default measurement unit, clicking the paddle arrows for the Space size control in Layout Options now increments/decrements by 0.1mm.
STEAM-4039	<i>User interface</i>	The behavior of how the selected item or items are kept in view when zooming in and out has been improved.
STEAM-5467	<i>User interface</i>	When using the Single Pages Vertically page arrangement, Dorico now moves the layout to accommodate changes of selection more reliably.
STEAM-5838	<i>User interface</i>	Closing a full screen document tab in macOS Sierra or later containing a Dorico document window will no longer sometimes cause Dorico to crash (Mac only).
STEAM-6451	<i>User interface</i>	The correct page is kept in view when Whole page zoom level is chosen and you open or close the Properties panel.
STEAM-7332	<i>User interface</i>	A problem whereby deleting a shortcut currently bound to another command and then re-assigning it would not work correctly (e.g. to reassign note durations) has been resolved.
STEAM-7356	<i>User interface</i>	When switching back to a score layout from a part layout using Window ▶ Counterpart Layout , Dorico now remembers which score layout was previously being viewed.
STEAM-7427 STEAM-7435	<i>User interface</i>	Under some circumstances, changes to options made in multi-page options dialogs would be lost when changing page; this has now been resolved.
STEAM-7466	<i>User interface</i>	The positioning of bar numbers shown via View ▶ Bar Numbers when shown above a single-line staff has been improved.
STEAM-7478	<i>User interface</i>	Cancelling out of the file chooser dialog when closing an unsaved project no longer goes ahead and closes the project anyway.
STEAM-7481	<i>User interface</i>	Instrument names now appear correctly in expanded cards in the Players panel in Setup mode when the project contains no layouts.

Dorico 1.2

1 December 2017

This version contains the following new features, improvements and issue resolutions.

New features

Cues

Cues are passages of music to be played by a different instrument shown in an instrumental part, usually to help orientate the player before an entry or a solo (for example, after a long passage of rests), but also on occasion to assist with co-ordination or tuning, or to indicate material that the player may be asked to double.

Cues are normally notated using notes of a smaller size, with the name of the instrument being cued indicated clearly at the start of the passage. Normally, full-sized rests are also shown below or above the cue to reinforce that the player reading the cue should not play these notes. Cues may exclude some notations that would be present in the source instrument's part, but may include slurs, articulations, and dynamics. Depending on the register of the instrument being cued and the tessitura of the specific cue passage, a clef change may also be needed at the start of the cue.




Dorico naturally makes it very quick and easy to create a correctly-formatted cue, but it is the only scoring program to include dynamic cues that are linked to the original source material, and which are updated in real-time if the source material changes.

Where cues appear. You can create a cue in any layout, but by default the music within a cue does not appear in the full score layout, since for most kinds of scores cues are shown only in the instrumental parts. In a full score, therefore, cues appear only as signposts by default, unless you are using galley view, in which case the cued music appears in addition to the signpost.

You can, however, choose for cues to appear in a full score layout in page view by activating the **Show cues** option on the **Players** page of Layout Options.

In rare circumstances, for example when the same player's music appears in multiple part layouts, you may also need to prevent a particular cue from appearing in a layout: this can be done by activating **Hide** in the **Cues** group of the Properties panel.

Creating a cue. To create a cue, make a selection in the staff on which you want the cue to appear in Write mode. If you already know how long you want the cue to be, first make a block selection of the appropriate length, by selecting a rest, then holding **Shift** and clicking on another rest, but it's easy to edit the duration of a cue after creation, so there's no need to get this precisely right from the outset. Once you have an appropriate selection in the instrument on which you want the cue to appear, either:

- Type **Shift+U** to open the new cue popover directly; or
- Choose **Write ► Create Cue**; or
- Click the new  button in the notations toolbox on the right-hand side of the window to open the **Cues** panel, then click **Insert Cue**.

The cue popover appears, into which you type the name of the instrument whose music you want to cue. Typing the beginning of the name of the instrument will show candidate instruments in a menu that opens up from the popover: select the desired instrument, either by pressing the down arrow key until it is highlighted, then press **Return** to complete its name in the popover, or by clicking it directly with the mouse. Then press **Return** again to confirm the popover and create the cue.

If you are editing the full score layout in page view, at this point you probably see only the signpost for the cue, showing the name of the instrument to be cued. Switch to the part layout (try the new **Window ► Counterpart Layout** command, with default key command **W**) and you will see the cued music.

The list of candidate instruments that opens up from the popover excludes the instrument on which the cue will be created (you cannot cue an instrument with its own music), but lists all other instruments, and lists each staff of grand staff instruments such as piano separately (as e.g. **Piano (a)** and **Piano (b)**). Each unpitched percussion instrument also appears separately: for example, if one player in your project is playing a drum set, each constituent instrument from the drum set appears as a candidate for cueing, so you can cue, say, the kick drum (you cannot, however, use the entire percussion kit as a cue).

Deciding where to cue. The **Suggest Cues** section of the **Cues** panel can help you to determine good locations for cues in your score. Dorico can find all of the places in the current flow where the players in the current layout have not played anything for at least a certain span of time – by default, 30 seconds. The resting

period is specified in absolute time rather than in bars or beats because the meter and tempo can change many times throughout a flow, and indeed the music may be either partially or completely meterless, whereas one second is always one second long, so specifying an absolute time ensures some consistency in the approach to finding possible places where cues might be appropriate.

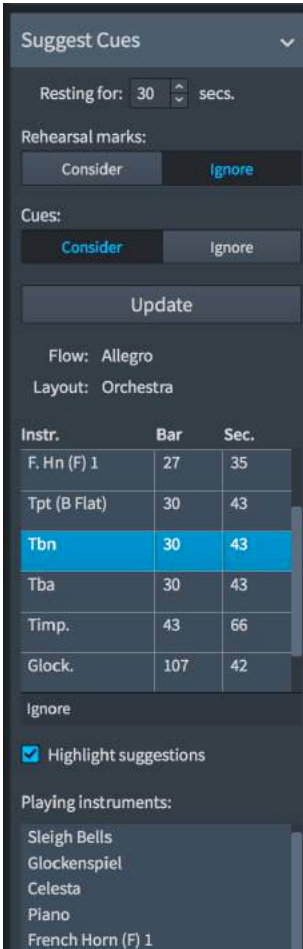
To specify the threshold for the period of rests after which Dorico should suggest that an instrument might need a cue, set **Resting for n secs** to the desired value.

You can choose whether to consider or ignore rehearsal marks when determining the resting period. Rehearsal marks often coincide with new sections or other landmarks in the music, which may well be obvious to the player without needing any further kind of cue, in which case you can decide whether the presence of a rehearsal mark should reset the timer. By default, rehearsal marks are ignored, since they do not always act as signposts to musical structure.

You can also choose whether to consider or ignore cues that between notes played by the destination player. A cue that occurs immediately before an instrument's entry will always be ignored and never show up as a suggested location, even if you choose to consider cues. However, orientation cues – cues that do not immediately precede an instrument's entry, but which serve to help the player keep his or her place during an extended rest – will reset the timer if you tell Dorico to consider cues.

Once you have made your choices, click **Update**. Below the **Update** button you can see the names of the flow and layout that were active when you last updated the list of cue suggestions: this allows you to freely navigate through the project, switching layout and flow, etc., and when you return to the list of cue suggestions, you will be able to see at a glance which flow and layout the suggestions apply to. To generate cue suggestions for another flow or layout, simply select an item in the desired flow, and/or switch to the layout, then click **Update**.

One possible workflow you might consider for larger projects is to switch to one of the part layouts and click **Update** to generate cue suggestions for that player. The list of suggestions will then include only suggestions for the player included in the layout, and you can then switch back to the full score (by typing **W**) to get an



Suggest Cues

Resting for: 30 secs.

Rehearsal marks: Consider Ignore

Cues: Consider Ignore

Update

Flow: Allegro
Layout: Orchestra

Instr.	Bar	Sec.
F. Hn (F) 1	27	35
Tpt (B Flat)	30	43
Tbn	30	43
Tba	30	43
Timp.	43	66
Glock.	107	42

Ignore

☒ Highlight suggestions

Playing instruments:

- Sleigh Bells
- Glockenspiel
- Celesta
- Piano
- French Horn (F) 1

overview of which material you might use as a cue at each suggestion, and you can freely switch back and forth between the score and the part layout without losing your list of cue suggestions.

The list of cue suggestions itself can be sorted either in bar order, or in order of length of resting periods. Clicking on a row in the list of cue suggestions navigates directly to that location, and by default an area corresponding to between five and 10 seconds prior to the instrument's entry is highlighted in red to help you to spot the location at a glance, which is especially useful when zoomed out. The highlighted area is not a specific recommendation for the length of cue you should create, but depending on the musical context it may be a good indication. If you would prefer not to see the red highlighted areas, deactivate the **Highlight suggestions** checkbox below the list and click **Update** again to regenerate the suggestions.

When you select a cue suggestion in the list, a further list of **Playing instruments** is populated with the instruments that are playing in the 5-10 seconds prior to the destination instrument's entry, to help you determine which instrument might be suitable to use as the cue.

If you create a cue at the location of one of the suggestions in the list, that suggestion is automatically removed from the list in the **Cues** panel. If you review a particular suggestion and decide that in fact a cue would not be appropriate there, you can click **Ignore** in the action bar at the bottom of the list to hide that suggestion; however, if you regenerate the list by clicking **Update**, that suggestion may reappear again in the future.

Editing the duration of a cue. Once a cue has been created, its duration can be edited at any time. In Write mode, in a layout where the cued music is shown, select the label at the start of the cue showing the name of the source instrument: round handles appear at the left-hand side of the label and at the end of the cue.

To lengthen the cue, click and drag either handle: as you do so, you will see the music in the cue change, as notes are snapped into the cue. You can start or stop the cue at any note onset position, even in the middle of a beamed group or a tuplet, but you should carefully consider whether a cue that begins or ends these kinds of partial notations would be helpful to the player.

Like other items in Write mode, you can also move the cue while retaining its current length with **Alt**+left/right arrow, and lengthen or shorten the cue with **Shift+Alt**+left/right arrow.

Editing the music in a cued passage. The music that appears in a cue is dynamically shown from the source instrument, and changes made to the source

music will be automatically shown in the cue, but it cannot be selected in the cue. However, it is possible to make graphical changes to the cued music without affecting the source instrument, such as adjusting the placement of slurs, or lengthening or shortening stems.

It is also possible to change the enharmonic spelling of notes in cues in Engrave mode using the **Alt+-** and **Alt+=** key commands. Respelling notes in the cue will not affect the spelling of notes in the source material.

Rests in cues. If a cue starts or ends in the middle of a bar, the cue will be padded with appropriate cue-sized rests up to the bar boundary or to the next entry in the player's instrument, whichever is the sooner, to ensure it is clear to the player how the rhythm of the cue fits with the existing material.

If you prefer not to see these padding rests to either side of the cued music, they can be hidden by selecting the cue label or signpost, then activating the **Hide rests around cue** property in the **Cues** group of the Properties panel. It is not possible to select or otherwise edit the cue-sized rests that are created to pad cues to the nearest entry or barline.

By default, full-sized bar rests will also appear throughout the cued passage, to make it clear to the performer that he or she should not play. In some jazz scores, or in scores where the cues are provided as potential passages for doubling, it may be appropriate not to show bar rests during cues, in which case you can set **Bar rests in cues** to **Omit bar rests** on the **Rests** page of Notation Options.

Full-sized bar rests are automatically positioned appropriate to the stem direction of the notes in the cue: if the cue uses up-stem notes, bar rests will be positioned below the cued notes, and if the cue uses down-stem notes, bar rests will be positioned above the cued notes. You can adjust the position of the full-sized bar rests using the **Rest pos.** property in the **Notes and Rests** group of the Properties panel.

Stem direction in cues. Because cues are normally shown together with full size bar rests to indicate to the performer that he or she should not play the cue, provided a cue contains music in only one voice, all of the notes normally take the same stem direction; if, however, the cue contains music in multiple voices, the original stem directions of the source music are used instead.

For single-voice cues, Dorico determines the default stem direction depending on whether the balance of notes fall below the middle line of the staff (in which case the stems will point downwards) or above (in which case the stems will point upwards).

You can override the default stem direction of a single-voice cue by selecting the cue label or signpost and activating the **Voice direction** property in the **Cues** group of the Properties panel.

Ties into and out of cues. If a cue begins in the middle of a sustained note, then a tie will be shown at the start of the cue, joining to the first note in the cue; similarly, if a cue ends in the middle of a sustained note, then a tie will be shown at the end of the cue, proceeding from the final note in the cue. For monophonic instruments, these ties will normally be well-positioned by default, but in complex cases involving cued chords, you may find that the positions of these ties may require some adjustment. Ties into and out of cues can all be edited in the same way as normal ties in Engrave mode.

Rhythmic cues. Sometimes it is necessary only to provide a rhythm as a cue, for example when many instruments play the same distinctive rhythm together. Rhythmic cues are displayed above the staff, with all notes from the source instrument shown at the same nominal pitch, showing no change of clef, no accidentals and no ledger lines. To make a rhythmic cue, create a cue from a pitched instrument in the normal way, then activate the **Rhythmic cue** property in the **Cues** group of the **Properties** panel. The material will then appear above the top line of the staff, and can be moved closer or further away by activating the **Distance** property: a value of 0 corresponds to the space immediately above the top line of the staff, with higher values moving the material further away from the staff. Since rhythmic cues often include music from multiple instruments, you may find it useful to change the text of the cue label, which can be done using the **Start label** property.

Cueing from an unpitched instrument. If you choose to cue music from an unpitched percussion instrument, it will be created as a rhythmic cue. If you switch off the **Rhythmic cue** property, all of the notes in the cue will be placed on a single staff position, by default the middle line of the staff. To move the notes to a different staff position, select the cue label or signpost and activate the **Unpitched notes pos.** property in the **Cues** group of the Properties panel (0 = middle line of the staff, 4 = top line of the staff, -4 = bottom line of the staff).

Cueing to an unpitched instrument. You can use other unpitched instruments as the source for a clef on an unpitched instrument. If you need to cue pitched material for a player of unpitched instruments, add any pitched instrument to the player in Setup mode, and create the cues from pitched instruments in galley view on the staff belonging to the pitched instrument. When you switch back to page view, Dorico will automatically show transitions between the pitched and unpitched instrument, with the pitched cues appearing in the pitched regions.

Cueing octave transposing instruments. When you cue music from an instrument that is normally written an octave lower or higher than its sounding pitch, such as piccolo or double bass, the cue is automatically shown at the normal written octave as it would be shown in a conductor's score, rather than at the sounding octave.

Dorico automatically appends an indicator such as **8va** or **15mb** to the cue label to tell the player that the cue they are reading is not written at its sounding octave. You can disable this by setting **Octave transposition** to **Exclude from cue label** on the **Cues** page of Engraving Options, and you can also override this setting on a per-cue basis using the **Show octave transposition** property.

Furthermore, if you want to shift a cue by one or more octaves, you can activate the **Octave shift** property and set the number of octaves by which to raise or lower the cue. If the octave transposition is shown in the cue label, it will include this shift.

Clef changes for cues. If the music for the source instrument is written in a different clef than is used by the destination instrument, Dorico will automatically include a clef change to the source instrument's clef at the start of the cue, and a restorative clef change to the destination instrument's previous clef at the end of the cue.

Clef changes at the start of cues are positioned differently to normal clef changes: if the cue starts at the beginning of a bar, any clef change appears on the right-hand side of the barline rather than the left. (Restorative clef changes at the end of the cue are positioned like normal clef changes.)

If a cue that requires a different clef crosses a system or frame break, the destination's original clef is shown in the usual place at the start of the new system, and the clef required for the cue then appears immediately before the first note of the new system (to the right of any key and time signature that may appear).

When multiple cues abut, clef changes will be created as needed: if two abutting cues use the same clef that is different than the clef in force on the destination instrument, a single clef change will appear at the start of the first cue, with a restorative clef at the end of the second cue. If cues overlap, and the second cue requires a different clef than the first, Dorico will create a clef change at the start of the second cue.

You can override the automatic behavior for clefs, with separate options for the layout in both concert and transposed pitch, by selecting the cue label or signpost and using the **Concert clef** or **Transposed clef** properties in the **Cues** group of the Properties panel; which property appears depends on whether the layout is currently using concert or transposed pitch. Dorico can show a treble G clef, bass F clef, alto C clef, or tenor C clef. You can furthermore choose **None**, which means that the clef of the destination instrument will be used instead of the clef of the

source instrument. When two cues abut and the first cue uses a different clef than the destination instrument, if the clef property for the second cue is set to **None**, then the clef change that restores the destination instrument's original clef will appear at the end of the first cue.

Any clef changes that occur in the source instrument in the middle of the cued passage will not be included in the cue on the destination instrument.

If you would prefer Dorico not to create a change to the source instrument's clef automatically at the start of a cue when the clefs used by the source and destination instruments differ, you can set **Clef at the start of the cue** to **Use clef of destination instrument** on the **Cues** page of Engraving Options. You can still make a clef appear for those cues that need it using the appropriate properties, as described above.

Choosing which notations should be cued. Only certain notations are included in cues, so as to avoid overloading the player with too much information: by default, Dorico includes slurs, articulations, ornaments and playing techniques in the cued material. If you are cueing vocal music, lyrics will also be included by default.

To change which notations are included in cues by default, set the options in the **Included Notations** section of the **Cues** page of Engraving Options to match your preferences.

You can also selectively choose which notations should be included in an individual cue by selecting the cue label or signpost, then setting the appropriate properties in the **Cues** group of the Properties panel.

Even when playing techniques are set to be included in cues, not every playing technique is included: playing techniques that indicate something that is of interest only to the player whose music is being cued (such as bowing marks for string players) will not be included in the cue. It is not currently possible for you to decide whether a particular kind of playing technique should or should not be included in cues, but this will become editable in a future version.

Beware that, for example, a playing technique such as *pizz.* for strings must exist within the range of the cued material for it to be included in the cue: if the *pizz.* instruction in the source instrument comes before the start of the cue, it will not appear in the cue. You could consider overriding the **Start text** property of the cue to include this information. Likewise, a slur will only be included in the cue if it both starts and ends within the cued material.

Changing the size of cued material. By default, cued material is scaled to three-quarters size. To edit this, change **Cue note scale factor** on the **Cues** page of Engraving Options.

Changing the labels for cues. The abbreviated form of the source instrument's name is shown as a label at the start of the cue. If you prefer to use the full instrument name, change the **Instrument name in label** option on the **Cues** page of Engraving Options to **Use full name**. By default, the transposition or pitch of the instrument is not included in the label. If you prefer to include the transposition, change **Instrument pitch or transposition** to **Include in cue label**.

If the **Additional label at end of cue** option is set to **Show 'Play' at next entry**, the word "Play" will be shown at the end of the cue. This is sometimes used in jazz scores, where it is also sometimes customary not to show bar rests along with cues.

Sometimes a cue may be for multiple instruments playing in unison or in octaves, in which case you can override the default label at the start of the cue to, for example, "Vln. I & Vln. II coll'ottava". This can be done by selecting the cue label or the cue signpost, and activating the **Start text** property in the **Cues** group of the Properties panel. Similarly, you can activate the **End text** property to make a label appear at the end of the cue even if no label would otherwise be shown.

The cue label is shown above the staff for up-stem cues (and cues including multiple voices), and below the staff for down-stem cues, but this default can be changed by way of the **Placement of cue label** option on the **Cues** page of Engraving Options, and overridden for an individual cue by activating the **Placement** property and setting it to **Above** or **Below** as desired.

Rhythmic spacing for cues. Cues are normally spaced more tightly than destination instrument's regular music. You can determine by how much the rhythmic spacing for cues should be tightened by setting the **Scale space for cue notes by n%** option on the **Note Spacing** page of **Layout Options**, and this can also be overridden for a range of music using a note spacing change event. By default, ideal rhythmic spacing is scaled to 70% for cues.

Hiding cues. If the same player's music appears in multiple layouts, it may be necessary to show different cues depending on the layout in which the player's music appears. As such, it is possible to hide an individual cue by selecting the cue and activating the **Hide** property in the **Cues** group of the Properties panel, which will hide the cued music in the current layout.

View options. **View ► Highlight Cues** shows a translucent yellow highlight behind the bars where a cue is shown, and a translucent blue highlight behind the bars that are used as the source for a cue. As you zoom out, the highlights become more opaque, allowing you to get an overview both of where cues have already been added, and which instruments are being used as cues. This is especially useful when viewing the full score layout in galley view.


View ▶ Note and Rest Colors ▶ Cues shows the cued material in grey, to remind you that this material cannot be edited directly.

Fingering

Sophisticated support for keyboard, brass and string fingering has been introduced in this update.



Inputting fingering. Fingering is associated with an individual notehead, so you must first select the note or notes to which you want to add fingering. To add fingerings to all of the notes in a chord efficiently, first select all the notes in the chord (one quick way to do this is to click on the stem that the notes share). Once you have selected the note or notes to which you want to add fingerings in Write mode, either:

- Type **Shift+F** to open the new fingering popover directly; or
- Choose **Write ▶ Create Fingerings**; or
- Click the new  button in the notations toolbox on the right-hand side of the window.

The fingering popover appears, into which you type the fingerings you want to appear as follows:

- For multiple selected notes, separate fingerings with commas, e.g. **1,3,5**. For keyboards, the order of the numbers doesn't matter: Dorico will automatically order them appropriately according to whether the notes are to be played by the right or left hand, under the assumption that unless otherwise specified, the notes will be played by the right hand for the upper piano staff and the left hand for the lower piano staff.
- To explicitly specify which hand a keyboard fingering refers to, add **L** for the left hand or **R** for the right hand before the first fingering. (As alternatives for "left" in other languages, you can also specify **G** for *gauche*, **S** for *sinistra*, **I** for *izquierda*, and **H** for *hidari*; as alternatives for "right", you can also specify **D** for *droit*, *destra* and *derecho*, and **M** for *migi*.)

- You can specify multiple fingerings for a single note, for example to specify the fingering for an ornament such as a mordent or turn, by typing a series of numbers with no separators, e.g. **2343**.
- Sometimes the same finger – typically the thumb – is used in keyboard music to play multiple notes. Simply specify the same fingering number for two adjacent notes, and Dorico will either display a single fingering number and a small bracket, or show the fingering number twice, according to your chosen Engraving Options.
- To specify an alternative fingering, which is shown immediately following the fingering number either in parentheses (the default) or square brackets, simply type the alternative fingering in parentheses into the popover immediately following the standard fingering number, e.g. **2(3)**. Even if you choose to show alternative fingerings in square brackets via Engraving Options, they must be specified with parentheses in the popover.
- To specify an editorial fingering, which is shown either in square brackets (the default) or parentheses, type the fingering in square brackets into the popover, e.g. **[4]**. An editorial fingering appears instead of a standard fingering for that note.
- To specify a finger substitution – where a note is played with one finger, and the performer must smoothly switch to another finger during the duration of the note – separate the first and second fingers with a hyphen, e.g. **1-3**. This creates an immediate substitution, the duration of which can be edited afterwards.
- For fingering on string instruments, you can also type **T** to input a thumb indicator.
- For fingering on brass instruments, you can enter the valve number (for trumpets, horns, etc.) or slide position (for trombones, etc.) in the same way as keyboard fingerings; for slide positions you can enter numbers up to 7.

To finish inputting fingering for the selected note or chord, simply hit **Return** to confirm the popover.

Because you need to select the notes to which the fingerings should be added before you add fingerings, the popover does not advance on its own: after confirming the popover, either move the selection with the arrow keys or select the next note or chord with the mouse before opening the popover again.

Choosing where fingering appears. By default, fingering will appear both in full score and part layouts, but depending on the nature of your project it may be more appropriate for fingering to appear in only the full score or part. Whether or not fingering appears in a layout is determined by the **Show fingering** option on the **Players** page of Layout Options.

Editing fingering. To edit an existing fingering for a note, select the note and open the fingering popover (e.g. by typing **Shift+F**), then type the new fingering. Alternatively, the fingering can be edited by changing the value of the **Finger or position** property in the **Fingering** group of Properties.

Deleting fingering. When you select a fingering in Write mode, the note will be selected as well, because the fingering is an intrinsic part of the note. Therefore, you cannot delete fingering by selecting it and pressing **Delete**. Instead, select the note and deactivate the Finger or position property in the Fingering group of Properties. To remove many fingerings efficiently, try making a block selection (click in a blank part of the staff in one bar, then **Shift**+click in a blank part of a later bar), then use **Edit ► Filter ► Notes and Chords** to filter the selection to only notes, then switch off the **Finger or position** property for all notes at once.

Fingering substitutions. To show that the performer should play a note with one finger and then inaudibly substitute another, input the two fingerings separated by a hyphen in the **Shift+F** popover (e.g. **2-3**). This will create an instantaneous substitution, centered above or below the note to which the fingering applies. You can choose on the **Fingering** page of Engraving Options whether an instantaneous substitution should be indicated using a horizontal line between or a slur above or below the two fingerings.

To specify that the performer should change finger at a specific rhythmic position, you can create a deferred substitution. Either:

- In Write mode, select an instantaneous substitution with the mouse: a circular handle appears on the fingering following the substitution indicator. Drag this left or right to change the position at which the substitution should occur; or
- In Write or Engrave mode, select an instantaneous substitution, and then activate or change the value of the **Substitution offset** property in the **Fingering** group of the Properties panel. The first value is the number of quarter notes (crotchets) after the initial depression of the note that the fingering substitution should be performed; this can be expressed as fractions of a quarter note. The second value is for the grace note position at which the substitution should occur; normally you do not need to set this value.

Deferred substitutions are always indicated with a horizontal line, even if instantaneous substitutions are indicated by a slur above or below.

Dorico automatically arranges deferred substitutions such that they are ordered appropriately with any other fingerings that coincide with the substitution.

Cautionary fingerings. A cautionary fingering is used to remind the performer that a fingering that was specified at a previous rhythmic position still applies for a note

that is still sounding. You do not need to create cautionary fingerings: Dorico automatically displays them if you add another fingering at a rhythmic position at which a note previously given a fingering is still sounding, enclosing them in parentheses by default. If you would prefer cautionary fingerings to be shown without parentheses, or indeed not to be shown at all, set the **Cautionary fingering appearance** option on the **Fingering** page of Engraving Options accordingly.

Choice of font. By default, fingerings are drawn in a bold, roman font that is similar in appearance to the digits in time signatures. If you would prefer fingerings to be drawn in another font, set **Fingering appearance** to **Plain font** on the **Fingering** page of Engraving Options. With this option set, Dorico will use the **Fingering text font** font style to draw fingering numbers, parentheses, and brackets; the thumb indicator, substitution lines and slurs, and brass valve separators will continue to be drawn as before.

Position relative to the staff. For keyboard instruments, fingering is positioned above the right-hand staff, and below the left-hand staff. For string and brass instruments, fingering is always positioned above the staff.

To position an individual fingering on the opposite side of the staff from its default position, select the fingering or its associated note and activate the **Staff-relative position** property in the **Fingering** group of the Properties panel, then set either **Above** or **Below** as necessary.

In complex contrapuntal music, you may find it preferable for fingerings in general to be positioned above the staff for up-stem notes and below the staff for down-stem notes. This can be achieved by setting **Position of fingering relative to the staff** to **Follow voice directions** on the **Fingering** page of Engraving Options.

Position relative to slurs. By default, fingerings are positioned inside the arc of slurs, but outside the starts or ends of slurs. You can change this default by setting **Position of fingerings relative to slurs, octave lines and triplets** on the **Fingering** page of Engraving Options. If you would prefer an individual fingering to be positioned outside a slur, select the fingering or its associated note in Engrave mode and activate the **Slur-relative position** property in the **Fingering** group of the Properties panel, and set **Outside**. Be aware that fingerings positioned inside slurs will also be positioned inside triplets and octave lines, unless they coincide with the first or last note of a slur, in which case they will be positioned outside all of these notations.

Adjusting the position of fingering. Fingerings can be nudged in Engrave mode by selecting them and using **Alt**+arrow keys to move them, with **Ctrl** (Windows) or **Command** (Mac) for larger steps. You can also drag fingerings directly with the

mouse. Alternatively, you can adjust the value of the Offset X and Y properties in the Fingering group of the Properties panel.

To reset the position of a fingering number, select it in Engrave mode and choose **Edit ▶ Reset Position**, or deactivate the **Offset X** and **Y** properties.

Fingering for valved brass instruments. For instruments like trumpet and horn, fingering is used to show which valves need to be depressed to produce a specific note. For example, to play C sharp on a trumpet, the first two valves must be depressed. To enter this into the **Shift+F** popover, simply type **12**. By default, Dorico stacks brass fingerings vertically, and inserts a dot between the numbers. If you prefer the fingerings to be positioned in a single row, or if you would prefer to use either a slash as a separator, or no separator at all, use the options in the **Brass** section of the **Fingering** page of Engraving Options to change them.

Slide positions for brass instruments. To indicate the slide position for slide brass instruments, such as trombones, either Arabic or Roman numerals are used. By default, Dorico shows slide positions as Arabic numerals, but you can choose to show Roman numerals instead by setting **Trombone slide position appearance** to **Roman numerals** on the **Fingering** page of Engraving Options. To input slide positions, use Arabic numerals in the **Shift+F** popover even if you want to see Roman numerals printed in the score.

Horn branch indicators. To indicate whether a note should be played on the F of B \flat branch of a double horn (or indeed on the alto E \flat or F branch of a triple horn), a horn fingering may be prefixed with an indicator of the branch to be used. Some publications simply indicate **T** for thumb, while others more explicitly indicate which branch is to be used by specifying its pitch. To add a branch indicator, select a note belonging to a horn in F (no other pitch of horn is supported at present), and activate the **Horn branch** property in the **Fingering** group of the Properties panel. Dorico does not, however, attempt to establish whether the branch chosen is actually valid for the selected note. Options for the appearance of these indicators can be found in the **Horn Branch Indicators** section of the **Fingering** page in Engraving Options.

String fingering shifts. When a string player has to shift position on the fingerboard of the instrument to play a higher or lower note with the same fingering as the previous one, this is sometimes indicated by way of an angled line that shows the direction of movement up or down the fingerboard. Dorico can show fingering shift indications if you specify which string a note is to be played on, and then activate the **Indicate shift to next note** property in the **Fingering** group of the Properties panel.

To specify which string a note is to be played on, select a note on a string instrument, and activate the new **String** property in the **Notes and Rests** group of the Properties panel. The property will show the pitches of the possible strings on which the note could be played on that instrument, to make it easy to set the correct value. If you subsequently edit the pitch of the note, the property will automatically be unset if it can no longer be played on that string.

Specify the string for both the first and second notes, and then activate the **Indicate shift to next note** property. It is not necessary for either the first or second note to show an explicit fingering in order for the shift indicator to appear.

Options for the length, thickness, angle, and placement between the two notes for the shift indication can be found in the **String Fingering Shifts** section of the **Fingering** page in Engraving Options.

If you find that Dorico shows the fingering shift indicator pointing in the opposite direction to that which you expect, you can activate the **Shift direction** property and force the direction of the shift indicator.

MusicXML import. Fingerings that are specified in the proper way in MusicXML files, i.e. using the **fingering** element, will be imported by Dorico. MusicXML files exported from Finale, for example, typically represent fingerings in the correct way, but Sibelius does not, so Dorico cannot import fingerings from MusicXML files exported by Sibelius.

Unpitched percussion notation

Dorico 1.2 introduces comprehensive support for unpitched percussion notation, with flexible options for combining music for multiple instruments into kits that can then be displayed differently in different layouts.

Setup mode. Unpitched percussion instruments can be assigned to players in the same way as pitched instruments. When a player holds several individual percussion instruments, each will appear as a single line in the music: if instrument changes are enabled (on the **Players** page of Layout Options), then only the first instrument held by the player will appear, and Dorico will change from one instrument to the next as it does for pitched instruments.

To show multiple unpitched percussion instruments held by a single player at the same time, they should be arranged into a percussion kit. By way of example, a drum set instrument is a percussion kit: a drum set consists of a number of separate instruments mounted together on a frame, and typically written on a regular five-line staff, with each instrument given its own position on the staff, and sometimes its own notehead type. Similarly, a pair of bongos



are likewise a percussion kit consisting of the two bongo drums, and typically written on a grid with two lines, the smaller drum shown on the top line, and the larger drum shown on the bottom line.

When you expand a player holding percussion instruments in the Players panel in Setup mode, you will notice that kit instruments are colored green, whereas individual percussion instruments are colored the same light blue as all other instruments.


Percussion kits versus individual instruments. When a player holds multiple individual percussion instruments, only a single kind of presentation is possible: each percussion instrument appears separately on a single line, labeled separately, in all the layouts in which the player is included. This will often be appropriate if a player has only one or two percussion instruments, but combining the instruments into a kit gives you more flexibility with how music for this player can appear: you can choose to use either of the other two presentation types – showing the music on a grid or on a five-line staff – and vary this per layout, and you have greater control over how the player's instruments are labeled.

Combining individual instruments into a kit. If a player is holding one or more individual percussion instruments, you can combine them into a percussion kit: simply right-click on the player's card in the Players panel in Setup mode and choose **Combine Instruments into Kit**. If the player already has one or more kit instruments, the individual instruments and any further kits will be combined into the first kit; if no kit exists, then one will be created. The **Edit Percussion Kit** dialog opens immediately to allow you to edit the resulting kit, for example to change the order in which the instruments appear in a grid or on a five-line staff.

Creating an empty percussion kit. To add an empty percussion kit to a player, right-click on the player's card in the Players panel in Setup mode and choose **Create Empty Kit**. The **Edit Percussion Kit** dialog opens immediately to allow you to add instruments to the empty kit.

Moving percussion instruments from one player to another. If you have already written music for your percussion players and then find that you need to reallocate instruments between players, this is easy to do in Setup mode.

You can move an individual percussion instrument from one player to another in the usual way: simply expand the card of the player holding the instrument you want to move, then click and drag to move it to another player, or hover over the instrument's light blue label, click to show its context menu, and choose the destination player from the **Move Instrument to Player** submenu.

If the percussion instrument you need to move is part of a kit, then you must first remove it from the kit from within the **Edit Percussion Kit** dialog. To open the dialog, hover over the instrument's green label in the Players panel, click to show its context menu, and choose **Edit Percussion Kit** to open the dialog. Select the instrument you want to move to another player from the list of instruments in the kit, and click  to remove it from the kit. Close the kit editor, and the instrument will appear as an individual instrument belonging to the player, at which point you can simply drag it to another player (and then combine it into a new or existing kit held by that player if necessary).

Changing percussion instruments. You can change any pitched instrument into any other pitched instrument in Setup mode by clicking the instrument's light blue label (in the expanded card for the player in the Players panel) and choosing **Change Instrument** from the context menu that appears. Any existing music belonging to that instrument is retained by the new instrument. When percussion instruments are involved, things are a little different.

Firstly, you cannot change a percussion kit into any other kind of instrument: if you click a kit's green label, **Change Instrument** is always disabled.

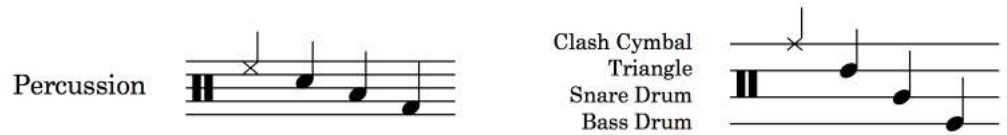
You can, however, change any individual un pitched percussion instrument into any other un pitched percussion instrument: when you choose **Change Instrument** all of the un pitched instruments will appear in the picker.

Presentation types for percussion kits. The music belonging to a percussion kit can be shown in one of three types of presentation, and each layout in your project can use a different presentation type if needed:

- **5-line staff:** all of the instruments are shown together on a single five-line staff, with each instrument allocated its own staff line or space, showing a single staff label in the margin, and able to show a percussion legend to show either all of the instruments on the staff or only those instruments sounding at a particular point.
- **Grid:** each instrument is shown on its own line, but sharing a single clef, time signature, etc., and where appropriate it is possible for notes to be written in the spaces directly above and below the line if needed. The lines of the grid are typically two or three spaces apart, and not all of the lines must be equally spaced from each other. The grid can have flexible staff labeling, with each instrument labeled separately, or several instruments grouped together with a single label.
- **Individual instruments:** each instrument is shown on its own individual line, with its own clef, time signature, etc., and where appropriate it is possible for notes to be written in the spaces directly above and below the line if needed.

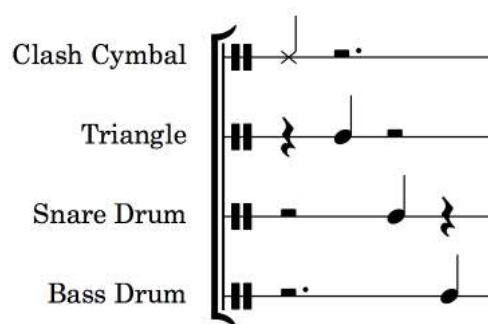
Multiple instruments held by the same player are vertically spaced according to the ideal distances defined on the **Vertical Spacing** page of Layout Options.

The following simple examples showing the same material for a kit consisting of four instruments illustrate each presentation type:



5-line staff

Grid

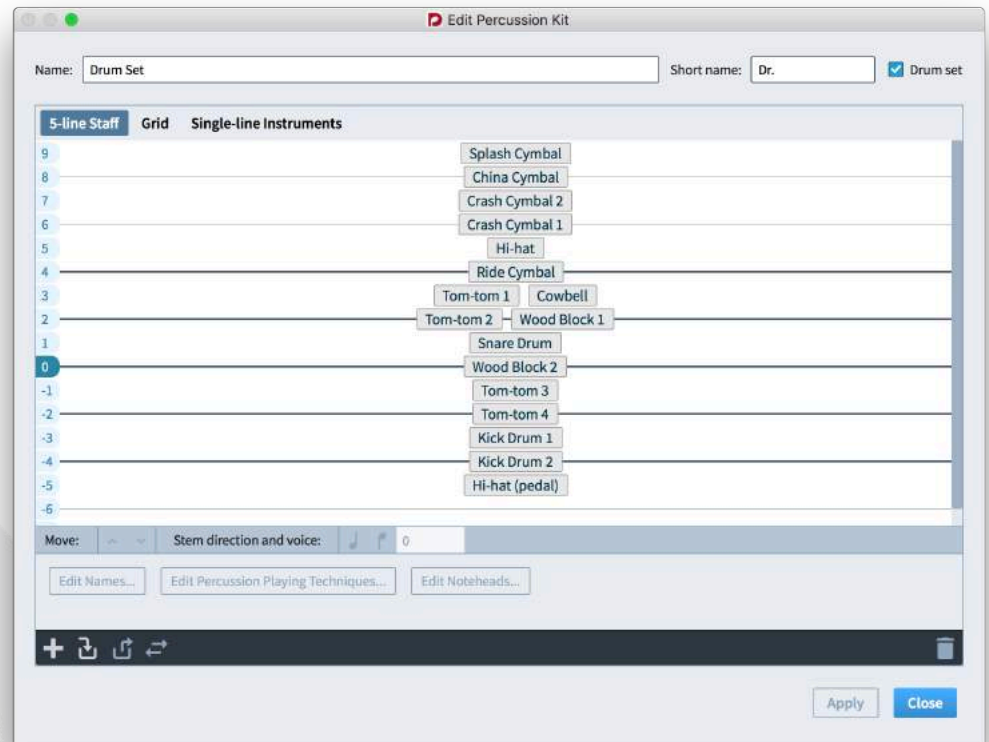


Individual instruments

To change the presentation type, go to the **Players** page of Layout Options. In the **Percussion** section, a row of buttons appears for each player in the selected layout that holds a percussion kit instrument.



Editing percussion kits. To edit a percussion kit, use the **Edit Percussion Kit** dialog. You will be taken to this dialog automatically if you create an empty kit or if you combine instruments into a kit. To edit an existing kit instrument, expand the player holding it in the Players panel in Setup mode, and click its green label. In the context menu that appears, choose **Edit Percussion Kit**. The dialog appears:



At the top of the dialog, you can set the full and abbreviated name for the kit instrument. This is the name that will be used as the staff label when using the five-line staff presentation type.

The main editing area of the dialog has three tabs, allowing you to edit how the kit will appear in each of the three presentation types:

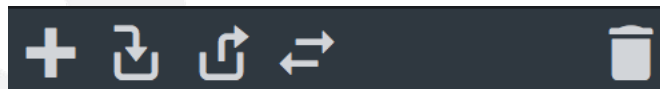
- **5-line staff.** The numbers down the left-hand side of the editing area correspond to staff positions: position 0 is the middle line of the five-line staff (on a staff using a treble G clef, B4; on a staff using a bass F clef, D3). Position 1 is the space immediately above the middle staff line, position -2 is the line below the middle staff line, and so on. The five lines of the staff are shown with bold black lines, while nominal staff line positions above and below the staff are shown with grey lines. Each instrument is shown on its staff position. To move an instrument to another position, simply drag and drop it. Multiple instruments can share the same staff position, but it is advisable to ensure that they use different noteheads so that the player can tell them apart.
- **Grid.** The numbers down the right-hand side of the editing area correspond to the number of staff spaces between each instrument's line. By default, all instruments in a grid are two spaces apart. The order in which the instruments are listed here matches the order in which they will appear in the grid. To change the order, select an instrument and click the up/down arrow **Move** buttons in the action bar at the bottom of the editing area. To change the gap

between one instrument and the next, select the upper instrument and then set the **Gap** value in the action bar at the bottom of the editing area. Each instrument in a grid shows its own staff label by default, aligned vertically with its own line, but you can group adjacent instruments together and show a single label instead: select instruments by clicking on the first, holding **Shift** and clicking on the last, then click the **+** button to create the group. To change the name of the group, double-click it in the column to the left of the instruments contained in the group.

- **Single-line instruments.** The editing area lists all of the instruments in the order in which they appear in the score. To change the order, select an instrument and click the up/down arrow **Move** buttons in the action bar at the bottom of the editing area.

Editing the name of an instrument will affect its appearance in all presentations: this can be done by clicking the **Edit Names** button below the action bar.

The action bar at the bottom of the dialog provide other operations that apply to all presentation types. From left to right:



- **Add new instrument:** shows the instrument picker to allow you to choose a new unpitched percussion instrument to be added to the kit.
- **Add existing instrument from player:** shows a menu listing the other players holding individual percussion instruments (i.e. those not in kits), to allow you to move an instrument from another player to this kit, bringing its music with it.
- **Remove instrument from kit:** removes the selected instrument from the kit, so it appears as an individual instrument and can be moved to another player or into another kit instrument.
- **Change instrument:** shows the instrument picker to allow you to choose a new unpitched instrument to replace the selected instrument, retaining its music.
- **Delete instrument:** deletes the instrument from the kit, along with its music.

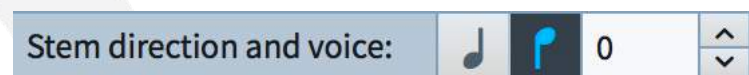
Voices in percussion kits. When music belonging to multiple percussion instruments is displayed in the five-line staff or grid presentations, Dorico combines the music from each instrument into a smaller number of voices: by default, one up-stem voice and one down-stem voice. Alternatively, you can choose to notate all notes in a single voice, which is a convention sometimes followed for drum set but less often for orchestral percussion.

To choose between using the voicing set in the **Edit Percussion Kit** dialog or only using a single voice, set **Voicing for drum set kit presentation** on the **Percussion** page of Notation Options to the desired option.



Furthermore, you can override this option on a per-percussion kit basis by activating or deactivating **Is drum set** in the **Edit Percussion Kit** dialog.

In the **Edit Percussion Kit** dialog, you can specify the default stem direction for each instrument, and also whether it should share the same voice as another instrument or use a new one. Select an instrument in the editing area, and these controls in the action bar are enabled:



Click the note whose stem direction matches the desired stem direction. If you want to move the instrument into its own voice, change the number to the right. The number corresponds to the number of voices for each stem direction, so you don't need to change the number simply because you are switching between up- and down-stem voices.

Notes in the same voice cannot be notated using different durations, so if you combine notes of different durations into the same voice, they will be notated using ties by default. If you would instead prefer to truncate longer notes so that only their onsets appear, thereby eliminating the use of ties, set **Overlapping notes in the same voice in a kit or grid presentation** on the **Percussion** page of Notation Options to **Truncate to shortest duration**.

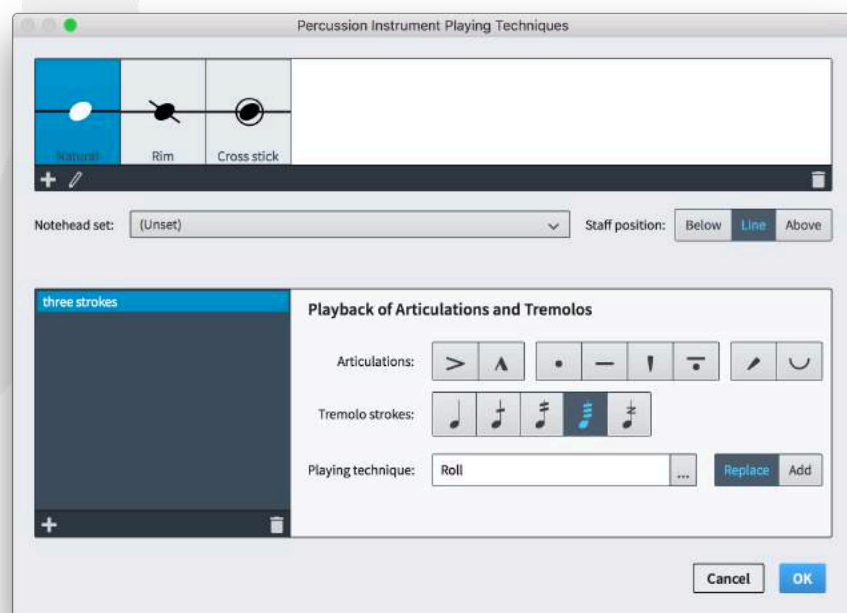
If one of the instruments has a tuplet rhythm, other instruments can still share the voice if their notation is compatible: if the tuplet structure is the same, or if they have a single note that coincides with the start of the tuplet, in which case that note will be notated as the same duration of the first note of the tuplet. If the music is incompatible, then Dorico will dynamically create another voice and notate the remaining music in that voice for the duration of the tuplet or otherwise incompatible region.

It is also possible to override the default choice of voice for an instrument for only one or a few notes: select the notes whose voice you want to override, and choose the desired up-stem or down-stem voice from the **Edit ► Percussion ► Change Voice** submenu. To reset an overridden note back to its default voice as defined in the **Edit Percussion Kit** dialog, choose **Reset Note Destination Voice**.

Playing techniques. In addition to the playing techniques that can be added via the **Playing Techniques** panel in Write mode or the **Shift+P** popover – which is how, for example, open/closed techniques for hi-hat are input – unpitched percussion instruments can also specify different playing techniques by the use of different noteheads, positioning notes in the space directly above or below the line on which notes are normally written, or by the addition of articulations (staccato, accent, etc.) or single-note tremolo (for rolls, etc.).

You can edit the set of playing techniques defined for each percussion instrument using the **Edit Percussion Playing Techniques** dialog, which is opened as follows:

- For an individual percussion instrument held by a player, expand the player's card in the Players panel in Setup mode, click the light blue instrument label, and choose **Edit Percussion Playing Techniques** from the context menu.
- For an instrument that is part of a percussion kit, first open the **Edit Percussion Kit** dialog, then select the instrument whose playing techniques you want to edit in the main editing area, and click **Edit Percussion Playing Techniques** below the action bar.



At the top of the dialog are the main playing techniques that are defined for this percussion instrument, showing the notehead set and, optionally, the staff position corresponding to this playing technique. Normally a percussion instrument will define at least the **Natural** playing technique, which is usually shown using the default notehead set.

To add a new playing technique, click the **+** button in the action bar, and in the dialog that appears, choose the playing technique you want to create. After clicking **OK**, a new entry appears in the list at the top of the dialog. If the technique should use the default notehead set, leave **Notehead set** at **(Unset)** rather than choosing a specific notehead set, and then Dorico will use the default notehead set as defined on the **Notes** page of **Engraving Options**. To specify that this playing technique should be positioned on the space either above or below the grid line, set **Staff position** to **Above** or **Below** respectively.

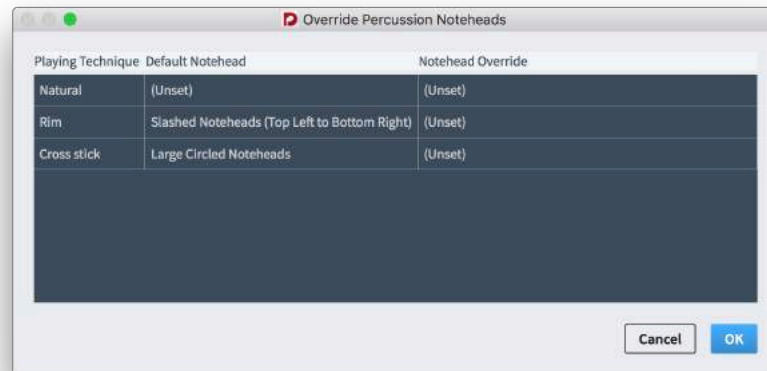
This is all that is required to specify a playing technique that you can cycle through using **Shift+Alt+up/down arrow** when inputting or editing music on a percussion instrument, but you may also want to define specific behaviors for particular combinations of articulations and single-note tremolos, in which case you can define further combinations for each playing technique defined in the list at the top of the dialog in the **Playback of Articulations and Tremolos** section below.

For example, to define a roll, first click **+** in the action bar in the list at the bottom left-hand corner of the dialog to add a new entry to the list. Click the ... button next to the **Playing technique** read-out, and choose **Roll** from the list of playing techniques, then click **OK** to confirm your choice. It is possible to choose a combination of playing techniques from this dialog with **Ctrl+click** (Windows) or **Command-click** (Mac). Choose **Replace** if you want this playing technique to be used instead of the default playing technique defined for this combination of notehead and staff position, or choose **Add** if you want this playing technique to be added on top – for our roll example, choose **Replace**. Finally, click the number of tremolo strokes that you want to produce the roll.

All of these settings are saved in the percussion instrument within your project, and can be exported from one project and imported into others later on.

Overrides for articulations and tremolos are not currently respected in playback, but this will be addressed in a future version of the software.

Overriding playing technique appearance. The choices you make in **Edit Percussion Playing Techniques** apply when a percussion instrument is shown in any of the three presentation types, but when the instrument is shown in a five-line staff presentation, if the instrument shares a staff position with one or more other instruments, it may be necessary to change the noteheads used to disambiguate the notes for one instrument from another. To do this, select the instrument whose noteheads you want to override from the main editing area and click **Edit Noteheads**. The following dialog appears:



This lists the playing techniques defined for the instrument in the **Edit Percussion Playing Techniques** dialog, and shows which notehead type is mapped for each technique. To override a notehead, click in the **Notehead Override** column for the appropriate playing technique, and choose the new notehead type from the menu that appears. Click **OK** to confirm your choices.

Exporting and importing percussion kits. All of the choices made in the **Edit Percussion Kit** dialog and its subsidiary dialogs pertaining to a particular percussion kit can be exported to a library file that you can reuse in other projects later on. To export the library, click **Export Kit** at the bottom left-hand corner of **Edit Percussion Kit**, and choose the name and location of the file to save.


To use a percussion kit you have exported in another project, you can either click the **Import Kit** button in the instrument picker to choose the library file containing your kit, or right-click a player in the **Players** panel in Setup mode and choose **Import Kit** from the context menu. In both cases, the imported kit will be assigned to the chosen player.

Setting up note input for percussion. Inputting music for unpitched percussion instruments works differently than it does for pitched instruments. You can use any of the usual methods for unpitched percussion input, but using a MIDI keyboard or the computer keyboard is most efficient.

On the **General** page of Preferences you will find options relating to note input for percussion, with one set of options for input onto five-line staves and grids, and another for input onto individual instruments. The main choice affects both input via MIDI and computer keyboard:



- **Use percussion map:** a percussion map defines which MIDI notes produce which sound for a particular patch in a sound library. For example, in General MIDI percussion, C2 (note 36) produces bass drum, and D2 (note 38) produces snare drum, and so on. If you know a particular mapping well, then you may find it helpful to use the mapping directly for input.
- **Use staff position:** this option uses the staff position defined in the **Edit Percussion Kit** dialog. For example, on a drum set, the bass drum is normally positioned in the bottom space of the staff, while the snare drum is positioned in the third space from the bottom. You might think of the staff positions relative to what they would be when using a treble G clef (F4 and C5 respectively) or using a bass F clef (A2 and E3 respectively). For five-line staves, therefore, when **Use staff position** is chosen, you can specify whether the staff positions are relative to a **Treble G clef** or a **Bass F clef**.

When **Use staff position** is set, you can designate one octave of your MIDI keyboard to input playing techniques. By default, the **Input techniques from MIDI key** option is set to MIDI note 48, which is C3, the C one octave below middle C (C4 = MIDI note 60). You can click the MIDI learn  button and then play a note on your MIDI keyboard to change the starting pitch if you wish.

Assuming a starting pitch of C3, ascending notes operate as follows:

- **C3** (48): Previous playing technique.
- **C#3** (49): Next playing technique.
- **D3** (50): First mapped playing technique.
- **Eb3** (51): Second mapped playing technique.
- **E3** (52): Third mapped playing technique.
- ...and so on, until...
- **B3** (59): Tenth mapped playing technique.

In general, it is recommended that you set **Use staff position** for percussion input: **Use percussion map** will normally be useful only when you are inputting onto a drum set and you have already memorized the General MIDI percussion map.

Note input for percussion. When inputting music on a percussion instrument using either the five-line staff or grid presentation type, the caret is smaller than when

inputting music on a pitched instrument: instead of occupying the whole height of the staff, the caret is centered around a particular staff position, and can be moved up and down to different staff positions using the up and down arrow keys. Above the staff, directly above the rhythmic grid display, the name of the current percussion instrument and, if applicable, the current playing technique appears.

You should make sure the appropriate playing technique is chosen before you input a note: if you are using alphabetic input, you can cycle through the playing techniques for the current instrument using **Shift+Alt+up/down arrow**; if you are using a MIDI keyboard, you can use the MIDI pitches defined in Preferences.

If you later want to correct a playing technique after input, you can select the note and type **Shift+Alt+up/down arrow** to cycle through the playing techniques for the current instrument. On a five-line staff or grid, if you keep going in the same direction, once you have exhausted the playing techniques for the current instrument, the note will be moved to the next instrument in that direction (in other words, the next staff position on a five-line staff, or the next line on a grid).

When inputting onto a percussion kit in either the grid or individual instruments presentation, you can type any note name **A–G** or play any MIDI note (outside of the octave designated for changing playing technique) to input onto the line corresponding to the caret's current position.

By contrast, when **Use staff position** is set in Preferences and inputting onto a five-line staff, you can type e.g. **F** to input a note on the F space or line. If you have the staff positions set relative to **Treble G clef**, then **F** could mean either the bottom space or the top line: in a standard drum set, this would mean either the kick drum (bottom space) or ride cymbal (top line). Dorico chooses the lower or upper possible staff position based on the current position of the caret: however, rather than choosing the staff position that is closest to the caret's current position, instead Dorico chooses the staff position that will produce a note with the same stem direction as the last input note.

Consider the case of inputting kick and snare drum notes on a standard drum set: the kick drum is on the bottom space, and the snare drum two spaces above, five staff positions away from the bottom space, and four staff positions away from the top line (ride cymbal). First, input kick drum by moving the caret towards the bottom of the drum set staff, and type or play **F**: now input snare drum by typing or playing **C**. Now play or type **F** again: instead of inputting a note for ride cymbal on the top line of the staff, Dorico inputs a note for kick drum on the bottom space. This is because the kick drum uses the same stem direction (i.e. voice) as the snare drum.

You can also input a note for the instrument and playing technique shown above the rhythmic grid, i.e. on the staff position currently occupied by the caret, by typing **Y**. This works on all three percussion kit presentation types.

Articulations. When working in the grid or five-line staff presentation, you can add articulations in the same way as for other instruments, but be aware that any articulations you add will be set for all instruments who have notes at that rhythmic position in the shared voice that appears on the grid or five-line staff. For example, if you have both a snare drum and tom-tom note at the same rhythmic position, and add an accent, because both of these notes are shown in the same down-stem voice by default, the accent is actually added to both instruments: if you switch to the individual instruments presentation type, you will see the accent appear on both instruments.

Tuplets. When working in the grid or five-line staff presentation, any tuplets you add will be added to all instruments who share the same voice. If you need to write a cross-rhythm for two instruments that normally share the same voice, you can switch to the individual instruments presentation type and input the independent rhythms on each instrument. When you switch back to the grid or five-line staff presentation, Dorico will do its best to resolve the conflicts:

- If there are conflicting tuplets, one tuplet will be broken out into an extra voice for the duration of the conflict.
- If there is a tuplet in one instrument and non-tuplet notes in another instrument, a non-tuplet note at the same position as the start of the tuplet and of any duration up to the total length of the tuplet will be displayed as if it were part of the tuplet, since the note onset is at the same position as the start of the tuplet, and hence will sound the same as the original notation.
- If the non-tuplet notes in another instrument do not coincide with the start of the tuplet, or if there are further notes that start part-way through the tuplet, then the non-tuplet notes will be broken out into an extra voice for the duration of the conflict.

Be aware that deleting a tuplet from a grid or five-line staff presentation will also delete the tuplet from all instruments whose notes contribute to the same shared voice.

Crossing notes to other instruments. When using the five-line staff or grid presentation type, you cannot use the commands in the **Edit ► Cross Staff** submenu to cross notes to other instruments. You can, however, cross notes between percussion instruments when using the individual instruments presentation type, or when a player is holding multiple individual percussion instruments that are not combined into a kit.

Playing techniques. You can add playing techniques – such as + for closed and o for open hi-hat – in the same way as for other instruments using the **Shift+P** popover or the **Playing Techniques** panel in Write mode. Playing techniques are added only to the instrument to which the note you select belongs.

Dynamics. Unlike other items, dynamics are not shared between the grid and five-line staff presentation type and the individual instruments presentation type: any dynamics that you add to individual instruments will not appear when you switch to either of the other presentation types. Dynamics can therefore be added independently in the grid/five-line staff and individual instruments presentations.

Percussion stickings. Dorico does not yet have a dedicated feature for showing percussion stickings, but you can use lyrics as a reasonable approximation in the meantime. Lyrics can be added either in the grid or five-line staff presentation by selecting a note in the instrument to which the stickings should apply, or by switching to the individual instruments presentation and inputting the lyrics directly on that instrument: when you switch back to the other presentation type, the lyrics will be shown on the grid or five-line staff.

Staff labels. Staff labels for percussion instruments vary according to the presentation type:

- **Five-line staff:** a single staff label will appear, using the full or abbreviated name defined at the top of the **Edit Percussion Kit** dialog.
- **Grid:** each line in the grid will show its own smaller staff label, using the full or abbreviated name for the appropriate instrument, which can be edited by clicking **Edit Names** in the **Edit Percussion Kit** dialog. Adjacent instruments in the grid can be grouped, in which case a group label will appear centered vertically on the group. The group label can be edited in the main editing area of the **Edit Percussion Kit** dialog.
- **Single-line instruments:** each instrument will show a full-size staff label, using the full or abbreviated name for the appropriate dialog.

Smaller staff labels for each line in a grid presentation use the **Staff labels (percussion grid)** paragraph style, which can be edited in **Engrave ► Paragraph Styles**.

Percussion legends. When using the five-line presentation type, it can be helpful to be able to show which instruments are represented on the staff, or to periodically remind the player which instruments are to be played.

To create a legend that shows all instruments in the five-line staff, select a note or other item on the staff at the position at which you want the legend to appear, and choose **Edit ► Percussion ► Legend for All Instruments**. The legend appears

above the staff, listing the instruments in the order in which they appear in the five-line staff, from highest staff position to lowest.

To create a legend that shows only the instruments that are sounding at a particular position, select a single note or a range of notes in the staff, and choose **Edit ▶ Percussion ▶ Legend for Sounding Instruments**. The legend appears above the staff, and shows a circular handle at its right-hand extent: this can be dragged with the mouse, or the duration of the legend can be edited with **Shift+Alt+left/right**, to enlarge or reduce the range over which the instruments to be included in the legend should be considered.

Using the new **Percussion Legends** group in the Properties panel, you can also change the **Placement** of the percussion legend to below the staff, or use abbreviated instrument names by activating **Use short names**.

The font size and style of the percussion legend can be edited by editing the **Percussion legend** paragraph style in **Engrave ▶ Paragraph Styles**.

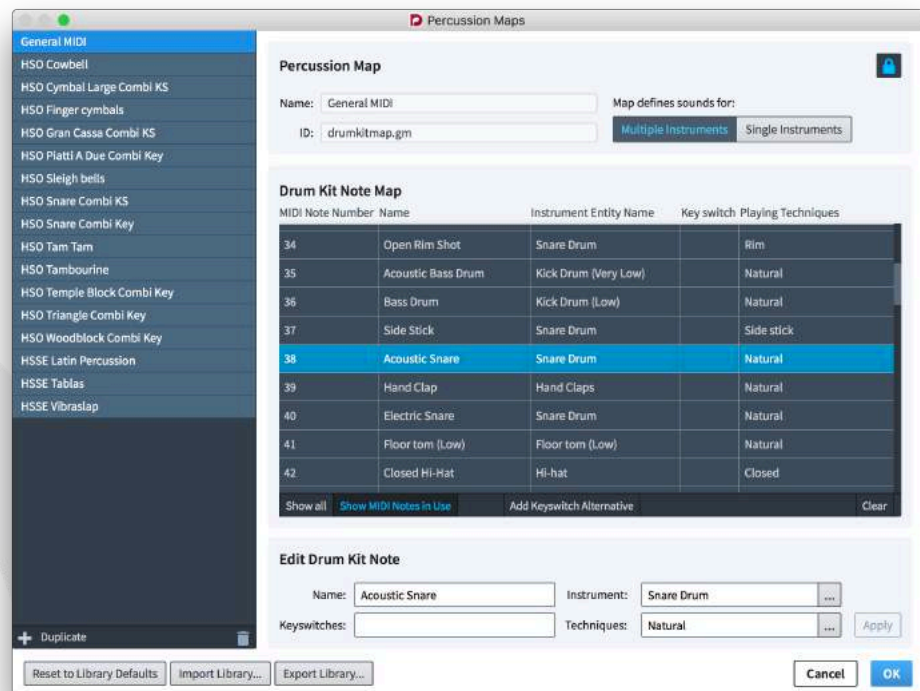
Percussion legends appear as signposts if there are no instruments sounding at their position, or when using the grid or individual instruments presentation type. These signposts can be hidden or shown using **View ▶ Signposts ▶ Percussion Legends**.

Percussion maps. Unpitched percussion instruments are played back using patches that map unpitched sounds onto different MIDI notes: for example, General MIDI percussion maps the bass drum onto C2 (MIDI note 36, two octaves below middle C), kick drum onto D2 (MIDI note 38), closed hi-hat onto F#2 (MIDI note 42), and so on. The pitch required to produce a particular unpitched sound varies by device, sample library, manufacturer, etc., and has no connection to the position on a five-line staff that a percussion instrument might be using.

To connect the written representation of notes and playing techniques for percussion instruments to what needs to be played back, Dorico uses percussion maps. A percussion map describes which unpitched percussion instruments and their playing techniques are present in a particular patch, and how to play them back: for example, which MIDI note to play, and optionally which other MIDI note should be used as a keyswitch to trigger a particular playing technique.

A set of percussion maps for the unpitched percussion patches that are part of the HALion Symphonic Orchestra and HALion Sonic SE factory libraries are provided with Dorico, and will be automatically chosen when you add percussion instruments to your project.

However, if you want to use a third-party sound library or MIDI device, you will need to define one or more custom percussion maps in order to obtain correct playback. To get started, choose **Play ► Percussion Maps**:



The list on the left shows all of the percussion maps that are present in the current project. Select one of the maps to show its contents in the main area of the dialog to the right, click **+** in the action bar to create a new empty map, or click **Duplicate** to create a copy of the selected map.

The **Percussion Map** section on the right allows you to specify the display **Name** for the percussion map that appears in the **Endpoint Setup** dialog, which is where you tell Dorico which percussion map to use for which channel on your VST instrument or MIDI output device. You can set anything you like in the **ID** field. Set the option **Map defines sounds for** appropriately:


- **Multiple instruments:** choose this if the patch for which you are creating a map contains many different percussion instruments; for example, the General MIDI drum map.
- **Individual instrument:** choose this if the patch for which you are creating a map contains only a single percussion instrument, perhaps with multiple playing techniques for that instrument; for example, a snare drumline patch in Virtual Drumline or another specialist sample library.

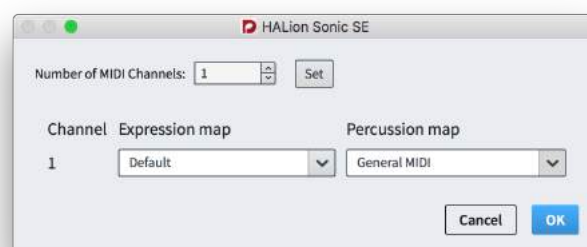
The **Drum Kit Note Map** area lists all of the MIDI notes from 0 to 127, and allows you to specify which combination of unpitched instrument and playing technique is

produced by each note. To add a new entry, first click **Show all** in the action bar at the bottom of the list of MIDI notes so that unmapped notes are shown. Select the row corresponding to the MIDI note for which you want to create a mapping. The **Edit Drum Kit Note** section at the bottom of the dialog allows you to specify the data for this MIDI note:

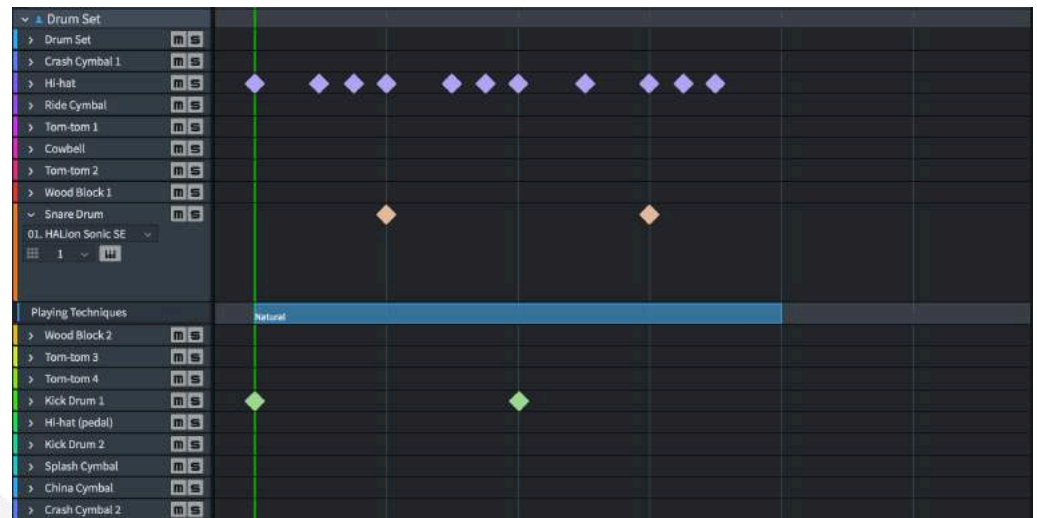
- **Name:** the display name for the specific combination of instrument and technique; you may choose to input whatever name is used in the manufacturer's documentation for your VST instrument or MIDI output device.
- **Instrument:** click ... to open a list of all of the unpitched percussion instruments you can create in Dorico: choose the appropriate instrument that corresponds to the sound produced by this MIDI note and click **OK**.
- **Techniques:** click ... to open a list of all of the playing techniques you can create in Dorico: choose the appropriate playing technique or techniques (you can use **Ctrl**+click or **Command**-click to make a multiple selection) that correspond to the specific sound produced by this MIDI note (for example, a roll, side stick or rim shot) and click **OK**.
- **Keyswitches:** if this sound requires another MIDI note to be played to trigger this specific combination of instrument and playing technique(s), specify the MIDI note number of the keyswitch in this field.

Repeat the process of selecting an unmapped MIDI note in the **Drum Kit Note Map** table and filling in the **Edit Drum Kit Note** fields for each one until you have created all of the required mappings. You can save your progress at any time by clicking **OK** to confirm the dialog, then saving your project as normal.

Once you have created your percussion map, the final step is to tell Dorico to use it: in Play mode, click the  button for the VST instrument or MIDI device that provides the patch corresponding to the percussion map. In the **Endpoint Setup** dialog that opens, make the appropriate selection in the **Percussion map** column for the channel in which your percussion patch has been loaded.



Play mode. Unpitched percussion instruments are handled differently in Play mode than pitched instruments. Instead of showing the usual piano roll view, the onset of each note on each percussion instrument is shown, as follows:



You can expand each instrument in a kit in the track header at the left-hand side in order to assign that particular instrument to another playback endpoint (for example, another channel on the same VST instrument or MIDI output device, or indeed to a completely different device if you wish). Be aware that the chosen endpoint must have an appropriate percussion map chosen, or Dorico will not know how to play that instrument's music.

Notes can be moved in Play mode by dragging them to the desired rhythmic position, but in the current release it is not possible to drag them from one percussion instrument to another, nor is it possible to change their duration within Play mode. These operations are planned for future releases.

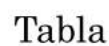
Percussion in imported MIDI files. When importing a MIDI file, Dorico will optionally interpret music for tracks set to use channel 10 as drum sets if the **Interpret channel 10 as General MIDI percussion** option is set in the **MIDI Import Options** dialog. This is the only condition under which Dorico will interpret any of the music in the MIDI file as percussion.

Percussion in imported MusicXML files. There are a number of ways in which unpitched percussion music can be expressed in MusicXML, and different applications take different approaches to what data is exported, and how it is encoded. Results may vary considerably.

Other scoring applications, and indeed MusicXML, have a different approach to how unpitched percussion music is represented: a drum set, for example, is effectively notated as pitched notes on a staff, and annotated with additional information to help identify which instrument corresponds to which staff position. Dorico takes the reverse approach, instead explicitly identifying each instrument that is part of the kit, and then combining them dynamically onto a five-line staff. Mapping between the slightly fuzzy representation in MusicXML and the more

Typically, drum set instruments in MusicXML files exported from both Sibelius and Finale will import quite cleanly. Results will be particularly good if the voicing of the drum set is consistent; for example, if the snare drum is consistently notated in a down-stem voice, this will help Dorico to identify and import it correctly. If the voicing changes from bar to bar, it is possible that some notes may be misidentified, or in extreme cases not import.

Universal Indian Drum Notation. Dorico is the first scoring application to support the new Universal Indian Drum Notation system developed by Keda Music Ltd. Universal Indian Drum Notation has been designed primarily for tabla, but can also be applied to other Indian drums with two heads, such as nagara, dhol, dholak, mrindangam, and pakhawaj.



www.keda.co.uk.

Improvements

Articulations

The **Horizontal position of staccato on stem side** option in the **Horizontal position** section of the **Articulations** page of Engraving Options now contains a new choice: **Half-centered**. When **Half-centered** is chosen, a staccato articulation will be positioned halfway between the center of the stem and the center of the notehead. If any other articulation is also present, then all articulations will be positioned as normal. (STEAM-6519)

Barlines

A new option **Maximum number of staff lines to use minimum barline protrusion** has been added to the **Barlines** page of Engraving Options. Barlines for any set of percussion instruments shown as a grid that has fewer than the number of staff lines specified here will protrude beyond the outermost staff lines by the value of **Minimum barline protrusion** (which was previously called **Minimum barline height for single-line staves**). (STEAM-6827)

Bar numbers

Bar numbers below the staff. Bar numbers positioned below the staff and centered on the barline are now positioned inside dynamics by default. (STEAM-7086)

First bar number. A new option **Hide first bar number when shown every bar** has been added to the **Bar Numbers** page of Layout Options. When switched on, the first bar number will not be shown if **Show bar numbers** is set to **Every bar**. (STEAM-7164)

Chord symbols

Modal chord symbols. Dorico now supports chord symbols that represent modes, including the church modes (Lydian, Dorian, Ionian, etc.), the whole-tone scale, and diminished or octatonic scales (either whole-half step or half-step whole versions). To input a modal chord symbol, you can type the following:

- Ionian: **ionian**
- Dorian: **dorian**
- Phrygian: **phrygian**
- Lydian: **lydian**
- Mixolydian: **mixolydian**
- Aeolian: **aeolian**
- Locrian: **locrian**
- Melodic minor: **melodic minor**
- Harmonic minor: **harmonic minor**
- Whole tone: **whole tone**

- Octatonic or diminished half-whole: **diminished half whole**, **diminished semitone tone**, **octatonic half whole** or **octatonic semitone tone**
- Octatonic or diminished whole-half: **diminished whole half**, **diminished tone semitone**, **octatonic whole half** or **octatonic tone semitone**

It is also possible to input these chord symbols using a MIDI keyboard, by playing all of the scale degrees including both the lower and upper root note. An option to determine whether Dorico should interpret such input as a modal chord symbol or as a regular chord symbol with quality, intervals, alterations etc. is found on the **MIDI Input** page of Note Input Options.

A new **Modal Chord Symbols** section has been added to the **Chord Symbols** page of **Engraving Options** in which options are provided for whether the mode and scale names should be presented in title case or lower case.

Editing chord symbol components. When editing an individual chord symbol in Engrave mode, or the default appearance of a chord symbol via the **Project Default Chord Symbol Appearance** dialog, it is now possible to directly edit both chord symbols in a polychord, or to edit the main chord symbol and altered bass in a chord symbol with an altered bass note, etc. When editing one of these components, a row of “breadcrumb” buttons directly above the editing area shows the current component being edited, and you can return to editing the top-level chord symbol by clicking the left-most breadcrumb. (STEAM-6832)

Left-aligned chord symbols. A new option **Horizontal offset when left-aligned** has been added to the **Chord Symbols** page of Engraving Options, allowing you to specify that a left-aligned chord symbol should be offset a little to the left. (STEAM-7087)

Appearance of root-only chord symbols. For a chord symbol that consists only of the root note, you can type e.g. **Cbass** or **Gonly** into the **Shift+Q** popover. For a chord symbol that is intended to act as a pedal note, you can type e.g. **Fped** into the popover. New options have been added to the **Root** section of the **Chord Symbols** page of Engraving Options to allow you to choose the exact appearance of pedal and root-only chord symbols. (STEAM-7090)

Appearance of chords with no third. When choosing to show an omitted third as e.g. **C5**, Dorico will now correctly use either **omit 3** or **no 3** for chord symbols that contain higher scale degrees. For example, you will now see **GMA9(omit 3)** rather than the mildly nonsensical **G5MA9**. (STEAM-7091)

Clefs

Invisible clefs now show signposts, which can be hidden and shown by choosing **View ▶ Signposts ▶ Clefs**. (STEAM-6770)

Dynamics

Alignment of text dynamics relative to the notehead. The **Alignment of text dynamics relative to note** option in the **Horizontal Position** section of the **Dynamics** page of Engraving Options has a new option: **Align optical center with left-hand side of notehead**. When chosen, this results in text dynamics being positioned slightly further left than when aligned with the center of the notehead. (STEAM-6911)

Inputting combined dynamics via the popover. If you specify a particular separator when inputting a combined dynamic (such as ***f-p***), the separator you type is now automatically set for the resulting dynamic. (STEAM-6772)

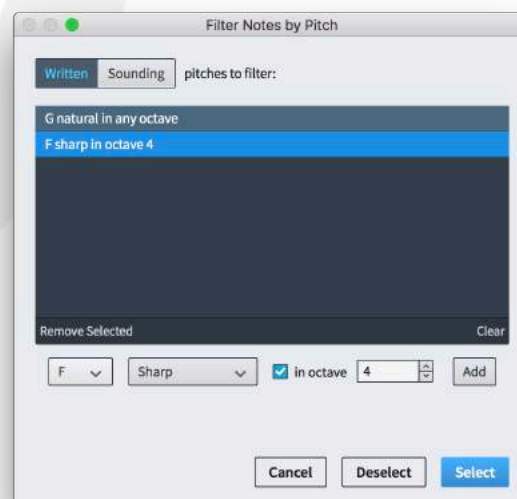
Playback of gradual dynamics to and from niente. Dorico now correctly follows the **Niente** property in playback. (STEAM-6957)

Engrave mode

Frame selection. Hitting **Return** with a text or graphics frame body selected now behaves identically to double-clicking the frame body, i.e. opens the text editor or opens the file chooser to select the graphic to display respectively. (STEAM-6733)

Filters

Filter notes by pitch. A new **Edit ▶ Filter ▶ Notes by Pitch** dialog has been added, allowing you to either select or deselect notes of specific pitches.



Choose the pitch of the note and the accidental from the drop-down menus, and click **Add** to add the pitch to the list of **Pitches to filter**. By default, the chosen pitch will be filtered in any octave, but if you want to filter only notes in a specific octave, activate **in octave** and specify the octave number using the spin box (C4 = middle C). You can choose whether or not the pitches should be filtered according

to their **Written** or **Sounding** pitch. To perform the filter, click either **Select** or **Deselect**.

The list of pitches is preserved for each project during the session, so that you can easily repeat the filter operation. To remove one of the pitches from the **Pitches to filter** list, select the entry and click **Remove Selected**; alternatively, to clear the list altogether so you can start a new filter operation, click **Clear**. (STEAM-6929)

Filtering all sharp or flat notes. In the **Edit ▶ Filter** submenu, two new commands **All Sharp Notes** and **All Flat Notes** have been added, which will select or deselect all sharp or flat notes. This may be useful in the event that you have imported a MIDI file and after changing the key signature, all of the accidentals are spelled incorrectly, allowing you to quickly select all sharp or flat notes in order to respell them. (STEAM-7197)

Expanded filters for lyrics. A new **Edit ▶ Filter ▶ Lyrics** submenu has been added, allowing you to select or deselect lyrics with greater flexibility than before. It is now possible to filter lyrics above or below the staff separately, to filter chorus and translation lyrics separately, and to filter lyrics by line separately. By combining these operations, it is possible to select, for example, only the lyrics that make up the translation for line 2 above the staff. (STEAM-6909)

Flows

Export Flows dialog. The choices made in the **File ▶ Export ▶ Audio, Flows, MIDI,** and **MusicXML** dialogs – such as the folder to export to, which layouts to export, and so on – are now saved in the project, so that your choices are preserved through multiple export operations. (STEAM-6710)

Importing flows. When importing flows from another Dorico project and choosing to merge the incoming players with the existing players in the destination project, player groups are also matched, so incoming players in groups will be merged with identical players in compatible groups. (STEAM-6683)

Glissando lines

It is now possible to edit the placement and length of glissando lines in Engrave mode. You can move between the handles by typing **Tab**, and move the selected handle by holding **Alt** and using the arrow keys (with **Ctrl** on Windows or **Command** on Mac for larger steps). The handles can also be dragged with the mouse. New properties for the position of each end of the glissando line are also found in the **Glissando Lines** group of the Properties panel. The position of an edited glissando line can be reset by choosing **Edit ▶ Reset Position**. (STEAM-7101)

Importing MIDI files

Import options dialog. When importing a MIDI file, a new **MIDI Import Options** dialog appears allowing you to make various decisions about how the MIDI file should be interpreted:

- **Interpret as General MIDI:** when switched on, Dorico will use the program numbers specified by each track as a hint to determine which instruments to create.
- **Interpret channel 10 as General MIDI percussion:** when switched on, Dorico will import any tracks that are set to channel 10 as drum set instruments.
- **Use split point for grand staff instruments:** when switched on, any notes higher than the value specified for **Split at MIDI note number** will be notated on the right-hand staff, and any lower notes will be notated on the left-hand staff (MIDI note number 60 = middle C, or C4). (STEAM-6584)
- **Preserve note velocities:** when switched on, the velocities of individual notes in the MIDI file will be preserved and played back in Dorico. There is currently no display of the velocity of individual notes in Play mode, so this option is switched off by default. If you import note velocities from a MIDI file and later want to remove them so that dynamics you input in Write mode will take effect in playback, use **Play ► Reset Playback Overrides**.
- **Preserve note positions:** when switched on, any offsets to the start and end position of individual notes in the MIDI file will be preserved and played back in Dorico, so that the rhythmic feel of the original MIDI performance is retained. These adjustments can also be removed by way of **Play ► Reset Playback Overrides**. (STEAM-3887)

Key signatures. Dorico now imports key signatures from MIDI files, if they are specified in the file to be imported. (STEAM-3195)

Automatic transcription of MIDI files. Some further improvements to Dorico's quantization algorithms have been made, improving the recognition of tuplet structures in imported MIDI files. (STEAM-6901, STEAM-4652)

Type 0 MIDI files. Dorico can now import Type 0 MIDI files. (STEAM-6427)

Track names. Players are now named according to the track in the imported MIDI file to which their instrument corresponds. (STEAM-7121)

Importing MusicXML files

Notehead types. Non-default notehead types are now imported from MusicXML files. (STEAM-6607)

MusicXML sound IDs. The default playback sound for a part in an imported MusicXML file, if specified, is now considered when determining what kind of instrument to create. (STEAM-4405)

Instrument changes

Editing instrument change labels. It is now possible to select the labels that appear to announce an imminent instrument change, and to mark the entry of the new instrument. These labels can be nudged with **Alt**+arrow keys or dragged with the mouse in Engrave mode to adjust their position; this is reflected in the values of the **Offset X** and **Y** properties in the **Common** group of the Properties panel.

The text shown in the labels themselves can also be overridden by way of two new properties in the new **Instrument Changes** group in the Properties panel:

- Activating **Hide prefix** will hide whatever prefix is specified on the **Players** page of Layout Options.
- **Custom text** allows you to replace the name of the instrument with text of your choosing. To remove the name altogether, set the **Custom text** property to an empty string, i.e. one or more space characters. (STEAM-6599)

Placement of instrument change labels. Instrument change labels are now placed outside text items above the staff by default. (STEAM-7125)

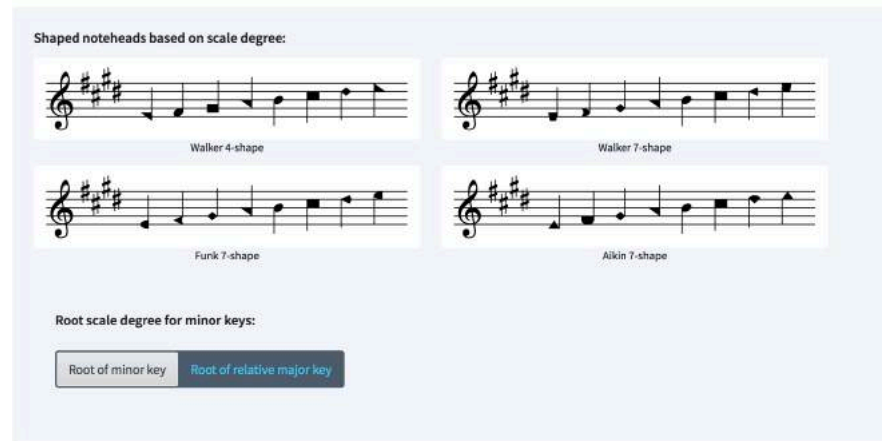
Multi-bar rests

Selecting multi-bar rests. It is now possible to select multi-bar rests in Write mode; in Engrave mode, the H-bar or bar rests and bar count number can be selected independently. When selected in Engrave mode, it is possible to adjust the width of an H-bar by way of the new **H-bar width delta** property in the new **Multi-bar Rests** group of the Properties panel: negative values make the H-bar narrower, while positive values make the H-bar wider. It is also possible to adjust the position of the bar count number by adjusting the new **Bar count offset** properties. (STEAM-6599)

Single empty bars. Single empty bars will no longer be treated or spaced as multi-bar rests if the **Bar count for single bar rests** option on the **Rests** page of Engraving Options is set to **No bar count**. (STEAM-7202)

Noteheads

Shape note or Sacred Harp notation. Dorico now supports the four most commonly-used systems for shape note or Sacred Harp notation, whereby each note is given a different notehead according to the degree of the scale to which it corresponds. To use shape notes, choose the desired system using the **Shaped noteheads based on scale degree** option in the **Noteheads** section of the **Notes** page of Engraving Options:



The **Root scale degree for minor keys** allows you to specify whether the root of the minor key or the root of the relative major key should be used to determine which shape of notehead is used for the root of the scale. The system in widest common use today, the **Aikin 7-shape** system, assumes the relative major key when determining which shape to use for the first degree of the minor scale.

The choice of notehead shape is completely dynamic and automatic, and is updated as the music is input and edited. The only situation in which you may need to intervene is for unison notes in multiple voices that use a triangular notehead, such as the fourth degree of the scale in the Aikin 7-shape system. On an up-stem note, the triangle points left, while on a down-stem note, the triangle points right. Consequently, if these notes are on the same staff position, the noteheads tessellate to make a rectangle. In this situation, select the notehead belonging to the down-stem voice, and set it to be transparent using the **Color** property in the **Common** group of the Properties panel.

During mouse input, the shadow note will show the correct notehead shape for the staff position under the mouse pointer. (STEAM-2178)

Figurenotes© note colors. Figurenotes is a fixed system for coloring notes according to pitch (e.g. A = yellow, B = green, C = red, etc.) that is widely used in education, particularly for students with accessibility or special educational needs. To use Figurenotes colors in your project, choose the new **Figurenotes© colors** option on the **Notes** page of Engraving Options. (STEAM-7081)

Stem positioning for noteheads. For noteheads that have non-zero side bearings – for example, noteheads bisected by slashes from top left to bottom right or from bottom left to top right – the position of stems relative to the noteheads has been improved. (STEAM-4970, STEAM-6608)

Note input

Add intervals popover. A new command **Write ▶ Add Intervals Popover** has been added, with the default key command **Shift+I**. This popover makes much of the functionality provided by both the **Add Notes Above or Below** and the **Transpose** dialogs accessible directly via the keyboard.

To use the popover, select the notes to which you want to add notes or transpose, then type **Shift+I**. The syntax is as follows:

- To transpose rather than add notes above or below, begin your input with **t**.
- Specify intervals using positive numbers to add notes above or transpose upwards, or using negative numbers to add notes below or transpose downwards, e.g. **3** adds a third above, while **t-2** transposes downwards by a second.
- If you do not otherwise specify it, the interval will be calculated by adding or transposing notes by the number of staff positions specified, e.g. in C major, if the selected note is a D natural and you specify **3** to add a third above, the added note will be an F natural. You can specify the quality of the interval by typing any of the following *before* the interval:
 - **p**, **per**, or **perf** for perfect
 - **M**, **maj**, or **major** for major
 - **m**, **min**, or **minor** for minor
 - **D**, **dim**, or **diminished** for diminished
 - **a**, **aug**, or **augmented** for augmented
 - **diat** or **diatonic** for diatonic
- Following the interval number, you can type an ordinal suffix for e.g. **2nd** or **5th** if you wish, but this is not necessary.
- To add multiple intervals in a single operation, separate them with a comma. For example, to add a third and a sixth above the selected notes, type **3,6**. To add a third below and a third above, type **3,-3**.
- If the selected material already includes chords, notes will be added above the top note in the chord, and added below the bottom note in the chord. If you do want to add notes above or below all of the notes in the selected chords, add **all** or **to all** at the end of the input, e.g. **M2,-m2 to all**.
- To add a note below the top note of a selected chord, type e.g. **-3 top** (which will add a third below the top note); to add a note above the bottom note of a selected chord, type e.g. **aug4 bottom** (which will add an augmented 4th above the bottom note). (STEAM-6395)

Editing durations. A new **Write ▶ Edit Duration** submenu has been added in order to make the existing commands to lengthen and shorten selected notes and other items by the current rhythmic grid value or, in the case of non-note items, by the

amount that their durations would be snapped if dragged with the mouse. This submenu also includes two new items, **Double Duration** and **Halve Duration**, which will double and halve respectively the durations of selected notes. (STEAM-6896)

Furthermore, when changing the duration of the selected note immediately to the left of the caret during note input, the caret will now automatically track the end position of the note as it is lengthened or shortened.

Rhythmic grid. Dotted 16th note (semiquaver) and 32nd note (demisemiquaver) have now been added as possible choices for the rhythmic grid resolution. (STEAM-6708)

Moving the caret up or down. **Ctrl**+up arrow now moves the caret to the top staff of the system, and **Ctrl**+down to the bottom staff of the system. On a percussion kit or grid, **Ctrl**+up/down arrow move to the top or bottom staff position to which an instrument is mapped. (STEAM-7119)

Enharmonic spelling in MIDI input. The spelling of the leading note in minor keys has now been improved. (STEAM-7094)

Ornaments

Trill stop lines. To indicate the exact position at which a trill should stop, you can show a vertical line on the right-hand end of the trill's wavy continuation line by activating the new **Show stop line** property in the **Trills** group of the Properties panel. The length and width of the trill stop line can be controlled using new options found in the **Trills** section on the **Ornaments** page of Engraving Options. (STEAM-7168)

Page layout

Moving pages. When moving pages in the **Pages** panel in Engrave mode, master page changes and page number changes are now moved along with other kinds of overrides. (STEAM-6596)

Pedal lines

Splitting and merging pedal lines. Two new commands have been added to the **Edit ▶ Pedal Lines** submenu to split and merge pedal lines:

- To split a pedal line but preserve the position of retakes, select the note at the position where you want the pedal line to be split, and choose **Split Pedal Line**.
- To merge two or more pedal lines into a single pedal line, again preserving the position of retakes, select the pedal lines to be merged, and choose **Merge Pedal Lines**. (STEAM-6771)

Signposts. If a pedal line's properties are set such that it will end up completely invisible, a signpost will be shown. You can choose whether or not to see these signposts via **View ▶ Signposts ▶ Pedal Lines**. (STEAM-6565)

Playing techniques

Dorico now shows the ID of the playing technique in the tool tip that appears when you hover over an item in the **Playing Techniques** panel in Write mode. This is helpful in working out what playing technique is actually produced for the purposes of writing a VST expression map. (STEAM-6773)

Play mode

Pencil and drumstick tools. New Pencil and Drumstick tools have been added to the toolbox in Play mode, allowing you to draw notes onto the piano roll editor and drum editor respectively.

Playback of multiple flows. Navigating between flows during playback has been improved. If the playhead is already at the start of a flow, clicking the **Rewind to Beginning** button in the mini transport on the toolbar will now set the playhead position back to the start of the project. Further, when playback moves from one flow to the next, the event display in Play mode now updates automatically.

(STEAM-5589, STEAM-6615)

Print mode

Print preview. It is now possible to choose between fitting the page width or the page height in the print preview, by clicking the **Whole Page** or **Page Width** button in the status bar at the bottom of the window.

Selecting all layouts for printing. Typing **Ctrl+A** (Windows) or **Command-A** (Mac) in Print mode will now select all layouts in the Layouts panel. (STEAM-7124)

Rehearsal marks

Individual rehearsal marks can now display custom prefix or suffix text, by way of the new **Prefix** and **Suffix** properties in the **Rehearsal Marks** group of the Properties panel. (STEAM-6860)

Rest grouping

Rests in irregular time signatures. A new option **Rests in bars with irregular beat lengths** has been added to a new **Irregular time signatures** section on the **Rest Grouping** page of Notation Options. This option allows you to specify whether rests at the start of a bar with irregular beat lengths, such as 7/8 (which might be 3+2+2/8 or 2+2+3/8, for example) should be consolidated into as few long rests as possible (**Allow to cross beat subdivisions**) or shown as a series of rests (**Split at beat subdivisions**). (STEAM-6491)

Scaling

It is now possible to change the scale factor of practically every item in the score. You can choose between one of four predefined sizes, and specify a custom scale factor as a percentage of the prevailing size.

To scale an item to one of the four predefined sizes, select the item and activate the **Scale** property in the **Common** group of Properties. The four sizes are:

- **Normal**: sets the item to its normal size, or 100%, relative to the current rastral size.
- **Cue**: sets the item to the size specified of the **Cue note scale factor** option on the **Cues** page of Engraving Options; by default, 75%.
- **Grace**: sets the item to the size specified by the **Grace note scale factor** option on the **Notes** page of Engraving Options; by default, 66%.
- **Cue grace**: applies the **Cue note scale factor** to the **Grace note scale factor**; by default, 75% of 66%, i.e. 49.5%.

To scale an item by an arbitrary factor, activate the **Custom scale** property in the **Common** group of Properties. This scale factor is applied on top of the size resulting from the **Scale** property. For example, if an item is set to **Cue** size using the **Scale** property and you set the **Custom scale** property to 50%, the resulting size for the item will be 50% of 75%, i.e. 37.5% of normal size.

Slurs

Reset Appearance and Reset Position. The behavior of **Edit ► Reset Appearance** and **Reset Position** have been improved for slurs. Choosing **Reset Appearance** now resets the control points at either end of the slur to the appropriate values relative to the end points of the slur to produce the default shape; choosing **Reset Position** likewise retains the relative position of the slur's control points. (STEAM-6962)

Staff labels

Overriding staff label visibility. To override the **Staff labels on first system** and **Staff labels on subsequent systems** options on the **Staves and Systems** page of Layout Options, you can now choose whether full, abbreviated or no staff labels should be shown for a specific system: simply create a system break, select the system break signpost, and set the new **Staff labels** property to **Full**, **Abbreviated** or **None** as desired. (STEAM-6613)

Displaying instrument pitch in staff labels. It is now possible to specify whether or not a particular instrument's pitch should be shown as part of its staff labels. To edit an instrument's name, expand the card of the player holding the instrument in question, hover over the name of the instrument so that the chevron > appears,

click the mouse button to show the context menu, and choose **Edit Names**. The new option **Show transposition** has three values, which interact with the **Show instrument pitch in staff labels** option on the **Staves and Systems** page of Layout Options:

- **Always:** always include the instrument pitch in the staff label, even if **Show instrument pitch in staff labels** is switched off.
- **Follow Layout Options:** show the instrument pitch if **Show instrument pitch in staff labels** is switched on, otherwise do not show it.
- **Never:** never include the instrument pitch in the staff label, even if **Show instrument pitch in staff labels** is switched on. (STEAM-5634, STEAM-6828)

In addition, you can now determine whether or not instrument pitch should be shown in full and abbreviated staff labels independently, by setting **Show in full staff labels** and **Show in abbreviated staff labels** as appropriate. (STEAM-7165)

Stems

Adjustment to the length of a note's stem are now reset using **Edit ▶ Reset Position** rather than **Reset Appearance**, and it is also possible to reset the stem lengths of all the notes in a beamed group by selecting the beam line itself and choosing **Reset Position**. (STEAM-6960)

Tempo

Signposts for gradual tempo changes. Gradual tempo changes whose properties are set such that they are invisible (for example, they have an empty text property, and no continuation line) will now show a signpost. These signposts can be shown or hidden by choosing **View ▶ Signposts ▶ Tempo**. (STEAM-6554)

Inputting parenthesized tempo markings. If you enter a metronome mark in parentheses in the **Shift+T** popover – for example, by typing **Allegro (q=120)** – Dorico will automatically set the **Parenthesized** property. (STEAM-6749)

Text

Empty text items will now show signposts by default. These signposts can be shown or hidden by choosing **View ▶ Signposts ▶ Text**. (STEAM-7073)

Ties

Laissez vibrer ties. It is now possible to show l.v. (*laissez vibrer*, or “let ring”) ties. Select the note to which you would like to add a tie, and activate the **Laissez vibrer tie** property in the **Notes and Rests** group of the Properties panel. *Laissez vibrer* ties are drawn by default at a minimum length, defined in the new **Length** section of the **Ties** page of Engraving Options. You may find that you need to adjust the shape and placement of such ties, which you can do in the normal way in Engrave mode.

Engraving Options. The **Ties** page of Engraving Options now contains a number of new options, including for the minimum length of ties, *laissez vibrer* ties, and ties at the start and end of cues. Options have also been added for the dash length and gap length for dashed ties, dot diameter and gap for dotted ties, stroke length and thickness for editorial ties. In total some 15 new options have been added.

Time signatures

Bar rest design in long time signatures. A new option **Bar rest design in long time signatures** has been added to the **Rests** page of Notation Options, allowing you to choose whether bars longer than a whole note (semibreve) in duration, e.g. in time signatures such as 4/2 or 2/1, should show a double whole note (breve) rest or a whole note (semibreve) rest as a bar rest. (STEAM-7012)

Cut common time signatures. It is now possible to display other time signatures with half note (minim) denominators than 2/2 using the cut common sign. In modern usage, only 2/2 is shown using this sign, but in historical usage, the cut common sign was used for other half note (minim) denominator time signatures. Set the **Common/cut common** property in the **Time Signatures** group of Properties to use the cut common appearance. (STEAM-7100)

Tuplets

A new property **Split notes at spanned barline** has been added to the **Tuplets** group in the Properties panel. When a tuplet crosses a barline and is shown as a single tuplet bracket by way of the **Spans barline** property, when **Split notes at spanned barline** is set, any note within the tuplet that crosses the barline will be split with a tie at the barline. (STEAM-4738)

User interface

Measurement units. The **Preferred unit of measurement** option on the **General** page of **Preferences** is now more widely respected throughout the application, and also now includes the new unit of **Centimeters (cm)**. Controls that previously required you to specify measurements in points now show you the measurement in your preferred unit, and in fact allow you to specify the measurement in any unit, by providing the appropriate suffix:

- Points: **pt**
- Millimeters: **mm**
- Inches: **in** or **"**
- Centimeters: **cm**

The controls for page width, page height, space size, page and music frame margins on the **Page Setup** page of Layout Options now all accept this multi-

format input, as do the various properties in the **Frames** group of the Properties panel in Engrave mode. (STEAM-6535)

Key commands. The way that user-defined key commands are saved has been improved such that only those key commands added, changed or deleted by the user are saved. This means that any new or changed default key commands in a new Dorico update will be available to existing users without requiring them either to add them manually or reset their key commands and recreate their custom key commands from scratch. When running Dorico 1.2 for the first time, any existing user-edited key commands files are converted automatically to the new format, so all new default key commands should be available to all users. (STEAM-6813)

Switching between counterpart layouts. A new **Window ► Counterpart Layout** command has been added, with the default key command **W**. This command switches between the full score layout and a part layout, based on the currently selected item. For example, if you are editing the full score layout and have selected a dynamic in the Violin 1 staff, pressing **W** will switch to the Violin 1 part layout; having switched to this part layout, press **W** again to switch back to the full score layout. (STEAM-6707)

Go to Page. A new **Edit ► Go To ► Go To Page** dialog has been added, allowing you to navigate quickly to any page in the current layout. (STEAM-6622)

Properties. A number of properties that used to include a checkbox in addition to the slide switch used to activate the property now use only the slide switch. Properties need to include a checkbox if it must be possible to set the property to be explicitly switched off, but some properties were incorrectly set up this way, including **Grace note before barline**; the properties for hiding articulations, chord symbols, bar numbers, and time signatures; and **Parenthesized** for dynamics. Furthermore, the **Show intensity marking** property has had its meaning reversed, and is now **Hide intensity marking**. (STEAM-6060)

Templates. A new **Jazz** category has been added to the Hub window and the **File ► New from Template** submenu, including jazz trio, jazz quartet, and big band templates.

Recent projects. It is now possible to remove individual projects from the list of recent projects in the Hub window: simply right-click a selected project in the list and choose **Remove from Recent Projects** from the context menu that appears. (STEAM-6750)

Project Info. New **<** and **>** buttons have been added to **File ► Project Info** to allow you to quickly move between the information for each flow. (STEAM-6755)

Options dialogs. The scroll position for each page of multi-page dialogs such as Engraving Options is now retained while the dialog remains open, so if you switch to a different page and return to the original page, Dorico will not automatically scroll back to the top of the original page. Once the dialog has been closed, all of the scroll positions are reset. (STEAM-7196)

Performance

Adding and removing players from layouts. Adding and removing players from layouts is now considerably faster than before. (STEAM-6704)

Note input into open meter. The speed of note input at the end of a flow that ends with an open meter has been improved. (STEAM-6869)

Opening complex dialogs. Opening complex multi-page dialogs, such as Engraving Options, is now practically instantaneous. (STEAM-6680)

Projects with many staves. The speed of editing in projects with many staves has been improved. (STEAM-7022)

Localization

Choice of default page size. A new **Default paper size type** option has been added to the **General** page of Preferences, allowing you to choose whether to use **International** (otherwise known as ISO216, European, or metric paper sizes, such as A3, A4, and so on) or **North American** (such as Letter, Tabloid, etc.) page sizes by default when starting a new project. By default, this option is set to **Automatic**, which will use your computer's locale or region settings to determine the default paper size type to use. (STEAM-6540)

Order of pages in options dialogs. The pages in multi-page options dialogs, such as Engraving Options, are now correctly alphabetically sorted according to the user interface language, rather than according to their order in the English-language version. (STEAM-6748)

Issues resolved

ID #	Component	Issue
STEAM-6686	<i>Articulations</i>	Stem-side articulations on stemless notes (e.g. whole notes) no longer collide with single-note tremolos.
STEAM-6766	<i>Articulations</i>	The options in the Ties section of the Articulations page of Engraving Options can now be set correctly through the user interface.
STEAM-6767	<i>Articulations</i>	Adjusting the Y offset of an articulation on a chain of tied notes now correctly applies the offset even if the end of the tie chain on which the articulation appears is overridden.
STEAM-7133	<i>Audio export</i>	Exporting audio to a UNC network path (e.g. of the form <code>\\server\folder</code>) now works correctly (Windows only).
STEAM-6692	<i>Bar numbers</i>	Bar numbers now correctly appear above the system as expected if the top instrument in the system uses a single staff line.
STEAM-7037	<i>Barlines</i>	Dashed barlines representing subdivisions in aggregate time signatures now appear correctly following an instrument change.
STEAM-7030	<i>Beams</i>	Selecting a note and an implicit rest and attempting to beam them together no longer sometimes results in a crash.
STEAM-6612 STEAM-6672	<i>Chord symbols</i>	Under some circumstances, the graphical chord symbol editors could show some components either as being deletable or non-deletable incorrectly. This has now been resolved.
STEAM-6825	<i>Chord symbols</i>	In larger projects and/or on slower computers, clicking outside the chord symbol popover after typing a chord symbol could cause a crash. This has now been resolved.
STEAM-6847	<i>Chord symbols</i>	Increasing the Y offset values in the graphical chord symbol editors now moves the selected component upwards, as expected.
STEAM-6872	<i>Chord symbols</i>	Chord components that use graphics are now positioned correctly and stably.
STEAM-6757	<i>Diagnostics</i>	On the rare occasions when Dorico crashes on Mac, it will now leave the expected crash log behind in <code>~/Library/Logs/DiagnosticReports</code> .
STEAM-6788	<i>Dynamics</i>	Properties that are set when creating dynamics by typing them into the popover (e.g. parenthesizing a dynamic) can now be correctly unset via the Properties panel.
STEAM-6852	<i>Dynamics</i>	Dragging the inflection point in the middle of a <i>messa di voce</i> dynamic now works reliably for grouped dynamics.
STEAM-6910	<i>Dynamics</i>	It is now possible to set the dash length and gap for gradual dynamics whose continuation lines are drawn dashed in the Properties panel.
STEAM-7117	<i>Dynamics</i>	Hidden dynamics now show signposts. The Hide dynamic intensity property now also always takes effect, rather than only when the custom prefix or suffix properties are set.
STEAM-6679 STEAM-6821 STEAM-6915	<i>Flows</i>	The automatic generation of filenames when exporting flows and layouts either as Dorico projects, audio, or MusicXML has been improved, so that illegal characters are removed correctly and the filename does not end up extremely long.
STEAM-6726	<i>Flows</i>	Split Flow will no longer position notes and other rhythmic items after the split incorrectly if the position of the split was followed immediately by implicit rests and tuplets.

ID #	Component	Issue
STEAM-6831	<i>Key signatures</i>	Inputting a key signature onto a single instrument by clicking it in the editor in the Key Signatures panel and holding Alt now works correctly.
STEAM-6639	<i>Lyrics</i>	When adjusting the horizontal position of lyrics to minimize distortion to the ideal rhythmic spacing, lyrics could sometimes be adjusted incorrectly such that they would touch. This has now been fixed.
STEAM-6735	<i>Lyrics</i>	The horizontal position of a hyphen at the start of the system can now always be adjusted.
STEAM-6730	<i>Multi-bar rests</i>	Multi-bar rests that are too wide to fit at the end of the system at their ideal width no longer sometimes cause part of the multi-bar rest to extend incorrectly beyond the frame edge.
STEAM-6824	<i>Multi-bar rests</i>	Under some circumstances, single bar rests drawn as multi-bar rests could cause too much music to be forced onto a system. This problem has now been resolved.
STEAM-6344	<i>Note input</i>	Under some circumstances, adding ties to existing notes entered with forced durations could cause their duration to be changed unexpectedly. This has now been resolved.
STEAM-6497	<i>Note input</i>	The enharmonic spelling of notes input from a MIDI keyboard has been further improved, particularly in minor keys.
STEAM-6541	<i>Note input</i>	Inputting a tied note using Force Durations no longer unnecessarily results in two distinct notes tied together, instead producing a single note with the appropriate properties to split it with ties at the desired position or positions.
STEAM-6630	<i>Note input</i>	Very long notes that have been split into chains of tied notes at positions that are no longer valid now have all such splits removed, in order to ensure that the note can be notated.
STEAM-6656	<i>Note input</i>	The option Notes starting in the middle of the beat ending at a beat boundary without crossing the half-bar on the Note Grouping page of Notation Options no longer incorrectly takes effect in time signatures that do not have a half-bar.
STEAM-7270	<i>Note input</i>	Mouse input onto single-line percussion instruments has been improved.
STEAM-6720	<i>Note spacing</i>	Under rare circumstances, enabling the note spacing tools in Engrave mode could cause Dorico to hang. This problem has now been resolved.
STEAM-6789	<i>Note spacing</i>	Using Alt +right arrow to nudge a grace note's spacing column no longer incorrectly removes the entire spacing adjustment.
STEAM-6477	<i>Ornaments</i>	Glissando lines from grace notes that precede implicit rests will no longer be incorrectly removed if the implicit rest is made explicit.
STEAM-7109	<i>Ornaments</i>	A problem whereby adding a slur could cause a trill continuation line that started on a previous system not to appear has been resolved.
STEAM-6513	<i>Page layout</i>	A problem whereby systems could be spaced unevenly by default on some pages has been resolved.
STEAM-6769	<i>Page layout</i>	Single-line percussion instruments are no longer incorrectly treated by Dorico's vertical spacing algorithms as if they have zero height.
STEAM-5820	<i>Performance</i>	Selecting items in projects with multiple flows is no longer sometimes significantly slower than it should be.

ID #	Component	Issue
STEAM-6666	<i>Performance</i>	The speed of inputting music into projects that use open meter has been improved.
STEAM-7106	<i>Performance</i>	Dorico now filters out System Exclusive MIDI messages sent by MIDI input devices, which could previously cause Dorico to become unresponsive.
STEAM-4870	<i>Play mode</i>	The order in which tracks appear in Play mode now always correctly reflects the order of the players in the current layout.
STEAM-6925	<i>Play mode</i>	The non-functional edit button in the VST Instruments panel has been removed, and the display of which plug-in is currently in focus or selected has been improved.
STEAM-4736	<i>Playback</i>	A problem whereby the playhead and time display in the Transport would stall during playback, which could subsequently cause the score display not to update correctly, has been fixed (Mac only).
STEAM-4936	<i>Playback</i>	Edits made to dynamics are now reflected immediately on playback.
STEAM-6586	<i>Playback</i>	Further fixes to the playback of relative tempo changes using a beat unit other than a quarter note (crotchet).
STEAM-6947	<i>Playback</i>	<i>pizz.</i> playing technique now plays back correctly at the start of the flow (Mac only).
STEAM-7084	<i>Playback</i>	When starting playback, the first note is no longer sometimes much quieter than normal.
STEAM-6846	<i>Project files</i>	Dorico can now correctly open project files saved in Microsoft OneDrive using the Files On-Demand feature (Windows only).
STEAM-6388	<i>Rehearsal marks</i>	Rehearsal marks left-aligned with the systemic barline are no longer sometimes incorrectly vertically positioned.
STEAM-6496	<i>Repeat endings</i>	When duplicating a flow, repeat endings are now duplicated correctly.
STEAM-6514	<i>Rests</i>	It is no longer sometimes impossible to unset the Rest position property on an explicit rest.
STEAM-6553	<i>Slurs</i>	Dragging a middle segment of a slur that crosses two or more system breaks in Engrave mode no longer causes a crash.
STEAM-6590	<i>Staff labels</i>	The size of staff labels is now correctly determined by the staff size in use at the start of the system, including a size change set by way of a system break.
STEAM-6899	<i>Staff labels</i>	Changes to the Staff labels paragraph style will now automatically update all staff labels correctly without requiring you to switch to another layout.
STEAM-5220	<i>Text</i>	The point size shown in the text editor popover no longer varies depending on the current zoom level.
STEAM-6402	<i>Text</i>	A paragraph style and a font style set to the same point size now draw at precisely the same size.
STEAM-6687	<i>Text</i>	Using Reset Position on a text item no longer also incorrectly removes any overridden formatting.

ID #	Component	Issue
STEAM-6906	<i>Text</i>	The Relative size control in the Character Style dialog no longer always incorrectly shows zero, rather than the chosen size.
STEAM-6907	<i>Text</i>	Changing the size of a character style after using that character style in one or more text items in the score will now update those text items correctly.
STEAM-7037	<i>Time signatures</i>	Dashed bar divisions in aggregate time signatures now draw correctly following an instrument change.
STEAM-7162	<i>Tremolos</i>	Dragging a single-note tremolo on a down-stem note in Engrave mode no longer drags the tremolo stroke in the wrong direction.
STEAM-6870	<i>Tuplets</i>	The positioning of the tuplet ratio digit for duplets has been improved.
STEAM-6914	<i>Tuplets</i>	Deleting the final note from a tuplet at the end of a flow in open meter no longer causes the music at the end of the flow to be drawn incorrectly.
STEAM-6914	<i>Tuplets</i>	Deleting the final note from a tuplet at the end of the flow in open meter now correctly updates the flow.
STEAM-7060	<i>Tuplets</i>	The horizontal position of tuplet ratios for tuplets without brackets has been improved.
STEAM-6426	<i>Undo and redo</i>	Some complex operations would not redo correctly after being undone, or would not leave the expected items selected. These problems have now been resolved.
STEAM-5517	<i>User interface</i>	The Up/Down buttons in the Transpose dialog are now correctly enabled when No. of octaves is set to anything greater than zero.
STEAM-5699	<i>User interface</i>	Under certain circumstances, changing between page and galley view when there is no selection can now keep the same area of music in view.
STEAM-6501	<i>User interface</i>	The order of the Hub and Help menus has been swapped, so that Help is the right-most menu.
STEAM-6665	<i>User interface</i>	When a spin control in Properties has an inconsistent value, it is now possible to set a consistent value using the keyboard rather than only by clicking the paddle buttons.
STEAM-6774	<i>User interface</i>	The context menu for adding players to layouts no longer incorrectly shows the names of player groups instead of the names of players.
STEAM-6816	<i>User interface</i>	Under some circumstances, changing page in the Layout Options dialog would ask you to apply unsaved changes, even when no changes had been made. This has now been fixed.
STEAM-6823	<i>User interface</i>	Various horizontal alignment properties no longer incorrectly show a non-functional Justified option value.
STEAM-6927	<i>User interface</i>	The Can slope property for tuplets has been replaced with a simple Force horizontal property, which more closely reflects its actual behavior.
STEAM-7056	<i>User interface</i>	Under some circumstances, making an edit after closing one window for the current project could cause a crash. This problem has now been fixed.
STEAM-7116	<i>User interface</i>	The Reset to Factory buttons in the Engraving Options, Notation Options, Playback Options and Note Input Options dialogs all now correctly restore factory settings.

Dorico 1.1.10

August 2017

This version contains the following improvements and issue resolutions.

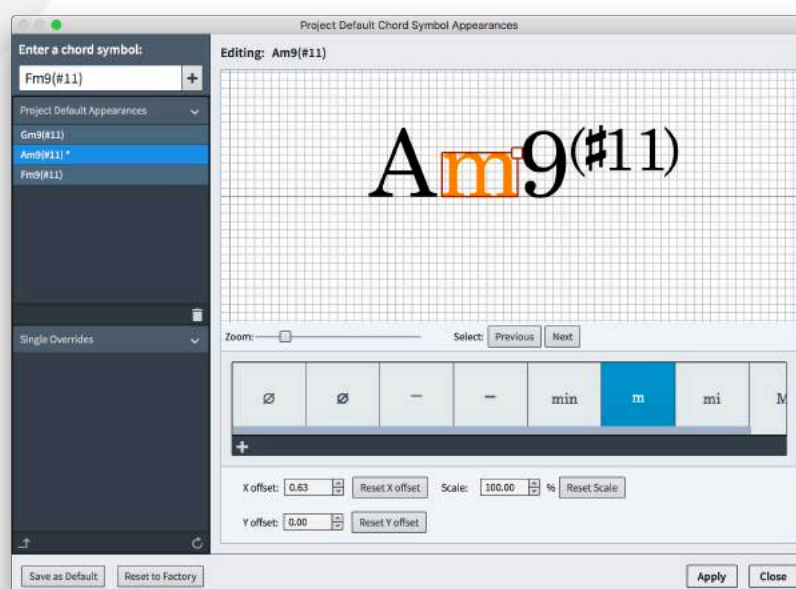
Improvements

Chord symbols

If you need to customize the appearance of chord symbols above and beyond the dozens of options provided in **Engraving Options** – for example, if you need to tighten the spacing of one or two chord symbols in a passage with rapid changes of harmony, or if you want to use a particular convention that is not directly supported – you can now both edit how a specific chord symbol should look by default in your project (and save this as the default for future projects) and override the appearance of an individual chord symbol.


Before you start editing chord symbols with either of these graphical editors, do take the time to check that the appearance you want is not achievable via **Engraving Options**: if it is, then changing a couple of options there will save you a lot of time.

Changing the default appearance of a chord symbol in your project. To adjust the appearance of all instances of a specific kind of chord symbol in your project, click the **Edit** button in the **Project Default Appearances** section at the bottom of the **Chord Symbols** page of **Engraving Options** to open the **Project Default Chord Symbol Appearances** dialog.



On the left-hand side of the dialog are two lists of chord symbols: **Project Default Appearances** lists the chord symbols whose default appearance has been overridden in the project; and **Single Overrides** lists the individual chord symbols that have been edited.

To change the default appearance of a particular chord symbol so that it will appear exactly as you wish whenever you create it, specify it by typing into the box at the top left-hand corner of the dialog and click the **+** button, which adds it to the **Project Default Appearances** list.

If you have overridden the appearance of an individual chord symbol in your project, you can promote that override to become a default for new chord symbols in your project by selecting it in the **Single Overrides** list and click the  button. Selecting a chord symbol in the **Single Overrides** list will show it on the right-hand side of the dialog, but you will not be able to edit it from here: to edit it without promoting it to becoming the default appearance for that chord symbol in your project, instead leave this dialog and double-click the chord symbol in Engrave mode.

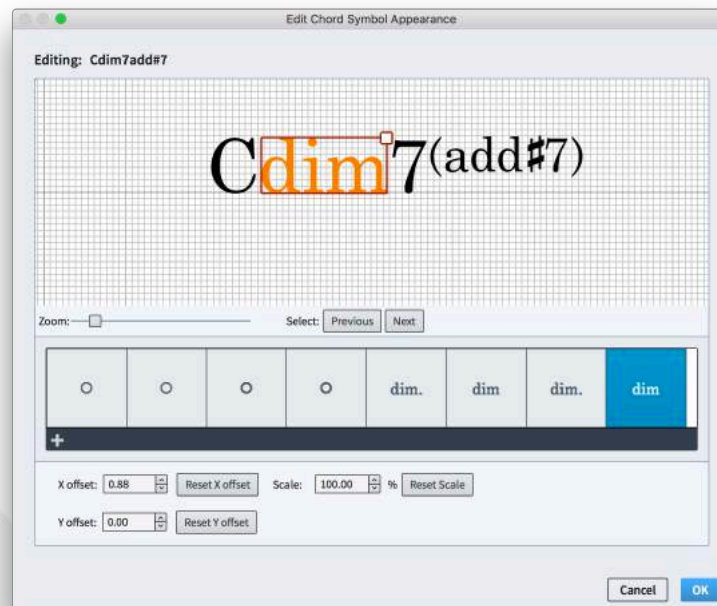
To save the chord symbols in the **Project Default Appearances** list such that they will become the default appearances for those chord symbols in newly-created projects, click the **Save as Default** button at the bottom left-hand corner of the dialog.

If you have made edits since opening your project but you want to return to your previous saved defaults, click **Reset to Saved Defaults**. If you do not have any saved defaults, the button will instead read **Reset to Factory**, and clicking this will remove all user-saved defaults.

If you hold **Ctrl** (Windows) or **Alt** (Mac), the **Save as Default** button will change to **Remove Saved Defaults** if you have previously saved some default chord symbol appearances; likewise, the **Reset to Saved Defaults** button will change to **Reset to Factory**.

The controls in the right-hand side of the dialog for editing chord symbols are common to editing default chord symbol appearances and overriding individual chord symbols, and are described below.

Editing the appearance of individual chord symbols. To adjust the appearance of an individual chord symbol, switch to Engrave mode and double-click the chord symbol. In the dialog that appears, you can make fine adjustments to the position and size of the individual components that comprise the chord symbol.



The large editing area can be zoomed in and out using the slider directly below; you can click on each component of the chord symbol (e.g. root, root accidental, quality, interval, alterations, etc.), or use the **Previous/Next** buttons to change the selection, or use the left and right arrow keys to change the selection.

When a component is selected, you can adjust its position relative to the component to its left either by clicking and dragging with the mouse, or using the **X offset** and **Y offset** controls, or holding **Alt** and using the arrow keys. Notice that any components to the right of the component you have selected also move: this is because the components are attached to each other, to ensure a good layout when using a different font.

You can also adjust the relative size of each component by adjusting the **Scale** value, or by dragging the handle at the top right-hand corner of the border around the selected component.

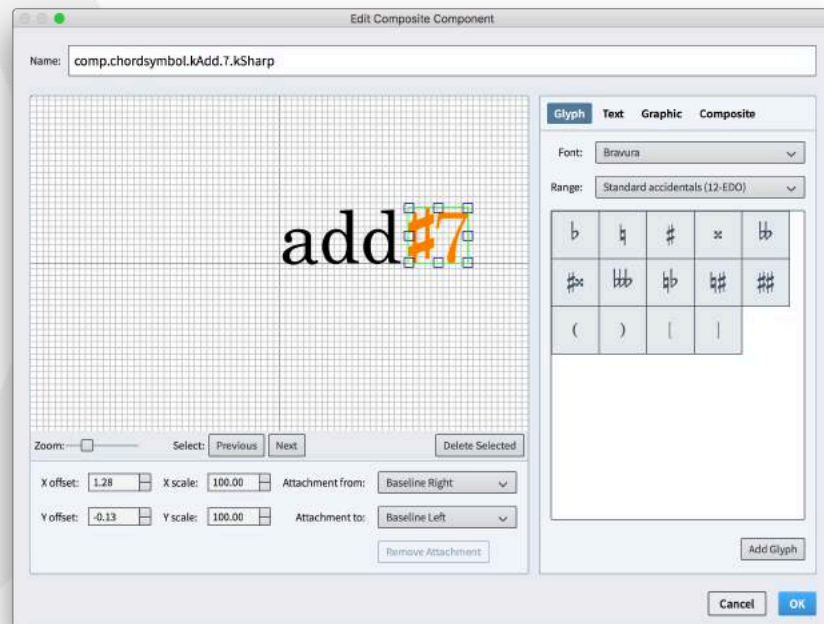
You can also substitute the selected component with other compatible components (e.g. replace **maj7** with Δ) by clicking another component from the row of alternative components at the bottom of the dialog.

When you override the appearance of an individual chord symbol, all of the components in the chord symbol are duplicated so that any edits you make to these components in the **Project Default Chord Symbol Appearance** dialog or edits you make in **Engraving Options** will not affect the overridden chord symbol. Components that exist either because you have created them or because they are used by an overridden chord symbol appear with a red triangle in the top corner in

the row of alternative components. Components that are not currently in use by any chord symbol in the project also show a delete icon: clicking this will delete the component from the project.

In the **Project Default Chord Symbol Appearance** dialog, if you want to change the default appearance of a given individual component (e.g. **maj7**) such that it will be changed for all chord symbols in the current project, select it in the list of compatible components, and click the pencil icon to edit it. Any changes you make to this component will be reflected in all chord symbols that use it.

If you would instead like to create a new component based on a current one, for example for use in a single chord symbol that is in a particularly tightly-spaced passage, then click the **+** button to create a new component based on the selected one. This new component will then be used only in the current chord symbol.



When editing an individual component, you can add any glyph from any font installed on your computer, add a string of text, include a graphic (SVG format is recommended, to ensure optimal appearance when printed or exported to a graphics format), or even use one of the existing symbols used elsewhere in Dorico, in any combination.

The relative positioning of each sub-component you add in this dialog is determined by the **Attachment from** and **Attachment to** menus below the large editor: for example, if you attach the bottom right-hand corner of one sub-component to the top left-hand corner of the next, then **X offset** and **Y offset** of zero will result in the bottom right-hand corner of the first attachment touching the

top left-hand corner of the second. When using text or glyphs, it is recommended to attach the **Baseline Right** attachment of the left-hand component to the **Baseline Left** attachment of the right-hand component to ensure sensible default positioning.

Resetting the appearance of edited chord symbols. To reset a chord symbol you have edited in Engrave mode back to its default appearance as specified by the current settings in **Engraving Options**, select the chord symbol and choose **Edit ► Reset Appearance**.

Showing chord symbols above the top staff. By default, chord symbols appear above the staves belonging to the players whose instruments are set to show chord symbols, which you can determine by right-clicking on a player's card in the **Players** panel in Setup mode and choosing the desired option from the **Chord Symbols** submenu in the context menu. In some types of scores, however, such as piano-vocal pieces, it is instead desirable to show chord symbols above the top staff, whatever it happens to be on each system (because e.g. the vocal line may be hidden during an intro or instrumental break). To allow this, a new option has been added to the **Staves and Systems** page of **Layout Options** that allows you to choose between showing chord symbols **Above specific players' staves** (the default) or **Above top staff of system**. (STEAM-6449)

Transposing chord symbols. **Write ► Transpose** includes a new option, **Keep chord symbol appearance overrides**, switched off by default. A chord symbol with an overridden appearance cannot be transposed, so you can choose either to retain the overridden appearance, or you can choose to reset its appearance so that it can be correctly transposed. (STEAM-6406)

Successive identical chord symbols with altered bass notes. When Dorico hides the part of the chord symbol before the altered bass note for a series of chord symbols that differ only by their altered bass notes, it now takes notice of whether a chord symbol is hidden, so a hidden chord symbol within the range for which only the altered bass note should be shown will be ignored. It is also now possible to set the **Hide root and quality** property independently for chord symbols on different staves. (STEAM-6404)

Signposts for chord symbols. If the chord symbol visibility settings for the players in the layout are set such that chord symbols do not appear on any staff, signposts are now shown above the top staff. (STEAM-6524)

Selecting chord symbols. In common with other system-attached items, chord symbols are no longer selected when clicking or **Shift**+clicking in the staff. Chord symbols can be selected via marquee selection or via **Edit ► Select All** (and can be filtered in or out of the selection as usual). (STEAM-6605)

Dynamics

The special bold italic letters for immediate dynamics, combined dynamics, and dynamics of force all now use a new dedicated font style, **Dynamic music text font**, in new projects, allowing you to change the font used for dynamics independently of the main music font. (STEAM-6479)

Example projects (STEAM-6543)

Several example projects are now included with Dorico. When you run the application for the first time, the example projects will appear in the list of recent projects in the Steinberg Hub window. If you would like to open any of the example projects but they do not appear in the list of recent projects, you can find them here:

- *Windows:* **C:\Users\Public\Documents\Dorico Example Projects**
- *Mac:* **/Users/Shared/Dorico Example Projects**

Flows

Importing flows from MIDI and MusicXML files. When importing flows from MIDI and MusicXML files that do not specify a title, the title of the new flow will be based on the filename of the imported file, rather than the default “Flow 1”. (STEAM-6600)

Navigating between flows. Selecting a flow in the **Flows** panel in Setup mode now navigates to the first bar of that flow. (STEAM-6621)

Importing MIDI files

- Tempo events are now imported when importing MIDI files. (STEAM-6429)
- When mapping a track in a MIDI file onto a transposing instrument, Dorico now prefers the most common transposition for that instrument (e.g. Clarinet in B \flat rather than Clarinet in A). (STEAM-6589)

Pedal lines

A new option **Case for full text at start and end of line** has been added to the **Una Corda Pedal** group of the **Design** section of the **Pedal Lines** page of **Engraving Options**, allowing you to choose between using title case, sentence case, or lower case for the *una corda* and *tre corde* text at the start and end of an *una corda* pedal line. (STEAM-6445)

Playback

Marcato articulations. It is now possible to edit the default playback duration of marcato articulations on the **Timings** page of **Play ▶ Playback Options**. (STEAM-6448)

Gradual tempo changes. It is now possible to set the **Final tempo %** property for gradual tempo changes, allowing you to specify the amount by which the tempo should change. (STEAM-6474)

Repeat endings

Showing repeat endings below the bottom staff of the system. To show repeat endings below the bottom staff of the system in addition to showing them above the top staff of the system and the other staves specified on the **Staves and Systems** page of **Layout Options**, switch on the new option **Additionally show repeat endings below bottom staff**. (STEAM-6466)

Setting times played for the final segment. It is now possible for the final segment of a repeat ending to not be the final one played: for example, if the first segment should be played on the first and third times through, with a jump to another part of the score at the end of the third time, and the second segment should be played only on the second time through, you can now show **1.3.** in the first segment and **2.** in the second segment. (STEAM-6419)

Tempo

It is now possible to type a tempo range into the **Shift+T** popover, e.g. **q=100-120**, and Dorico will automatically display the tempo range correctly. (STEAM-6555)

Vertical spacing

A new option **Justify staves when frame with single system is above this threshold** has been added to the **Vertical Justification** group on the **Vertical Spacing** page of **Layout Options**.

If you have a score that only has one system per page on most systems (e.g. an orchestral score), then it is desirable to justify the distances between staves within the system as there won't ever be any space between systems. However, if you have a score that mostly has more than one system per page but occasionally has only one (e.g. a small chamber group), then it can look strange if the distances between staves are justified on some pages but not others, simply because the page happens to cross the threshold specified for **Justify distance between staves and systems when page is at least n% full**.

If you are working on such a score that sometimes shows one and sometimes shows two systems per page, try switching off the new **Justify staves when frame with single system is above this threshold** option as you may find this produces a more consistent justification throughout the project. (STEAM-6476)

Issues resolved

ID #	Component	Issue
STEAM-6465	<i>Audio export</i>	The choice between exporting in WAV or MP3 format has been reinstated.
STEAM-6619	<i>Audio export</i>	Only those flows selected for export in the Audio Export dialog will now be exported.
STEAM-6455	<i>Brackets and braces</i>	When using the Wind band bracketing approach, system objects now once again appear only above the first bracket for a given family.
STEAM-6407	<i>Chord symbols</i>	Chord symbols are no longer incorrectly transposed by edits made in Write ► Add Notes Above or Below .
STEAM-6425	<i>Chord symbols</i>	Polychords with stacked alterations on both the upper and lower chord now show the correct stack of alterations on both chords.
STEAM-6434 STEAM-6507	<i>Chord symbols</i>	Chord symbols now correctly appear selected after creation via the popover, and after operations like moving a multiple selection. Other instances of the same chord symbol on other staves are also now drawn in blue to indicate that they are linked.
STEAM-6459	<i>Chord symbols</i>	Chord symbols are now correctly auditioned when selected, provided the chord track is routed to an appropriate output in Play mode (Mac only).
STEAM-6262	<i>Dynamics</i>	The behavior of dragging dynamics to grace note positions in Write mode has been improved.
STEAM-6408	<i>Dynamics</i>	Dragging the start handle of a hairpin in Write mode now correctly adjusts the duration of the hairpin, rather than moving the entire item.
STEAM-6409	<i>Dynamics</i>	When pasting dynamics at the same rhythmic position as dynamics on another staff, they will now only be linked if their properties are equivalent.
STEAM-6435	<i>Dynamics</i>	Setting the aperture of a hairpin to 0 could under rare circumstances cause a crash. This problem has now been resolved.
STEAM-6438	<i>Dynamics</i>	It is now possible to create a hairpin by clicking and dragging it when it starts at the same position as an existing immediate dynamic.
STEAM-6487	<i>Dynamics</i>	Pasting part of a dynamic group no longer incorrectly offsets the position of subsequent dynamics in other groups.
STEAM-6569	<i>Dynamics</i>	Adjusting the prefix or suffix of an immediate dynamic now updates the rhythmic spacing immediately.
STEAM-6663	<i>Dynamics</i>	Cutting part of a dynamic group to the clipboard no longer pastes in the wrong position.
STEAM-6685	<i>Engrave mode</i>	If a stem is dragged to the opposite side of the note in Engrave mode, when you stop dragging, the handle now draws at the end of the stem.
STEAM-6530	<i>Flows</i>	Using Split Flow or Duplicate Flow in a project with one or more empty-handed players (i.e. players with no instruments assigned) will no longer cause the project to be corrupted and unable to be reopened.
STEAM-6628	<i>Flows</i>	Multiple flows with the same name can now be exported correctly via the Export Flows dialog.

ID #	Component	Issue
STEAM-6652	<i>Flows</i>	Split Flow now works correctly for music that includes notes crossed to different staves.
STEAM-6662	<i>Flows</i>	Exporting flows is now more resilient to invalid characters in the names of flows and layouts in the project.
STEAM-6682	<i>Flows</i>	Dynamics of force (e.g. sffz) are now correctly imported when importing a flow from another Dorico project.
STEAM-6512	<i>Instrument changes</i>	Under rare circumstances, the letter case of instrument change labels could change unpredictably when opening the project. This problem has now been resolved.
STEAM-5938	<i>Key signatures</i>	Tonality systems saved as defaults for new projects now work correctly in new projects.
STEAM-6448	<i>Key signatures</i>	Edits made in the Edit Tonality Systems dialog are now properly undoable.
STEAM-6453	<i>Key signatures</i>	Signposts for key signatures on transposing instruments that don't show key signatures now correctly include the accidental in the key signature root if necessary.
STEAM-6629	<i>Key signatures</i>	Key signatures in user-defined tonality systems that do not use any accidentals now show a signpost that reads Custom .
STEAM-6446	<i>Localization</i>	The names of accidentals in the Interval Calculator in Write ► Transpose are now correctly translated.
STEAM-6462	<i>Localization</i>	A number of inconsistencies between the default key commands in the localized versions of Dorico have been resolved.
STEAM-6440	<i>Multi-bar rests</i>	Multi-bar rests are once again correctly split in layouts with instrument changes.
STEAM-6480	<i>Multi-bar rests</i>	Multi-bar rests at the end of the system will no longer cause grace notes at the start of the next system to be drawn incorrectly.
STEAM-6486	<i>Multi-bar rests</i>	System objects (such as tempo and rehearsal marks) no longer have a different horizontal position relative to the start of the bar when coinciding with the start of a multi-bar rest.
STEAM-6443	<i>MusicXML import</i>	Dorico will no longer crash when attempting to import a MusicXML file with an incorrectly positioned time signature.
STEAM-6659	<i>MusicXML import</i>	Dorico can now correctly open MusicXML files (and files of other types) whose extensions are not in lower case.
STEAM-6675	<i>MusicXML import</i>	Chord symbols in MusicXML files whose position is specified using the offset element are now imported at the correct positions.
STEAM-6488	<i>Note grouping</i>	A syncopated pattern of short- <i>n</i> x long-short notes can now span an entire bar of 12/8.
STEAM-5102	<i>Note input</i>	The behavior of deleting bars when tuplets cross barlines has been improved.
STEAM-6431 STEAM-6432	<i>Note input</i>	When inputting using a MIDI keyboard and the option to allow Dorico to retrospectively change the spelling of notes is set, the produced spellings have been improved in a number of situations.

ID #	Component	Issue
STEAM-6437	<i>Note input</i>	Certain edits, such as pasting or changing voice, that involved setting two or more properties on a note would not always cause the display of the score to be updated correctly until another edit was made. This problem has now been resolved.
STEAM-6495	<i>Note input</i>	Copying and pasting ornaments and playing techniques from one project to another now always ensures that the pasted ornaments and playing techniques appear correctly.
STEAM-6525	<i>Note input</i>	When starting a new voice, the choice of octave now always uses the clef's hot spot to determine the octave of the new note, rather than the octave of the previously active voice.
STEAM-6496	<i>Note spacing</i>	Note spacing adjustments made in Engrave mode on columns that do not contain notes, e.g. for a hairpin that does not start at the start of a note, are now applied correctly.
STEAM-6454	<i>Notes</i>	Rhythm dots on stem-down split stem cluster chords no longer sometimes collide with the noteheads.
STEAM-6587	<i>Notes</i>	When multiple rhythm dots have to be shifted vertically in multi-voice situations, dots are no longer shifted if they can stay in their default position without colliding with another dot.
STEAM-6447	<i>Options</i>	Clicking Save as Default in the Notation Options and Layout Options dialogs now correctly updates the respective options for newly-created flows and layouts in the current project, as well as new projects.
STEAM-6151	<i>Page layout</i>	Lock System and Lock Frame now work correctly once again when invoked with a selection of a single item.
STEAM-6414	<i>Pedal lines</i>	Different types of pedal lines (e.g. sustain and <i>una corda</i>) at the same rhythmic positions are now spaced independently.
STEAM-6617	<i>Pedal lines</i>	Pedal lines now draw correctly when one staff of a grand staff instrument is hidden because it is empty.
	<i>Performance</i>	Projects containing many chord symbols should both open more quickly and respond to certain large edits (such as changing Layout Options or Engraving Options) more quickly.
STEAM-6456	<i>Performance</i>	Edit ► Select All is no longer very slow when View ► Attachment Lines is switched on.
STEAM-6464	<i>Performance</i>	The speed of opening projects has been improved.
STEAM-6415	<i>Play mode</i>	A note selected in Write mode is now immediately editable when switching to Play mode, rather than requiring you to first reselect it.
STEAM-6436	<i>Play mode</i>	The chord symbol track and playing technique lanes no longer disappear when expanding and collapsing tracks in Play mode.
STEAM-6444	<i>Playback</i>	Adding an accent to a note played <i>pizzicato</i> will no longer cause that note to be played back <i>arco</i> .
STEAM-6457	<i>Playback</i>	Successive grace notes of the same pitch now play back correctly, without cutting each other off.
STEAM-6458	<i>Playback</i>	Using undo after changing the settings in Playback Options no longer sometimes causes a crash.

ID #	Component	Issue
STEAM-6463	<i>Playback</i>	Some of the GM patches in HALion Sonic SE 2 were set to use the wrong VST Expression Map by default and would not play back. This problem has been resolved.
STEAM-6586 STEAM-6645	<i>Playback</i>	Relative and gradual tempo changes now correctly take into account the beat unit of the prevailing tempo.
STEAM-6604	<i>Playback</i>	Instruments that use note velocity for dynamics now correctly respond to changes to the Dynamic curve setting on the Dynamics page of Playback Options .
STEAM-6450	<i>Repeat endings</i>	Dorico no longer crashes when you create a repeat ending that crosses one or more instrument changes.
STEAM-6489	<i>Repeat endings</i>	The last segment of a repeat ending line with the Open, short appearance now correctly obeys the end X offset specified in Properties.
STEAM-6676	<i>Repeat endings</i>	It is now possible to set properties on segments of repeat ending lines that span instrument changes.
STEAM-6365	<i>Rests</i>	Double whole note (breve) rests are now correctly positioned relative to a single-line percussion staff.
STEAM-6485	<i>Time signatures</i>	Setting the Hide time signature property now applies to all layouts. This will not affect existing projects in which the property is already set: select the time signature and use Edit ▶ Reset Appearance to unset the property, and then set it again to make it take effect in all layouts.
STEAM-6473	<i>Tuplets</i>	Choosing the light weight for triplet numbers on the Tuplets page of Engraving Options once again produces the expected numbers, rather than apparently random characters.
STEAM-5825	<i>User interface</i>	Under some circumstances, opening a project that was saved using one of the zoom levels that fits the page width or height in the viewport could crash. This has now been fixed.
STEAM-6442	<i>User interface</i>	Clicking outside a popover now correctly dismisses the popover once more.
STEAM-6523	<i>User interface</i>	The Save as Default button in Layout Options is now correctly enabled only when the right kind of layout is selected, and only one such layout is selected.
STEAM-6536	<i>User interface</i>	The page margin controls no longer incorrectly disappear when returning to the Page Setup page from another page of the Layout Options dialog.
STEAM-6625	<i>User interface</i>	Under some circumstances, closing a document window via the close button in the title bar when a popover is open could cause a crash. This problem has been resolved.
STEAM-6502	<i>Vertical spacing</i>	The distances between systems no longer change unexpectedly for systems that contain staves with instrument changes.
STEAM-6513	<i>Vertical spacing</i>	A problem whereby systems could be unevenly justified, causing them to end up too close to the system above or below, has been resolved. The appearance of projects affected by this problem will be changed when opening them in Dorico 1.1.10.

Dorico 1.1


June 2017

This version contains the following improvements and issue resolutions.

New features

Chord symbols

Creating chord symbols. To create a chord symbol, select the note or rest where you want the first chord symbol to appear, and choose **Write ► Create Chord**

Symbol, or use the key command **Shift+Q**, or click the  button in the right-hand toolbox in Write mode.

The chord symbol popover will appear, into which you can type the desired chord symbol using the computer keyboard, or play it using your MIDI keyboard.

Inputting chord symbols using the computer keyboard. Chord symbols consist of a root, quality, optional interval, optional alterations, and optional altered bass note.

Each of these elements can be entered in the popover as follows:

- **Root:** English note names (e.g. C, Db, F#, B); German note names (e.g. C, Des, Fis, H); fixed-do *solfège* (e.g. do, reb, so#, ti); Nashville numbers representing scale degrees (e.g. assuming C major, 1, 2b, 4#, 7).
- **Quality:** major can be specified by typing nothing following the root, or by typing **maj**, **M**, or **ma**; minor can be typed as **m**, **min**, or **mi**; diminished can be typed as **dim**, **di**, or **o**; augmented can be typed as **aug**, **au**, **ag**, or **+**; half-diminished can be typed as **half-dim**, **halfdim**, or **hd**; 6/9 can be typed as **6/9**, **69**, or **%**.
- **Interval:** chords with extensions and major seventh can be typed as e.g. **^7**, **^9**, etc. (^ on its own is interpreted as major seventh). You can also type e.g. **maj9** or **9maj7** for chords with extensions beyond the major seventh.
- **Alterations:** alterations can be typed as e.g. **#5**, **b9**, etc.; added notes can be typed as e.g. **add#11** or **addF#**; suspensions can be typed as e.g. **sus4**; omissions can be typed as **omit3**, **no7**, etc.
- **Altered bass notes:** these can be specified in the same way as root notes, separated from the preceding main chord symbol by typing **/**, e.g. **Cm7b5/Eb**.

The specific shorthand you use in the popover to create the chord symbol does not directly influence the precise appearance of the resulting chord symbol: this is determined instead by the prevailing options set on the **Chord Symbols** page of **Engraving Options**. For example, you could choose to enter a C major chord as

either “C” or “Cmaj” or “CM”, but in each case the appearance of the resulting chord symbol will be the same, as specified in **Engraving Options**.

Dorico can handle polychords, where a single chord symbol describes two simultaneous chords: in the popover, simply separate the two chords using the pipe character |. For example, type **D|C7** for a D major chord over a C7 chord.

To input a “no chord” symbol, type **N.C.**, **NC**, **no chord**, or **none** into the popover. For a chord symbol that consists only of the root note, type e.g. **Cbass** or **Gonly** into the popover.

Inputting chord symbols using your MIDI keyboard. When the chord symbol popover is open, you can play a chord on your MIDI keyboard to input a chord symbol. Options for how Dorico interprets the notes you play on your keyboard are found on the **Chord Symbols** page of **Write ► Note Input Options**, and include choices over things like whether Dorico should consider the inversion in which you play a given chord, or should always write the chord symbol as if it had been played in root position; whether Dorico should notate omissions (e.g. if you play C and E, should it be notated as **C** or **C(omit5)**); how it should notate added notes and suspensions; how it should handle complex enharmonic relationships between root and altered bass notes; and so on. You should examine these options carefully as the default settings will not suit every user.

To input a chord symbol with an altered bass note, simply play the chord with the altered bass note at the bottom. Alternatively, you can play the chord and its altered bass note separately: hold down the keys for the chord, then while the keys are depressed, play the altered bass note.

To tell Dorico the root of the chord to be input, either first play the root with one finger and then play the remaining notes of the chord while holding down the root, or play all the notes of the chord together, hold them down, then release and replay the root note.

To input a polychord, play one chord with one hand, then while those keys are depressed, play the second chord with the other hand.

To input a chord symbol that consists only of the root note, simply play only a single note.

Navigation during chord symbol input. When the chord symbol popover is open, hitting **Space** will advance the popover to the next beat. You can also move the popover using the following key commands:

- **Ctrl**+left/right arrow (Windows) or **Command**-left/right arrow (Mac): previous/next chord symbol.

- **Tab**: start of next bar.
- **Shift+Tab**: start of previous bar.
- **Space**: next beat.
- **Shift+Space**: previous beat.
- Left/right arrow: previous/next note/rest or rhythmic grid position, whichever is closer.
- **Backspace**: previous chord symbol.

When inputting chord symbols using a MIDI keyboard, by default the popover advances automatically to the next beat after you play a chord. You can change this behaviour using the **Advance during chord symbol input via MIDI input** option on the **MIDI Input** page of **Note Input Options**.

Furthermore, you can define specific keys or buttons on your MIDI keyboard to trigger different navigation behaviours, by using the **MIDI Learn** button on the **Key Commands** page of **Preferences** to assign specific keys to the **Note Input ▶ Advance Chord Symbol Input** commands.

Editing an existing chord symbol. To edit an existing chord symbol, simply select it and hit **Return** or double-click it in Write mode: the popover will open, with the shorthand for the chord symbol ready to be edited. You can either edit the existing chord symbol by editing the shorthand, clear the popover and type an entirely new chord symbol, or play a new chord symbol on your MIDI keyboard.

Transposition of chord symbols. One or more selected chord symbols can be transposed using **Write ▶ Transpose**. Chord symbols also appear at the appropriate transposed pitch when shown on transposing instruments and **Edit ▶ Transposed Pitch** is chosen.

Changing the enharmonic spelling of chord symbols. To respell a chord symbol for a transposing instrument in a transposing layout, simply edit the chord symbol as normal: if you change, for example, the root of **Dbmaj13** from **Db** to **C#** without changing the quality, interval or alterations, the spelling of the chord symbol will be altered for all instruments with the same transposition.

To remove an enharmonic spelling override for a chord symbol on the current instrument, edit the chord symbol as usual and type **Alt+S** into the chord symbol popover; to remove all enharmonic spelling overrides for a chord symbol, type **Shift+Alt+S** into the popover.

Choosing above which staves chord symbols appear. By default, chord symbols appear above the staves belonging to rhythm section instruments (e.g. keyboards, guitars, bass guitars, etc.), but you can control this from the **Players** panel in **Setup** mode. Select a player, then right-click to access the **Chord Symbols** context

menu, and choose **Show For All Instruments**, **Show For Rhythm Section Instruments**, or **Hide For All Instruments**.

Chord symbols may optionally be shown between the two staves of grand staff instruments, such as piano, by setting the **Position of chord symbols on grand staff instruments** option in the **Position** group on the **Chord Symbols** page of **Engraving Options**.

Choosing in which layouts chord symbols appear. By default, chord symbols appear both in full score and part layouts. To change this, switch to Setup mode, select the player in question in the Players panel, right-click to access the Chord Symbols context menu, and choose **Show in Full Score and Parts**, **Show in Full Score Only**, or **Show in Parts Only**.

Hiding individual chord symbols. To hide an individual chord symbol in the current layout, select the chord symbol and set the **Hidden** property in the **Chord Symbols** group in the Properties panel. A signpost is shown in place of the chord symbol. If you do not want to see these signposts, switch off **View ► Signposts ► Chord Symbols**.

Positioning chord symbols. Chord symbols are centered horizontally on the middle of the front notehead in the first voice column at the rhythmic position to which they are attached. You can instead choose to left-align chord symbols with the left-hand side of the front notehead in the first voice column (or even right-align them, though this typically produces unclear results) by setting **Horizontal alignment of chord symbols** on the **Chord Symbols** page of **Engraving Options**. This can also be overridden for an individual selected chord symbol using the **Horizontal alignment** property in the **Chord Symbols** group of the Properties panel.

Chord symbols are aligned at the same vertical position across the width of the system by default, but you can switch off **Align chord symbols across width of system** on the **Chord Symbols** page of **Engraving Options** if you prefer each chord symbol to be positioned above the staff independently.

Moving chord symbols. In Write mode, dragging a chord symbol or moving it with **Alt+left/right** will attach it to a new rhythmic position; be aware that moving a chord symbol to the same position as an existing chord symbol will delete the existing chord symbol at that position.

In Engrave mode, dragging a chord symbol or nudging it with **Alt+arrow** keys will not change the rhythmic position to which the chord symbol is attached.

Chord symbol appearance presets. Because there are many conventions for the appearance of chord symbols, Dorico provides a choice of different preset conventions that you can use as-is or as the basis of your own preferred

appearance. The presets are found at the top of the **Chord Symbols** page of **Engraving Options**, and are as follows:

$$\text{B}\flat\text{maj}7^{(\sharp 11)}_{(\sharp 9)}/\text{F}$$

Boston

$$\text{B}\flat\text{MA}7^{(\sharp 11)}_{(\sharp 9)}/\text{F}$$

Brandt-Roemer

$$\text{B}\flat\Delta^{+11}_{+9}/\text{F}$$

Indiana

$$\text{B}\flat\text{M}7^{(\sharp 11)}_{(\sharp 9)}\text{on F}$$

Japanese

$$\text{B}\flat\text{MA}7^{(\sharp 11)}_{(\sharp 9)}/\text{F}$$

Jazz Standard

$$\frac{\flat 7\Delta^{\sharp 11}_{\sharp 9}}{4}$$

Nashville

$$\text{B}\flat\text{Maj}7^{+11}_{+9}/\text{F}$$

New York

$$\frac{\text{B}\flat\text{maj}7^{+11}_{+9}}{\text{F}}$$

Ross

A further preset, simply called **Default**, is also provided, which uses a set of symbols intended to be as unambiguous as possible, avoiding the use of symbols for major seventh, augmented, diminished, and half-diminished, using standard accidentals, and so on. This is the preset that is chosen by default in new projects.

The presets simply choose specific combinations of the options on the **Chord Symbols** page, and you can further adjust these options to suit your preferences.

Changing the font used for chord symbols. To change the text font used for chord symbols, choose **Engrave ► Font Styles**, and edit **Chord symbols font**. It is not advised to edit the **Chord symbols music text font**, which is set to Bravura Text by default; this can only be set to a SMuFL-compliant font intended for use in text-based applications. When using the option to show the word *on* instead of a slash or line to separate a chord from its altered bass note, you can edit the font used for that word by editing the **Chord symbols altered bass separator font**.

Playback of chord symbols. To include chord symbols in playback, go to Play mode and expand the chord track at the top of the event display. Choose the playback device (VST instrument or MIDI device) that should be used, and switch on the speaker icon to enable playback. Chord symbols are played back as sustained chords, the duration being taken from the gap between one chord

symbol and the next. If the chord symbol was input using a MIDI keyboard, the chord will play back using the voicing that was used to input the chord symbol.

MusicXML import. Chord symbols are imported from MusicXML files, but chords that specify **Neapolitan**, **Italian**, **French**, **German**, **Pedal**, **Tristan** and **Other** values for the **kind** element are ignored during import, as there is no information to specify what notes these chord symbols are meant to describe.

Enharmonic spelling during MIDI step input

Enharmonic spelling refers to the choice of note name and accidental to describe a note of a given pitch, normally according to the current key center or tonality – for example, whether a note should be spelled as F# or Gb. When inputting notes from a MIDI keyboard, there is no way to directly specify the desired spelling, so Dorico works out the optimal spelling using a sophisticated algorithm.

The algorithm takes into consideration the current key signature, the intervals between the next and previous notes or chords, and the intervals between the notes of chords. If you choose to respell a note (using **Write ▶ Respell ▶ Respell Using Note Name Above/Below**), Dorico will also take that choice into consideration, and will use that spelling for further notes of that pitch.

Broadly speaking, Dorico will prefer to notate notes outside the key signature using sharps if the figure is rising, and using flats if the figure is falling. When determining the spelling of a note, if one spelling will produce a simpler interval (for example, a major third rather than a diminished fourth), it will overall prefer the simpler interval.

When inputting onto a grand staff instrument such as piano, Dorico will also use the context provided by any music already entered on the other staff: by way of example, Dorico will normally prefer Bb over A#, but if this note is input into the right-hand staff of a piano, and the left-hand staff includes an F# at that rhythmic position, Dorico will spell the note on the right-hand staff as A# since this produces a simpler interval between the notes in the two staves.

As you input notes using your MIDI keyboard, you may notice that Dorico automatically respells previous notes or chords as you continue inputting: for example, if you input, in the key of C major, E followed by G#, Dorico will spell the second note as G#, but if you then input Gb, Dorico will respell the G# as Ab, because that spelling makes more sense in the context. If you want to prevent Dorico from making retrospective changes to notes you have already input, switch off **Allow spelling of notes to be adjusted retrospectively** on the **MIDI Input** page of **Note Input Options**. (STEAM-5203)

Piano pedal lines (STEAM-5661)

Dorico now has the most comprehensive support for piano pedal lines of any scoring software. You can easily create pedaling for the sustain, *una corda* and *sostenuto* pedals, with support for modern sustain pedaling techniques, including changing the pedal level over the course of a single pedal instruction.

Creating pedal lines with the mouse. Pedal lines can be created from the **Keyboard** section of the **Playing Techniques** panel in Write mode.



The items on the first row create a new pedal line for the sustain, *sostenuto* or *una corda* pedals respectively. Either select the notes to which the pedal line should apply and click the relevant button, or, with nothing selected, click the relevant button and then click and drag in the score to create a pedal line and extend it to the desired duration.

The items on the second row can be used to add retakes and changes of pedal level (to one-quarter depressed, half-depressed, three-quarters depressed, and fully depressed, respectively) to an existing pedal line: ensure that nothing is selected, click the relevant button, then click on the pedal line at the rhythmic position at which you want the retake or change of pedal level to be created.

Creating pedal lines with the keyboard. You can also create pedal lines using the **Shift+P** popover, either based on the range of selected notes, or during step input.

To create a pedal line of a particular duration, first select the notes to which the pedal line should apply, then type **Shift+P** and enter **ped** for the sustain pedal, **sost** for the *sostenuto* pedal, or **unacorda** for the *una corda* pedal.

To create a pedal line during step input, position the caret at the rhythmic position where the line should begin, then type **Shift+P** and enter the appropriate shorthand for the desired pedal line. You can then extend the pedal line simply by advancing the caret with **Space**. When you want to stop the pedal line, type **Shift+P** again and enter ***** to stop a sustain pedal line, **s*** to stop a *sostenuto* pedal line, or **u*** to stop an *una corda* pedal line.

You can also add retakes and changes of pedal level while inputting a pedal line in step input: when the caret is at the position at which you want it to appear, type **Shift+P** and enter **^** for a retake, **1/4** for a change of level to one-quarter

depressed, **1/2** for half-depressed, **3/4** for three-quarters depressed, or **1** for fully depressed.

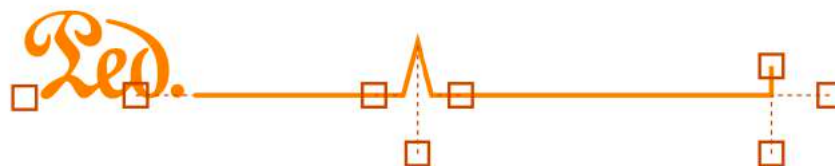
To edit the start position of a pedal line once it has been created, select the pedal line and type **Alt**+left/right to snap the whole line to the previous or next rhythmic position, or type **Shift+Alt**+left/right to snap the end of the line to the previous or next rhythmic position.

Engraving Options. A comprehensive set of options to determine the appearance and positioning of pedal lines can be found on the new **Pedal Lines** page of **Engraving Options**. This includes options for which symbol should be shown at the start of each kind of pedal line, what should be shown for continuing lines at the start of a new system, the height and width of the retake notch, whether gradual changes of pedal level should be shown using a dashed or solid line, and many other options besides.

Properties. The appearance of an individual pedal line can also be overridden by selecting it and adjusting the properties in the new **Pedal Lines** group in the Properties panel. Among other things, you can specify whether the start and end of a pedal line should be positioned before or after grace notes using the **Starts before grace notes** and **Ends before grace notes** properties.

In Engrave mode, you can select each segment of a sustain pedal independently, and thus set properties independently. Selecting a retake or change of pedal level in a sustain pedal line will show the **Pedal Line Retakes** group of properties, which allows you to specify the pedal depression level before the retake (**End level at retake**) and the pedal depression level following the retake (**Start level at retake**). If the pedal should not be released altogether between the old and new levels, change **Retake type** to **Change Level** instead of **Retake**.

Editing pedal lines in Engrave mode. When a pedal line is selected in Engrave mode, the following handles appear to allow fine graphical editing:



At the start of the pedal line, the leftmost handle can be dragged left and right to move the start of the line horizontally; and the handle to the left of the start of the continuation line can be dragged up and down to change the start pedal level.

At a retake, the handle to the left of the retake notch can be dragged up and down to change the pedal level before the retake, while the handle to the right of the

retake notch changes the pedal level after the retake; the handle below the center of the notch can be dragged left and right to move the whole retake horizontally.

At the end of the pedal line, the handle at the tip of the hook can be dragged up and down to change the hook length; the handle to the right can be dragged up and down to change the final pedal level; and the handle below the hook can be dragged left and right to move the end of the line horizontally.

Overriding start and restorative text. For pedal lines that use a text indication rather than a symbol, as *una corda* pedal lines do, for example, or as sustain pedal lines do if you choose to use plain **Ped.** text rather than the ornate symbol, you can override the text shown at the start of the pedal line by editing the **Text** property, the text shown at the start of the next system by editing the **Continuation text** property, and, for *una corda* pedal lines, the *tre corde* text shown at the end of the pedal line by editing the **Restorative text** property.

Playback. Pedal lines are automatically played back. Sustain pedal lines send MIDI controller 64 (Sustain), *sostenuto* pedal lines send MIDI controller 66 (Sostenuto), and *una corda* pedal lines send MIDI controller 67 (Soft Pedal). Some VST instruments (such as Pianoteq and Garritan CFX Concert Grand) support partial depression of the sustain pedal – consult the manufacturer’s documentation for more details.

Options for how Dorico plays pedaling are found on the new **Pedal Lines** page of **Playback Options**. You can control the speed of the initial pedal depression, the speed of a retake in the middle of a pedal line, and the speed of the final pedal release, and you can also specify whether the initial depression and the retake should be played before or after the onset of the notes or chords at that rhythmic position.

MusicXML import. Sustain pedal lines are imported from MusicXML files. MusicXML can only describe the sustain pedal, and it cannot describe changes in pedal depression level.

Repeat endings

Dorico now supports the notation of repeat endings, sometimes known as *volta* lines, or as 1st and 2nd endings. Playback of repeat ending lines is not yet supported, but is planned for a future update.

Creating repeat endings. To create a repeat ending, select the bars that will form the first ending, then click the button to create a first ending from the **Repeat Endings** section of the **Repeat Structures** panel on the right-hand side in Write mode. The first ending segment will be created, covering the selected bars, with a second ending segment created in the bar immediately following the first ending; a

suitable end repeat barline will be created at the end of the first ending if one is not already present. To add a repeat to the second ending, select the bars that will form the second ending, and click the button to add an additional ending from the **Repeat Endings** section: the existing second ending segment will become a closed line, with an end repeat barline created if necessary, and a third ending segment will be added in the bar following the second ending. This process can be repeated as often as required.

Changing the number of times played. By default, each segment in the set of repeat endings is played once, and so will show a single digit corresponding to the time through the music on which each ending is played. To tell Dorico that an ending should be played more than once – for example, that the first ending should be played on the first three times through – set the **No. times played** property in the **Repeat Endings** group in the Properties panel to the number of repetitions to be played. The number shown under the relevant ending segment will automatically be updated, following the options defined in **Engraving Options**. It is not necessary to set this property on every segment, as Dorico will do its best to calculate how many times a segment should be played if the property is set inconsistently (it will prefer to add any unused repetitions to the final closed ending segment); it will enforce that the total number of times played must be greater than or equal to the number of segments.

Changing the text shown in a segment. If you need to override the text displayed in a specific ending segment, you can set the **Custom text** property in the **Repeat Endings** group in the Properties panel.

Engraving Options. Options controlling the design, default position, and display of number of times played can be found on the new **Repeat Endings** page of **Engraving Options**.

Choosing where repeat endings appear. Repeat endings are system-attached items and appear above the instruments chosen in the **System Objects** section of the **Staves and Systems** page of **Layout Options**.

Editing repeat endings in Write mode. Repeat endings can be dragged from bar to bar in Write mode by selecting any segment and dragging left or right, or using **Alt**+left/right arrow. Each segment can be made to include more or fewer bars by selecting the handle at the start or end of each segment and dragging left or right.

Editing repeat endings in Engrave mode. In Engrave mode, the exact horizontal position of the hooks at the start and end of each segment of the repeat ending can be adjusted, the position of each segment relative to the staff, and the length of the hooks can all be edited both by nudging or dragging the appropriate handles, or using the properties in the **Repeat Endings** group.

MusicXML import and export. Repeat endings are imported from MusicXML files, with the limitation that the segments in the middle of a set of endings cannot have an open right-hand end, despite this being technically possible to represent in MusicXML. Repeat endings are also now included when exporting MusicXML files.

Editing in Write mode

It is now possible to edit the rhythmic position and, where appropriate, the duration of items in Write mode, and it is also easier to create items with the mouse.

Creating with the mouse. You can now create and set the length of an item in a single operation with the mouse: with nothing in the score selected, click the item you want to create (such as an octave line) in the relevant panel, then click on the staff where you want the item to be created, and keep the mouse button held down while you drag the item to the desired duration.

Editing with the mouse. Selected items with duration (such as slurs, hairpins, pedal lines, octave lines, trills, and so on) now show circular handles at their starts and ends. Dragging the start handle snaps the rhythmic position of the start of the item, leaving the end position in the same place (i.e. it lengthens and shortens the duration of the item); dragging the end handle snaps the rhythmic position of the end of the item, leaving the start position in the same place. To snap the item to a new rhythmic position without editing its length, drag the main body of the item rather than either of its handles.

Editing with key commands. You can use the key commands **Alt**+left/right arrow to snap the selected item to the previous/next rhythmic position, and for items that have duration you can shorten or lengthen their duration with the key commands **Shift+Alt**+left/right arrow; add **Ctrl** to snap to or shorten or lengthen by the current rhythmic grid duration rather than the next logical position.

Editing dynamics. Grouped dynamics can now be edited with the mouse: where a group begins or ends with a hairpin, a circular handle appears corresponding that can be dragged to a new rhythmic position; a similar handle also appears at the point where the type of dynamic changes in a *messa di voce* hairpin, allowing you to snap that inflection point to a new rhythmic position. Dragging the dynamic at the start or end of the group will scale the positions of the other dynamics proportional to the overall length of the group. Immediate or combined dynamics in the middle of a group of gradual dynamics can also be dragged to new positions, which will automatically shorten or lengthen the surrounding gradual dynamics appropriately.

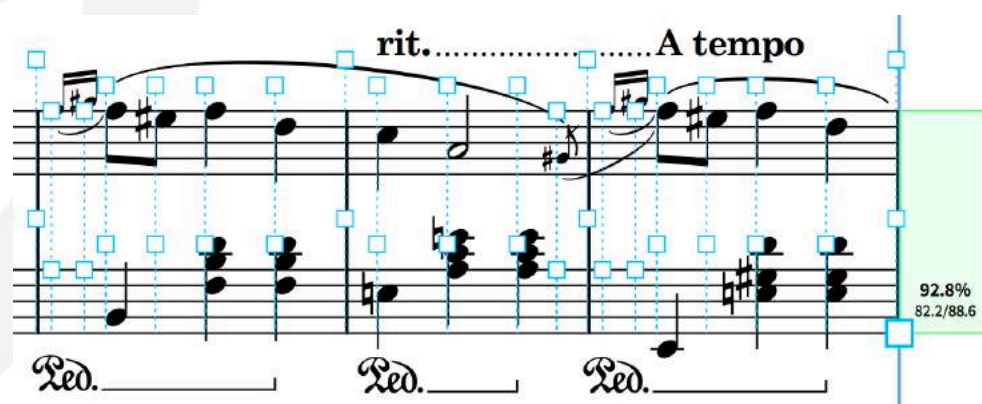
Creating items with the mouse. If you prefer using the mouse for input and editing to using the keyboard, new options in the **Editing** group of the **General** page of **Preferences** can make using Dorico more comfortable for you. When **Allow**

multiple items to be created with the mouse is set, you can create multiple items from any of the panels in Write mode without having to reselect the item each time. Under **Creating items with the mouse**, you can also choose whether Dorico should automatically create items at the position of the current selection (the default), or whether you want it to always load the cursor so that you can click to place the item. (STEAM-6102)

Attachment lines. To make it clear to which rhythmic positions items are attached, a dark red dotted line is drawn from the left-hand side of each selected item (and, for items that have duration, such as slurs, hairpins, octave lines, pedal lines, and so on, from the right-hand side too) to the middle of the staff at the attachment position. This can be disabled by switching off **View ► Attachment Lines**.

Editing note spacing (STEAM-5983)

You can now edit the note or rhythmic spacing of your music in Engrave mode. To enable these spacing adjustments, activate the switch in the **Note Spacing** section of the left-hand panel in Engrave mode, and dashed lines representing spacing columns and handles for each spacing-significant item will appear. When the columns and handles are visible, you cannot make any selections or edits to items in the current layout: deactivate the switch on the **Note Spacing** section or switch to Write mode to resume normal selection and editing.



Spacing adjustments and graphical adjustments. You can make two kinds of adjustments to the horizontal position of notes and chords, grace notes, rests, clefs, key signatures, time signatures, barlines, and so on: spacing adjustments, which increase or decrease the amount of rhythmic space to the left and right of the item, and which affect the whole spacing column (i.e. all items that start at that rhythmic position across all staves); and graphical adjustments, which move a selected item on a single staff only, in a way that does not affect the spacing of other items. To make a spacing adjustment, select a square handle, hold **Alt** and use the left and right arrow keys to adjust in small increments, and add **Ctrl** (Windows) or **Command** (Mac) to adjust in larger increments. To make a graphical adjustment, first select the square handle above the staff, then select the circular

handle that appears on the middle staff line, and use the same key commands. You can switch between selecting related square and circular handles by hitting **Tab**.

When you make a spacing adjustment to a primary rhythmic position, both the square handle itself and the dashed line representing the spacing column are colored red.

When you make a graphical adjustment to an item, a horizontal red line is drawn joining the item's circular handle to its original position (i.e. the position at which it is still considered to be for the purposes of spacing).

Adjusting secondary voice columns. When multiple voices are active at the same rhythmic position, you can adjust the position of each voice column independently. A square handle appears for each voice column, allowing you to make spacing and graphical adjustments for the notes in that column independently of the first column. If you find that you need to make an adjustment to a voice that is currently sharing a voice column with another voice, you can move it into its own voice column using the **Voice column index** property, which will allow spacing and graphical adjustments independently of other columns.

Navigating between handles. You can navigate between handles using the arrow keys. Hold **Shift** to make a multiple selection of handles. Press **Tab** to switch between the square handles for adjusting spacing and the circular handles for adjusting graphical offsets.

Adjusting multiple items at once. Select multiple handles either via marquee selection or using **Shift**+arrow keys, and then use the key commands to make spacing or graphical adjustments to all the selected handles at the same time.

Removing adjustments. To remove a single spacing or graphical adjustment, select the handle and hit **Delete**; if the item has both a spacing and graphical adjustment, both adjustments will be removed. To remove only a graphical adjustment, select the item in Write mode and choose **Edit ▶ Reset Position**. To remove spacing adjustments over a larger region, select one or more handles in the region you want to remove them, then choose **Engrave ▶ Note Spacing ▶ Reset Layout** (which removes all spacing adjustments in the current layout), **Reset Selected Frames** (which removes all spacing adjustments in the music frames in which one or more handles are currently selected), or **Reset Selected Systems** (which removes all spacing adjustments in the system or systems in which one or more handles are currently selected).

Locking the system. When you make any spacing or graphical adjustment to an item, the system on which you are making the adjustment is locked: Dorico will create a system break at the start of the adjusted system (if one does not exist

already) and at the start of the following system. This ensures that making spacing adjustments does not cause the casting-off of your layout to change.

System fullness indicator. When editing note spacing, a new indicator in the right-hand page margin shows you at a glance how full each system is, expressed both as a percentage, and as the number of spaces occupied out of the total number of available spaces (which is measured from the start of rhythmic space to the right of the initial clef and signatures to the final systemic barline). When a system is too empty, the indicator is colored purple; when it is more than 70% full it is colored green; and when a system is over-full (more than 100%), it is colored red.

Indenting the system. Two large square handles appear at either end of each system: on the left-hand side, aligned with the top staff line of the top staff, and at the right-hand side, aligned with the bottom staff line of the bottom staff. These handles allow you to indent either end of the system from the frame, using the same key commands for the other types of handles. Unlike editing the spacing within a system, indenting either end of the system does not lock the system, so the casting off can change.

Properties. It is also possible to specify spacing and graphical adjustments for items outside of the dedicated tool in Engrave mode using the Properties panel. You can make spacing adjustments for most non-note items using the **Spacing offset** property found in that item's property group, and graphical adjustments using the **Offset X** property found in the **Common** group. For notes, spacing adjustments are made using the **Voice column spacing** offset property, and graphical adjustments are made using the **Voice column X offset** property, both of which are found in the new **Note Spacing** group.

Adjusting the position of a bar rest. Unlike other rests and notes, bar rests do not show handles, but it is possible to adjust the horizontal position of a bar rest relative to its bar using the **Offset X** property in the **Common** group of the Properties panel.

Filters (STEAM-5893)

Selection filters are used to narrow down a selection of notes and other items in your project, based on criteria that you specify. A new **Edit ► Filter** submenu has been added, containing filters that select or deselect items of different kinds. To use a filter, first select multiple items – for example, by clicking in a blank part of a bar to select all notes and other items in that bar, then extending the selection by holding **Shift** and clicking in another bar in the same or another staff – then choose the filter corresponding to the item you want to remain selected, or to the item you want to remove from the selection.

Whether a filter will leave only the chosen item selected or will deselect the chosen item is determined by whether **Select Only** or **Deselect Only** is chosen at the top of the **Edit ▶ Filter** submenu.

The following filters are available:

- **Notes and Chords:** selects or deselects notes, grace notes, and tuplets
- **Grace Notes:** selects or deselects only grace notes
- **Rests:** selects or deselects explicit rests, explicit bar rests, and implicit rests
- **Voices** submenu: allows you to select or deselect all items belonging to either **All Up-Stem Voices**, **All Down-stem Voices**, or if your selection encompasses only a single staff, material in any of the numbered voices on the staff.
- **All Dynamics:** selects or deselects immediate (including combined and force) dynamics and gradual dynamics (including hairpins, *messa di voce*, *cresc./dim.* lines)
- **Immediate Dynamics:** selects or deselects immediate dynamics only
- **Gradual Dynamics:** selects or deselects gradual dynamics only
- **All Tempos:** selects or deselects all immediate, relative and gradual tempos
- **Immediate Tempos:** selects or deselects immediate tempos (e.g. **Andante**) only
- **Relative Tempos:** selects or deselects relative tempos (e.g. **a tempo**) only
- **Gradual Tempos:** selects or deselects gradual tempos (e.g. **rit./accel.**) only
- **Arpeggio Signs**
- **Chord Symbols**
- **Clefs**
- **Glissando Lines**
- **Holds and Pauses**
- **Key Signatures**
- **Lyrics**
- **Octave Lines**
- **Ornaments and Trills**
- **Pedal Lines**
- **Playing Techniques**
- **Rehearsal Marks**
- **Slurs**
- **Text:** i.e. **Shift+X** text events
- **Time Signatures**
- **Tuplets:** selects tuplet brackets/numbers (but not the notes within them)
- **All Breaks:** selects or deselects frame and system breaks
- **Frame Breaks:** selects or deselects frame breaks only
- **System Breaks:** selects or deselects system breaks only

Play mode

Editing played or notated durations. The event display in Play mode now allows you to display and edit either the played durations or the notated durations of notes. A new pair of buttons (shown on the right) have been added to the Play mode toolbox to switch between these two modes.



When viewing played durations, the main body of each note in the piano roll display represents the played duration, including all intrinsic playback effects (such as shortening a note due to a staccato articulation, or lengthening it due to a slur), while the notated duration is shown as a thin line at the bottom of each note event. When viewing notated durations, this arrangement is reversed: the played duration is shown as a thin line at the bottom of each note event, whereas the main body of the note represents the notated duration.

Editing played durations. When editing the start position or duration of notes in the event display, the event display is now updated in real-time as you edit, rather than only after you release the mouse. Notes whose playback duration have been edited show up in a darker color in the piano roll display.

To remove any edits made to the played durations of notes back to their default start position and length, select the affected notes and choose **Play ► Reset Playback Overrides**.

Editing notated durations. When editing notated durations, you can move notes earlier and later in time by selecting them and dragging them left and right, which snaps them to positions described by the current rhythmic grid value.

Notes can also be dragged up and down to change their pitch (or you can use **Alt+up/down arrow**, or **Ctrl+Alt+up/down arrow**, as you would in Write mode).

You can also change the durations of notes by selecting them and dragging the right-hand end of any selected note. As with moving notes earlier later in time, note durations are snapped according to the current rhythmic grid value.

Finally, notes can be cut and pasted in the event display. When pasting, the destination rhythmic position will be determined by the position of the playhead.

Voices in the event display. All voices for each instrument are now shown in a single track. (STEAM-6202)

Ruler. The ruler at the top of the event display in Play mode now shows bar and beat divisions for the prevailing time signature.

Scrolling, zooming and navigating. There have been significant improvements to the user experience of working with the event display in Play mode:

- The disclosure state of each track in the event display is now persistent when switching away from and back to Play mode during a single editing session (it is not yet persisted when saving and reopening the project, but this is planned).
- You can now scroll and zoom the event display with two-finger gestures if you have a multi-touch trackpad.
- Horizontal scroll and zoom of the event display is constrained, so that you cannot scroll off the start or end of the flow, or zoom out such that the flow does not occupy the whole width of the window.
- When expanding a track in the event display, the piano roll view is now centered on the range of notes played by that instrument.
- When the pointer is over the vertical piano keyboard display at the left of the event display for a track, **Shift+**mouse wheel scrolls the piano roll vertically.
- The thresholds for clicking either end of or the body of a note in the event display have been adjusted, so it's easier to select the note by clicking on it, and the mouse pointer updates as it hovers over the parts of a note to show what will happen when you click there.

Playing technique display. To visualize how Dorico maps playing techniques onto the various keyswitches and articulations provided by the VST Expression Map in use for an instrument, when you expand an instrument's track in Play mode you will now see an additional informational lane, which shows which regions will be played by different switches within the current VST Expression Map. Hover over a region of the lane for a tool tip containing more detailed information.

Support for MIDI output devices

Dorico can now play back through any connected MIDI output devices. A new **MIDI Instruments** section has been added to the right-hand panel in Play mode, allowing you to add any of your MIDI devices in a similar manner to adding a new VST instrument. Once a MIDI device has been added, you can choose to route playback from any instrument in your project to the MIDI device by editing the settings in the relevant track header on the left-hand side of the event display in Play mode.

A new **MIDI** button has been added to the toolbar in the Mixer, allowing you to show a MIDI fader for each instrument. Each MIDI fader sends MIDI controller 7 (Volume), and the pan slider above the fader sends MIDI controller 10 (Pan). You cannot solo or mute MIDI faders. (STEAM-5920)

Flows

Duplicate an existing flow. You can make a copy of a flow in your project – for example, to revise the music while maintaining the current state as a separate flow – by selecting the flow in the **Flows** panel in Setup mode, then choosing **Duplicate Flow** from the context menu.

Splitting an existing flow. You can split an existing flow into two by selecting a note or other item at the point at which you want the flow to be split, and choosing **Write** ► **Split Flow**.

Importing flows from another Dorico project. You can now import one or more flows from another Dorico project into the active project by choosing **File** ► **Import** ► **Flows**. You will be prompted to choose the source Dorico project that contains the flow or flows you want to import. A dialog appears in which you can choose which flow or flows to import from the source project, and you can also choose how Dorico should handle assigning the music in the imported flow or flows to players in the destination project:

- **Create All New Players** will create a new player in the destination project for every player assigned to the flow or flows in the source project, and will also create new part layouts as needed for those players.
- **Merge with Existing Players Where Possible** will attempt to assign the music in the imported flows to existing players. It will use an existing player provided it has the same instruments or a superset of the instruments of the player in the imported flow.

Importing a flow from a MusicXML file. When a Dorico project is open, choosing **File** ► **Import** ► **MusicXML** will import the music from that MusicXML file as a new flow in the active project. If you want to open the MusicXML file as a new project instead, choose **File** ► **Open** and open the MusicXML file that way instead. As with importing one or more flows from another Dorico project, after you choose the source MusicXML file to import, a dialog appears in which you can choose how Dorico should handle assigning the music in the imported file to players in the destination project.

Improvements

Accidentals

It is now possible to make fine adjustments to the horizontal position of an individual accidental using the new **Accidental X offset** property, which appears in the **Notes and Rests** group of the Properties panel in Engrave mode. (STEAM-6105)

Arpeggio signs

Playback. Arpeggio signs now play back, and options to control this playback are found in the new **Arpeggio Signs** group on the **Timing** page of **Playback Options**. You can control whether the arpeggiation should start or end on the beat, the speed of arpeggiation, and the maximum percentage of the written duration of the chord that can be used to accommodate the arpeggio. The new **Arpeggios Playback** group in the Properties panel also allows you to override the default playback options for an individual arpeggio sign. (STEAM-3909)

Engrave mode. It is now possible to move an arpeggio sign left or right relative to the chord to which it belongs, either by nudging it with **Alt**+left/right, dragging it with the mouse, or adjusting the **X offset** property in Engrave mode. (STEAM-5775)

Barlines

Two new options have been added to the **Barlines** page of **Engraving Options**:

- **Barline length for single-line instruments** allows you to specify by how many spaces the barline should extend above and below the single staff line, assuming it does not join with another staff above or below. (STEAM-5730)
- **Barline at end of system coinciding with start repeat** allows you to choose between showing a single or double barline at the end of one system when a start repeat barline appears at the start of the next. (STEAM-5195)

Beams

Splitting a beamed group. A new **Edit ► Beaming ► Split Beam** command has been added, which splits an existing beam group into separate groups at the positions of the selected notes. The command formerly called **Break Beam** is now called **Make Unbeamed**, to make clear what it actually does. (STEAM-5792)

Beam slants for concave shapes. New options for determining when beams should be horizontal, rather than slanting up or down, have been added to the **Advanced Options** section within the **Slants** group on the **Beams** page of **Engraving Options**.

When determining whether a beamed group of three or more different pitches should be considered concave (i.e. that the notes in the middle of the beamed group are closer to the beam than the notes at the ends of the beamed group), you can now determine whether a group should be considered concave when the inner note closest to the beam is strictly closer than the notes at the ends of the beamed group, or whether it can be at the same staff position as the notes at the ends of the beamed group. By default, inner notes at the same staff position as the notes at the ends of the beamed group will cause the beam to be horizontal, which was not the case previously; to restore the previous behavior, set **Inner note at same position as outer note** to **Do not treat as concave**.

By default, for a beamed group to be considered to have a concave shape, the inner note closest to the beam must be closer than the note at each end of the beam, i.e. closer (or at the same position as) both outer notes. If you would prefer the group to be treated as a concave shape if the inner note is closer than only one of the outer notes, set **Inner note closer to the beam than one but not both outer notes** to **Treat as concave**. (STEAM-5636)

Stem shortening. When note stems point outside the staff, which happens especially when multiple voices are active, stems are shortened as notes approach the outer lines and spaces. It is now possible to control the positions on the staff at which the shortening starts and stops, using the new options below the Stem Shortening heading in the Stems group on the Notes page of Engraving Options.

In *The Art and Practice of Music Engraving*, Ted Ross recommends that the stem length of beamed eighth notes (quavers) should be shortened by a quarter of a space for a horizontal beam, and by half a space for a slanted beam. Dorico no longer does this by default in new projects, as it makes the default stem lengths for beamed eighths shorter in comparison to unbeamed notes, but if you want to restore this behavior, set **Stem shortening for beamed groups** to **Shorten beamed stems**.

Finally, it is now possible to specify the minimum stem length separately for notes of different durations: quarter notes (crotchets) and longer; eighth notes (quavers); and 16th notes (semiquavers) and shorter. The interaction of the desired minimum stem length, shortening according to staff position, and the snapping of beam lines to valid sit/straddle/hang positions according to their ideal slants is complex.

Brackets and braces

A new option **When only one staff of braced group is shown** has been added to the **Design** group of the **Brackets and Braces** page of **Engraving Options**. When set to **Draw brace**, a brace will be drawn spanning a single staff if only one staff of a grand staff instrument such as a piano is shown on that system; when set to **Do**

not draw brace, a brace will only be drawn if both staves of the grand staff instrument are shown on that system. (STEAM-5580)

Casting off (STEAM-6139, STEAM-6140)

A new **Casting Off** section has been added to the **Staves and Systems** page of **Layout Options**, providing options to influence how Dorico casts off your music. *Casting off* is the process of determining how many and which bars appear on each system, and how many systems appear on each page. The new options in this section are as follows:

- **Fixed number of bars per system:** fixes the number of bars on the system, regardless of their width. Multi-bar rests and complete bars with open meter are counted as a single bar; if a bar with open meter is split across a system break, each portion either side of the system break is counted as a single bar. Fixing the number of bars per system is not appropriate for all kinds of music, but it is often done in music for session recording, as fixing (say) four bars per system typically allows enough room for annotations, cues, and other material to be written in by the player in the session.
- **Fixed number of systems per frame:** fixes the number of systems in each music frame; since a music frame normally occupies almost the full height of the page, this option therefore normally determines the number of systems on each page. Fixing the number of systems per frame is most often done in instrumental parts, where it is typical for there to be 10 or 11 systems per page.
- **Scale number of systems by frame height:** allows Dorico to reduce the fixed number of systems in the frame proportionally with the height of the music frame. This is useful if you generally want to have, say, 10 systems per page, but because the first page of your part includes material such as the title, composer, instrument name, etc., the height available for music is reduced compared to subsequent pages, and when using this option, Dorico can put eight or nine systems in this first frame instead.

In addition, the existing option **Allow open bars to be split across system breaks** has been moved from the **Note Spacing** page of **Layout Options**.

Clefs

French violin clef. The French violin clef (a G clef positioned on the bottom line of the staff, and where that bottom line represents G4, i.e. the G above middle C) has been added to the **Uncommon Clefs** section of the **Clefs and Octave Lines** panel.

Coloring clefs. It is now possible to change the color of clef changes using the **Color** property in the **Common** group of the Properties panel.

Copy and paste

A new **Edit ▶ Paste Into Voice** submenu has been added, making it possible to paste a selection consisting of notes and other items all belonging to a single voice into another voice, either one of the existing voices on the destination staff (in which case the pasted material will be merged with any existing material in the existing voice), or a new up-stem or down-stem voice. (STEAM-5420)

Dynamics

Dorico automatically groups abutting dynamics together when you create them, and grouped dynamics are aligned at the same vertical position below or above the staff, moving together if a note or other item protruding from the staff requires them to be moved from their default position to avoid a collision.

When you paste an individual dynamic or a group of dynamics from one staff to another, at the same rhythmic position, the dynamics are linked between those staves, which means that if you edit one of the dynamics on one staff, the other instances of that dynamic on the other staves with which it is linked will automatically update.

It is now possible to control both how dynamics are grouped and how dynamics are linked between staves. Select one or more dynamics, and use the appropriate item from the **Edit ▶ Dynamics** submenu, which can also be found in the context menu:

- **Group Dynamics:** groups the selected dynamics together; if any of the selected dynamics are already part of a group, then the groups are combined into a single larger group.
- **Ungroup Dynamics:** breaks the group of any selected dynamics; the group will be removed altogether.
- **Remove From Group:** removes only the selected dynamic or dynamics from the group, leaving the rest of the group intact.
- **Link:** links selected dynamics on multiple staves together, provided they are compatible, i.e. that they are at the same rhythmic position, and they are the same kind of dynamic (you cannot link, for example, *p* and *f*).
- **Unlink:** unlinks the selected dynamics such that they are no longer linked to dynamics on other staves. If the selected dynamic is part of a group, the group itself is unlinked from the other staves, and can then be further edited independently.

To show which dynamics are grouped and linked, when you select a dynamic, any other dynamics that are part of the same group or are linked to dynamics on another staff are drawn in blue, while the selected dynamic is drawn in the normal orange selection color. (STEAM-3528)

Engrave mode

When editing frames, it is no longer possible to select any of the items within a music frame, for consistency with the other special editing tools in Engrave mode.

It is now possible to use marquee selection for each of the special editing tools in Engrave mode, which makes it easier to select multiple frames, or multiple staff spacing handles, or multiple note spacing handles. (STEAM-5953)

It is also now possible to navigate between frame handles using the arrow keys when editing frames in Engrave mode. Press **Tab** to switch between selecting either the whole frame, whose outline is now shown using a bolder line when selected, and selecting individual handles, which are shown as filled in when selected. (STEAM-5769)

Fonts

The Noto Sans JP font family is now installed along with Dorico, and is used as the default font family for text in new projects created in the Japanese language version of Dorico. (STEAM-5865)

A new **Default text font family** option has been added to the **General** page of **Preferences**, which is set to Academico for all languages except Japanese, for which it is set to Noto Sans JP. Changing this option will change the font used by the **Default text font** font style and the **Default text** paragraph style, from which all of the other font, paragraph and character styles in your project inherit the font. (STEAM-5873)

Font styles

Font styles are used to define the appearance of various notations within Dorico: they are distinct from paragraph and character styles, which are used for text that you type into text frames or directly into the music using the **Shift+X** text tool. Font styles are used for things like lyrics, tempo marks, the text drawn in the middle of a glissando line, playing techniques, and so on.

For font families that include extended styles or weights (such as condensed, light, semibold, etc.) can now be chosen in the **Engrave ► Font Styles** dialog, enabling the use of any weight or style of any font on your computer for items like lyrics.

When opening projects created in earlier versions, Dorico will attempt to map the bold and italic flags that were used to choose bold, italic, or bold italic styles of the chosen font onto the most appropriate weight and style of the font. Note that in previous versions it was possible to choose a weight of a font that was not actually available, in which case the operating system would have synthesized a font style (e.g. if a bold weight was not available, choosing the bold option would cause a bold font to be generated on demand), which often looks poor. If a font style in an

older project requests a font weight that is not available, that font style will now be set to use the regular or normal weight of that font instead.

Beware that Windows and macOS approach font naming in very different, and largely incompatible, ways. On Windows, the list of accessible styles is hardcoded to regular, italic, bold, and bold italic, which means that fonts with extended styles instead appear in the font menu as separate fonts – for example, Adobe's Minion Pro font has regular and condensed widths, and on Windows these will appear as separate families, **Minion Pro** and **Minion Pro Cond**. On macOS, by contrast, a font like Minion Pro will appear as a single font family, with all the extended styles listed in the **Style** menu alongside regular, italic, bold, and bold italic. When moving projects between Windows and macOS computers, be aware that if you use one of the extended styles of a given font, you may need to edit the font style on the destination platform to ensure the expected style is used. (STEAM-5846)

Instrument changes

Multi-staff instruments. When a player has a combination of instruments assigned that includes both single- and multi-staff instruments, the option **Allow individual staves of multi-staff instruments to be hidden** (on the **Vertical Spacing** page of **Layout Options**) is now better integrated with hiding empty staves. When one or more staves of a multi-staff instrument are hidden, Dorico now correctly determines which staff or staves should be shown based on which staff next has any music written, to try to reduce the number of redundant changes from one staff to another on different systems. (STEAM-5688)

Vertical position of labels. A new option **Minimum distance above items outside staff for instrument change labels** has been added to the **Instrument Changes** page of **Engraving Options**, controlling the vertical gap that Dorico should leave when an instrument change label is pushed away from the staff by an item protruding above the staff. (STEAM-5927)

Key commands (STEAM-5977)

You can now use your MIDI keyboard to trigger commands within Dorico. Ensure that you have a project open, then open the **Preferences** dialog and go to the **Key Commands** page. For the command to which you want to assign a MIDI trigger, click **MIDI Learn**, then play the note or chord or hit the button or pad that you want to be mapped to this command, and click **Add MIDI Command** to save the new trigger. Rotary controls and faders are not currently supported.

Key signatures

Signposts for key signatures. Key signatures that show no accidentals, such as a key signature of C major or A minor, or a change to such a key in a project in which cancellation naturals at key changes are not shown, now appear as signposts. To

hide these signposts, switch off **View ▶ Signposts ▶ Key Signatures**. Note that to copy and paste a key signature, or a passage of music including a key signature, the signpost must be visible and selected to be included in the copy and paste operations. (STEAM-5342)

Naturals in custom key signatures. Custom key signatures can now include natural accidentals if needed. (STEAM-5645)

Lyrics

A new option **Systems on which verse numbers appear** has been added to the **Verse Numbers** group on the **Lyrics** page of **Engraving Options**, allowing you to specify whether verse numbers should be shown at the start of each line of lyrics only on the first system, or on all systems, as sometimes done in hymnals. (STEAM-5735)

MIDI import

Instrument detection. The mapping of tracks in imported MIDI files onto instruments has now been significantly improved. (STEAM-6271)

Clean lengths. The import of note durations has been significantly improved: notes that overlap or are separated by a small amount are now notated as abutting, rather than overlapping or separated by rests of very short durations. The detection and quantization of tuplet rhythms has also been significantly improved.

MusicXML import

A new **MusicXML Import** page has been added to the **Preferences** dialog, allowing you to choose what information should be retained when opening a MusicXML file as a new project or when importing it as a new flow into an existing project.

Now that it is possible for you to choose what information is retained, Dorico now retains less information by default: explicit rests are not imported, meaning that rest grouping will use Dorico's defaults; explicit accidentals are not imported, meaning that which notes show accidentals will be determined by the prevailing notation options; forced durations are not imported, meaning that how notes are broken up into tie chains will be determined by the prevailing notation options; and rest positioning is not imported, meaning that rests will be vertically positioned relative to the staff according to the prevailing notation options.

Navigation

A new **Edit ▶ Go To** submenu has been added, containing some basic commands for navigating around your project. **Go To Bar**, with the default key command **Ctrl+G** (Windows) or **Command-G** (Mac), allows you to navigate to a bar within

one of the flows in your project. **Go To Previous Flow** and **Go To Next Flow** navigate to the start of the previous or next flow. (STEAM-6115, STEAM-6116)

Note input

The perceived latency of input via MIDI keyboard is now much lower: the notes that you play on your keyboard are now echoed back to you immediately, rather than being played back at a fixed length after the note has been input. The echoed note may be transposed depending on the transposition of the instrument onto whose staff you are inputting, and the current state of the **Write ► Input Pitch** options. (STEAM-5290)

Note spacing

The option **Minimum distance between adjacent rhythmic items** on the **Spacing Gaps** page of **Engraving Options** now has a different effect than in previous versions.

Previously the value specified by this option was almost never used in practice, because it was applied from the left-hand side of one spacing column and the left-hand side of the next: because almost all spacing columns contain an item wider than this minimum (e.g. a notehead), in fact the distance between two items at adjacent rhythmic positions was a tiny value, around 1/20 of a space. This meant that, for all intents and purposes, that successive columns could practically touch. This was particularly noticeable, for example, with tightly-spaced notes on ledger lines, as the ledger lines would appear to touch.

Now, the value is applied from the right-hand extent of one spacing column to the left-hand extent of the next, which ensures that successive rhythmic items – such as tightly-spaced notes on ledger lines – no longer appear to touch. (STEAM-3803)

Options

Dorico's five options dialogs – **Layout Options**, **Notation Options**, **Note Input Options**, **Engraving Options**, and **Playback Options** – all provide buttons to save the current set of options as the defaults for new projects.



A suite of improvements in this update allow you to reset back to your saved defaults if you have made changes in the dialog that you later decide you want to discard; reset back to the factory defaults (i.e. ignoring your saved defaults); and remove your saved defaults so that new projects created thereafter will use the factory defaults.

A new button **Reset to Saved Defaults** appears in the button bar at the bottom of each dialog; this button will read **Reset to Factory** if you have not yet saved any default settings for that dialog. If you have saved user defaults but want to reset to

the factory defaults instead, you can hold **Ctrl** (Windows) or **Command** (Mac) and click the button (which will instead say **Reset to Factory** while the **Ctrl/Command** key is held down).

To remove saved defaults, if saved user defaults are found, holding **Ctrl/Command** will cause the **Save as Default** button to read **Remove Saved Defaults** instead, and clicking that button will delete the saved user defaults. (STEAM-5883)

Ornaments

The naming of the default ornaments shown in the **Baroque and Classical** section of the **Ornaments** panel has been corrected. , which was previously named “mordent”, is now named “short trill”; , which was previously named “inverted mordent”, is now named “mordent”. (STEAM-5849)

The ornaments shown in *Clavier-Büchlein vor Wilhelm Friedemann Bach* by J.S. Bach have also been added to the **Baroque and Classical** section of the **Ornaments** panel, together with the Haydn ornament, the long *schleifer* ornament, and a few of the more common ornaments used by Couperin.

Page layout

Copying frames between pages. When editing a pair of master pages, you can now copy the layout from the left-hand page to the right-hand page or vice versa by clicking the appropriate **L→R** or **R←L** button in the toolbar at the top of the master page editor.

Furthermore, you can also copy any selected frame or frames to other pages in your layout as follows:

- Enable the frame editing tool by clicking the switch at the top of the **Frames** section of the left-hand panel in Engrave mode.
- Select the frame or frames you want to copy to another page.
- Select the page or pages to which you want the selected frames to be copied in the **Pages** panel on the right-hand side. Select multiple pages using **Ctrl+click**.
- Right-click in the **Pages** panel to show the context menu, and choose **Copy Selected Frames to Selected Pages**. (STEAM-5813)

Moving page overrides. It is now possible to move multiple selected overridden pages in the **Pages** panel in Engrave mode and move them earlier or later, which swaps the selected range of overridden pages with the pages immediately to their left or right. To move a range of pages by a larger distance, right-click the **Pages** panel and choose **Move Pages** from the context menu to open a simple dialog from which you can choose the page before or after which the selection of pages should be moved to. (STEAM-6196)

Disabling automatic adjustment of staff spacing. If you would prefer Dorico never to adjust the distances between staves and systems from the ideal values specified in **Layout Options**, switch off the new **Automatically resolve collisions between adjacent staves and systems** option in the **Minimum Gaps** section of the **Vertical Spacing** page. (STEAM-6229)

Improved vertical justification. When justifying the gaps between systems, Dorico now considers whether the distance between successive systems is already larger than the ideal distance specified on the **Vertical Spacing** page of **Layout Options**, and if so, it prefers to add the remaining unjustified space between systems that currently have smaller gaps, to produce an overall more even result. (STEAM-6197)

Playback

Score following during playback. Dorico now automatically moves the music to keep the playhead in view during playback in Setup, Write and Engrave modes. (STEAM-3943)

VST 2.x plug-ins. The process of whitelisting VST 2.x plug-ins so that they can be used with Dorico has been simplified. Firstly, in addition to the default **vst2whitelist.txt** file that is included with your Dorico installation, listing those VST 2.x plug-ins that Steinberg have qualified for use with Dorico, a second **vst2whitelist.txt** file can now be loaded from a user-specific location that will not be overwritten if you subsequently update or reinstall Dorico. When Dorico starts up, it reads both the default whitelist file and your user-specific whitelist file to build up the list of whitelisted plug-ins.

If you want to whitelist any VST 2.x plug-ins that are not included on the default whitelist, you should place your own **vst2whitelist.txt** file here:

- Win: C:\Users\username\AppData\Roaming\Steinberg\VSTAudioEngine_64
- Mac: /Users/username/Library/Preferences/VSTAudioEngine

Secondly, the **vst2whitelist.txt** file now need contain only the filename of the VST plug-in to be whitelisted, minus its file extension (**.dll** on Windows and **.vst** on Mac), with the name of each plug-in on its own line in the text file. (AD-293)

Dynamics playback. Playback sounds in the HALion Sonic SE library provided with Dorico that use VST Note Expression for dynamics (including saxophone, choir, and others) now use MIDI controller 11 (Expression) by default, which allows them to play dynamics until Dorico supports VST Note Expression, which is planned for a future update. (STEAM-5933)

Playing techniques

Creating playing techniques. It is now possible to input a playing technique either via the **Shift+P** popover or the **Playing Techniques** panel while the caret is visible: the chosen playing technique will appear immediately after it is input, rather than only appearing once a note or chord has been input at that rhythmic position.

(STEAM-4943)

Additional playing techniques. Some new playing techniques are available in new projects, including m.d./m.s. (*mano destra/mano sinistra*) in the **Keyboard** section, text versions of the common mutes in the **Brass** section, *con bocca chiusa* in the **Vocal** section, and air/Aeolian/key clicks in the **Wind** section.

Rests

It is now possible to nudge a selected rest up or down by a small amount using the **Offset Y** property in the **Common** group of Properties, which appears only in Engrave mode. For dotted rests, only the main rest shape will be affected by the offset, so the rhythm dot or dots will remain in the space in which they are currently positioned. If you need to move a rest by one or more whole spaces, use the **Rest pos.** property in the **Notes and Rests** group instead: when using this property, rhythm dots will snap to the space closest to the rest. (STEAM-6350)

Selections

Where two or more items overlap, or are superimposed, it is now possible to select each item in turn by hold **Alt+Shift** and clicking. (STEAM-3816)

Slurs

- A new **Tied Notes** group has been added to the **Slurs** page of **Engraving Options**, with options to determine whether slurs should start or end on the first or last note in the tie chain. These options can also be overridden for an individual slur by setting the **Start pos. on tie chain** or **End pos. on tie chain** properties as appropriate. (STEAM-5144, STEAM-6024)
- A new option **Slurs starting on the last note or ending on the first note of a beamed group** has been added to the **Endpoint Positioning** group of the **Slurs** page of **Engraving Options**, allowing you to specify whether slur endpoints should be positioned as if the notes are unbeamed (in which case the slur endpoint will be positioned closer to the notehead) or as if they are beamed (in which case it will be positioned closer to the stem tip). (STEAM-5772)
- When adjusting the position of either end of a slur in Engrave mode with the mouse, you can hold **Alt** to rotate the slur instead of moving only the selected endpoint, which maintains the slur's shape. (STEAM-5770)
- The calculation used for **Maximum angle for slurs** is now relative to a horizontal slur, rather than relative to the angle between the first and last note

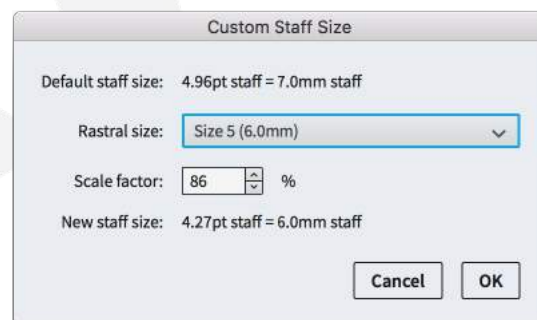
under the slur. A new option **Maximum angle for cross-staff slurs** has also been added, set to a larger angle by default. (STEAM-5771)

Staff labels

A new option **Minimum indent for systems with staff labels** has been added to the **Staves and Systems** page of **Layout Options**. When a system is set to show staff labels, now the indent of the system is determined by the width of the widest staff label or the value of this option, whichever is the wider; if this is the first system, then the value of **Indent first system of flow** is then added on top. In this way, it is possible to obtain a uniform indent for each system even when the staff labels change. (STEAM-6026)

Staves

A new **Custom Staff Size** dialog has been added to the **Edit ► Staff Size** submenu, allowing you to change the size of the staves belonging to a player to any percentage scale factor. Select any note or chord in any of the staves belonging to the player whose staves you want to resize, then open this dialog.



Choose one of the preset sizes from the **Rastral size** menu, or specify a custom scale percentage. The resulting staff size is shown in the preferred unit of measurement (as specified in Preferences). Click **OK** and the sizes of all the staves belonging to the instruments held by that player are updated. (STEAM-5659)

Text

System text. It is now possible to create text items that will appear at the system object positions defined on the **Players** page of **Layout Options**, and in all layouts, by choosing **Write ► Create System Text**, which has the default key command **Shift+Alt+X**. System-attached text also splits multi-bar rests. (STEAM-5583)

Font size in part layouts. Each paragraph style can now optionally define a separate size for part layouts. (STEAM-5582)

Time signatures

Inserting time signatures. When adding a time signature with Insert mode switched on, time is inserted before any later time signature to ensure that the bar prior to the later time signature is always the correct length. (STEAM-6279)

Dashed barlines in aggregate time signatures. When creating an aggregate time signature, where a sequence of time signatures exists within a single bar, you can choose whether the subdivisions within the bar should be separated with a dashed barline when creating the time signature in the **Shift+M** popover. To show the dashed barline, separate each time signature with | (pipe); to hide the dashed barline, instead use : (colon). By way of example, **4/4|3/4** will show a dashed barline, while **2/4:3/4** will not. (STEAM-5633)

Tokens

It is now possible to use tokens that correspond to specific flows inside text frames. For example, to show the title of the third flow, use the token **{@flow3title@}**. To find out what number to insert in the token, look at the **Flows** panel in Setup mode, which shows the flow number in the bottom right-hand corner of the block corresponding to each flow. (STEAM-5818)

Tuplets

A new **Repeated Tuplets** group has been added to the **Tuplets** page of **Engraving Options**, containing new options that allow the tuplet ratio and bracket for successive identical tuplets to be hidden automatically. To hide such tuplets, set **Successive tuplets of the same unit and ratio** to **Hide ratio and bracket**; the tuplet ratio and bracket of repeated tuplets will then be hidden after the number of tuplets specified in **Number of repeated tuplets before ratio and bracket can be hidden** have been encountered. The final option in this group allows you to specify whether tuplets should continue to be hidden if the pattern of repeated tuplets is broken, for example by a rest or notes not part of the tuplet pattern. (STEAM-5734)

User interface

- A new **View ▶ Zoom ▶ Custom Zoom** dialog has been added, with key command **Alt+Z** (also accessible by clicking the little magnifying glass icon in the status bar, next to the button showing the current zoom level), allowing you to quickly zoom to any magnification. Type **Alt+Z** to open the dialog, type the desired zoom level (or use the up and down arrows to increase or decrease the current zoom level in increments of 25%), and hit **Return** to confirm the change. (STEAM-5783)
- The operation of the hand tool has been improved: when using the hand tool to move the music around on the screen, the selection is not changed, which makes it practical to use the hand tool to make a selection that ends outside the current view. (STEAM-5918)
- When attempting to open a project that is already open, a window belonging to that project is now brought to the front. (STEAM-5709)

- An extra page has been added to the end of the guided tour for each mode, telling you how to view it again. If you would like to review the guided tour for any of Dorico's five modes, simply choose **Help ► Guided Tour**. (STEAM-5509)
- **Window ► Previous Mode** is now implemented, allowing you to quickly toggle between the current mode and the previously chosen mode. You can also assign a key command to this function in **Preferences** for quicker access. (STEAM-5981)
- A new option **Double-click in Setup or Engrave mode switches to Write mode** has been added to the **General** page of **Preferences**. Switch this option off if you would prefer that double-clicking within a music frame in Setup or Engrave mode should not switch to Write mode and start note input. (STEAM-4529)
- It is now possible to assign key commands to the three special editing modes in Engrave mode, i.e. frame editing (**Edit, Edit Frames**), staff spacing (**Engrave, Edit Staff Spacing**), and note spacing (**Edit, Edit Note Spacing**). (STEAM-5815)
- Properties that properly apply only to music in a specific frame chain are no longer misleadingly shown as if they apply when viewing music in galley view. (STEAM-6261)
- It is now possible to use comma (,) as a decimal separator in the spin controls that display spaces in fractional values in the Properties panel and the options dialogs. (STEAM-6251)

Voices (STEAM-5201)

New options have been added to the **Edit ► Voice** submenu:

- **Swap Voice Contents** swaps the voices used by the notes and chords in the selection.
- **Change Voice** allows you to change the voice used by the notes and chords in the selection, listing the voices already in use on the staff (in which case the selected notes and chords will be merged into the existing notes and chords of that voice), and allowing you to change notes into a new up-stem or down-stem voice as needed.

Both editing operations affect only the first selected instrument: if you select music from multiple instruments, the remaining instruments' music will be unaffected.

Furthermore, **Swap Voice Order** (which changes the graphical order of opposing two voices, allowing you to position them either head-to-head or stem-to-stem as you wish) has been moved from the **Edit ► Stem** submenu to the **Edit ► Voice** submenu.

Performance

Deleting and reordering flows in Setup mode is now significantly faster. (STEAM-5643)

Installation

When downloading Dorico via the Steinberg Download Assistant, Dorico is now delivered as three separate packages for your convenience: the main application installer, the HALion Sonic SE plug-in and its content, and the HALion Symphonic Orchestra content. It is still strongly recommended that all three packages should be installed on your computer for correct operation of Dorico. Even if you already have HALion Sonic SE or HALion Symphonic Orchestra installed, it is recommended that you run the installers provided with Dorico, as they may include required updates to the plug-ins or content. Your existing installation will be detected and updated to avoid duplicating the content on your system.

Troubleshooting

A new option **Help ► Create Diagnostic Report** has been added, which creates an archive called **Dorico Diagnostics.zip** and saves it to your desktop. If you are encountering any technical problems when using Dorico relating to the application crashing, or problems with audio and playback devices, please consider including the **Dorico Diagnostics.zip** file when you contact support or when you post your query to the user forum, as this archive contains useful information that may allow Steinberg staff to diagnose and resolve your problem more quickly.

Issues resolved

ID #	Component	Issue
STEAM-5488	<i>Arpeggio signs</i>	Copying and pasting music with arpeggio signs now correctly retains the arpeggio signs in the pasted material.
STEAM-5549	<i>Arpeggio signs</i>	Arpeggio signs are no longer incorrectly removed when using the Change Instrument feature to change one instrument held by a player into another.
STEAM-5800	<i>Arpeggio signs</i>	Adding a cross-staff arpeggio sign in situations where either or both staves include notes in multiple voices now correctly creates the arpeggio across all voices.
STEAM-5896	<i>Articulations</i>	Articulations no longer incorrectly avoid ties that are on the opposite side of the notehead to the articulations themselves.
STEAM-5118	<i>Bar numbers</i>	Bar numbers drawn at the start of the system no longer incorrectly move horizontally when a start repeat barline appears at the start of the system.
STEAM-5332	<i>Barlines</i>	Special barlines no longer show a redundant time signature signpost if they do not also coincide with a change of time signature.
STEAM-6172	<i>Barlines</i>	Start repeat barlines at the start of the flow now draw as expected in galley view.
STEAM-6224	<i>Barlines</i>	Adding a barline (e.g. a double or start repeat barline) with an existing barline selected no longer causes the new barline to be added one bar later than expected.
STEAM-4768	<i>Bars</i>	Adding bars via the Shift+B popover now correctly considers the prevailing alternating time signature, if any.
STEAM-5705	<i>Bars</i>	Deleting bars via the Shift+B popover now correctly considers any ongoing octave lines, lyrics, and grouped dynamics.
STEAM-6163	<i>Bars</i>	When deleting bars via the Shift+B popover, a time or key signature at the beginning of the first bar to be deleted, that time or key signature is no longer deleted.
STEAM-6267	<i>Bars</i>	If the caret is positioned in the middle of a bar when deleting bars via the Shift+B popover, the bar in which the caret is positioned is now completely deleted.
STEAM-5592	<i>Brackets and braces</i>	Creating, deleting or otherwise editing a player group in Setup mode now correctly updates the brackets and braces in the score immediately.
STEAM-4751	<i>Dynamics</i>	The handles that appear in Engrave mode for hairpins have been improved, such that they follow the mouse more closely during drag operations.
STEAM-5295	<i>Dynamics</i>	Cutting and pasting dynamics that are part of a group now works more reliably, with the dynamics offset correctly when pasted.
STEAM-5295	<i>Dynamics</i>	Cutting and pasting dynamics that are linked together now works more reliably.
STEAM-5761	<i>Dynamics</i>	Using Alt +click to repeatedly copy dynamics no longer results in duplicate dynamics being created.
STEAM-5971	<i>Dynamics</i>	Dynamics at grace note rhythmic positions now track the mouse pointer correctly when dragging them in Engrave mode.

ID #	Component	Issue
STEAM-6123	<i>Dynamics</i>	When entering dynamics into the Shift+D popover while the caret is visible, advancing the popover with Space will now correctly only extend a hairpin if it was the final dynamic entered into the popover.
STEAM-4813	<i>Flows</i>	Adding more than 79 flows to a single project no longer causes a crash (Windows only).
STEAM-6169	<i>Grace notes</i>	Attempting to set the Grace note before barline property on a grace note at the very start of the flow no longer causes Dorico to crash.
STEAM-5731	<i>Holds and pauses</i>	Fermatas on barlines now draw in the correct position relative to barlines on single-line percussion instruments.
STEAM-5732	<i>Holds and pauses</i>	Fermatas on barlines are now positioned correctly if the barline results from a local time signature (i.e. one specific to a single staff).
STEAM-5733	<i>Holds and pauses</i>	The option Gap to right of caesura in the Horizontal Position group of the Holds and Pauses page of Engraving Options now works as expected.
STEAM-6104	<i>Holds and pauses</i>	Reset Position now takes effect immediately for a selected fermata, caesura or breath mark, rather than only appearing to take effect after another nearby edit.
STEAM-6117	<i>Holds and pauses</i>	A problem whereby a fermata over a barline could drift further and further away from the staff during editing in galley view has been resolved.
STEAM-6147	<i>Holds and pauses</i>	Fermatas positioned on barlines now break multi-bar rests in the correct position.
STEAM-5644	<i>Instrument changes</i>	A redundant key signature no longer appears if the point at which an instrument change occurs coincides with a key change.
STEAM-5686	<i>Instrument changes</i>	Changing between a multi-staff instrument and a single-staff instrument no longer unnecessarily shows a clef if one of the staves is hidden because it is empty, and it shows the same clef as the existing staff.
STEAM-5757	<i>Instrument changes</i>	When an instrument change occurs at the end of a system, the required clef change and, if the transposition of the new instrument is different, the required key signature now correctly appear.
STEAM-5758	<i>Instrument changes</i>	If all the notes belonging to an instrument in a given system have been crossed to another staff, and the option to allow some staves belonging to an instrument to be hidden is enabled, the destination staff is now shown correctly, so that the notes appear.
STEAM-5765	<i>Instrument changes</i>	A problem whereby redundant instrument change labels would appear during note input close to the point at which the instrument transition occurs has been resolved.
STEAM-5777	<i>Instrument changes</i>	When one staff of a grand staff instrument is hidden and the single staff shown changes from one system to the next, Dorico no longer shows redundant clef changes.
STEAM-4787	<i>Key signatures</i>	It is now possible to add microtonal accidentals when using a traditional Western key signature, provided the current tonality system's EDO value is divisible by 12.
STEAM-6301	<i>Key signatures</i>	Under rare circumstances, deleting a key signature on a single staff could cause a crash. This problem has now been resolved.
STEAM-5859	<i>Layouts</i>	Layouts whose names have not been explicitly overridden will now correctly update when the instruments attached to their associated players are changed after a project has been saved and reopened.

ID #	Component	Issue
STEAM-5928	<i>Localization</i>	Some key commands that were defined in the English version of Dorico but were missing from the localized versions have now been restored.
STEAM-6221	<i>Localization</i>	The names of font, paragraph and character styles are now correctly translated in the relevant editing dialogs.
STEAM-6289	<i>Localization</i>	When running in a language other than English, OS-provided dialogs such as Open and Save are now fully translated (Mac only).
STEAM-6268	<i>Lyrics</i>	In rare circumstances, dragging a lyric hyphen could cause Dorico to crash. This problem has now been resolved.
STEAM-6269	<i>Lyrics</i>	Lyric extender lines and hyphens now draw in the correct positions if they cross a system break in the middle of a bar, or in open meter.
STEAM-4171	<i>MIDI import</i>	The detection and quantization of tuplets in MIDI files has been significantly improved.
STEAM-5285	<i>Mixer</i>	The Mixer window now correctly updates immediately in response to changes to players and instruments made in Setup mode.
STEAM-6217	<i>Multi-bar rests</i>	Multi-bar rests will no longer collide with key signatures or time signatures at either end of the bar when spacing is tight.
STEAM-6347	<i>Multi-bar rests</i>	Multi-bar rests are now positioned correctly above single-line percussion instruments.
STEAM-6369	<i>Multi-bar rests</i>	A double or other special barline in the middle of a bar now correctly causes a multi-bar rest to be split.
STEAM-4892 STEAM-5807	<i>MusicXML import</i>	Numbered instruments are now imported more intelligently from MusicXML files.
STEAM-6089	<i>MusicXML import</i>	The Ends voice property is no longer set on the final note in each voice in an imported MusicXML file, which could cause rests not to appear when adding more music at the end.
STEAM-5706	<i>Navigation</i>	Navigating with the right arrow in galley view no longer sometimes fails to navigate onto a rest.
STEAM-5710	<i>Navigation</i>	Navigating with the up and down arrows in a single-staff layout in galley view will no longer sometimes incorrectly navigate horizontally.
STEAM-1995	<i>Note input</i>	Using chord mode to add notes to existing notes and chords no longer incorrectly removes articulations that were originally present.
STEAM-4869	<i>Note input</i>	Using Alt +left/right to move notes by the current rhythmic grid resolution now handles tuplets correctly.
STEAM-5234	<i>Note input</i>	Inputting a rest by playing a note or chord on a MIDI keyboard with rest input engaged after having previously input a chord now correctly inputs a rest, rather than the note or chord played.
STEAM-5571	<i>Note input</i>	Creating octave lines, gradual tempos, and gradual dynamics based on the selection now always produces a line of the expected duration at the rhythmic start of the selection.
STEAM-5678	<i>Note input</i>	Step input from a MIDI keyboard no longer causes a crash when inputting into a score using a tonality system other than 12-EDO.

ID #	Component	Issue
STEAM-5805	<i>Note input</i>	Changing the order of players in Setup mode is now correctly reflected in the order in which staves are visited when you move the caret up and down between staves in galley view.
STEAM-5805	<i>Note input</i>	Changes made to the order of players and instruments in Setup mode are now correctly reflected in the order in which staves are navigated by the caret during note input in galley view.
STEAM-5950	<i>Note input</i>	Double-clicking a note above the top of the top staff or below the bottom staff in the system now shows the caret correctly.
STEAM-5952	<i>Note input</i>	Deleting a tuplet with an expanding ratio (e.g. 2:3 rather than 3:2) no longer incorrectly deletes any adjacent tuplets.
STEAM-6041	<i>Note input</i>	Moving the caret left now always correctly navigates to the nearest rhythmic grid position, rather than to the last note in the voice.
STEAM-6234	<i>Note input</i>	Copying and pasting system and frame breaks, and note spacing changes, from one layout to another now retains the relevant properties in the new copies.
STEAM-6246	<i>Note input</i>	Using a MIDI keyboard to input notes in a layout-specific music frame would previously ignore the accidentals played on the keyboard. This problem has now been resolved.
STEAM-6246	<i>Note input</i>	Using a MIDI keyboard to input into a layout-specific frame chain (rather than the main music frame chain from the master page) now inputs notes with accidentals correctly.
STEAM-6319	<i>Note input</i>	Using Alt +up/down arrow to change the pitch of notes in a frame chain with a player filter applied now works correctly.
STEAM-5812	<i>Noteheads</i>	When copying and pasting notes that use a different notehead type, the changed notehead type is now correctly retained in the pasted material.
STEAM-5843	<i>Notes</i>	It is now possible to set the stem direction of a note in a project created by importing a MusicXML file directly, without first removing its forced stem direction.
STEAM-5720	<i>Octave lines</i>	It is now possible to nudge octave lines using Alt and the arrow keys (or use Ctrl+Alt for larger steps) in Engrave mode.
STEAM-6078	<i>Octave lines</i>	Under rare circumstances it was possible for dotted octave lines of a certain length to draw as solid lines. This problem has been resolved.
STEAM-5878	<i>Ornaments</i>	Changing an existing glissando line from drawing with a straight line to drawing with a wiggly line now correctly immediately updates the appearance of the line.
STEAM-4497	<i>Page layout</i>	Setting the Space size property on a system or frame break now results in the initial value (of 4.96pt, equivalent to a 7mm/0.28" staff) taking effect immediately.
STEAM-5535 STEAM-5911	<i>Page layout</i>	Editing the Wait for next frame/system break properties for a selected frame or system break now causes the casting-off of the layout to be updated immediately.
STEAM-5624 STEAM-5826	<i>Page layout</i>	Changing the order of frames within a chain of music frames now works reliably.
STEAM-5669	<i>Page layout</i>	Deleting a flow in a project with multiple flows no longer sometimes causes all music in a layout to stop drawing, if one of the music frame chains in the layout was set to show only the flow that has subsequently been deleted.

ID #	Component	Issue
STEAM-5755	Page layout	Under some circumstances, changing the vertical position of a rest could incorrectly cause the staff spacing to widen, or dynamics to move unnecessarily. These problems have been resolved.
STEAM-5819	Page layout	Under rare circumstances, it was possible for Dorico to crash when changing the frame chain to which a music frame belongs. This problem has been resolved.
STEAM-5910	Page layout	Inserting blank pages before the page containing the first page of a flow no longer sometimes causes the start of the flow to be missing from the music frame chain.
STEAM-5923	Page layout	Locking the contents of a single music frame containing music from multiple flows now works correctly.
STEAM-5930	Page layout	Attempting to lock a system or frame with a system or frame break signpost selected will no longer cause a crash.
STEAM-6151	Page layout	Lock System will no longer lock the wrong system if you select a clef, key signature, or time signature at the end of the system to specify the end of the system to be locked.
STEAM-6311	Page layout	After adjusting staff spacing, undo now correctly only undoes the last spacing adjustment, rather than clearing spacing adjustments.
STEAM-6317	Page layout	Under some circumstances, deleting an item that causes the casting-off of the music to change, then undoing that deletion, would not return to the original casting off. This is fixed.
STEAM-5760	Performance	When your computer is connected to wifi, Dorico no longer polls the available networks every 10 seconds, which can in some circumstances result in high network latency.
STEAM-5963	Play mode	When a note is partially scrolled out of view in the event display in Play mode, it no longer incorrectly shows a border at its left-hand side, making it appear it starts at that position.
STEAM-6063	Play mode	Changing the settings in an instrument's track header no longer incorrectly causes the event display to scroll back to the beginning.
AD-244	Playback	A problem whereby the ports in the chosen audio device could become disconnected, causing no sound to be heard on playback, has been fixed.
STEAM-4803	Playback	When choosing a different audio device in the Device Setup dialog, the list of sample rates is now correctly updated to show the sample rates supported by the active device.
STEAM-4806	Playback	If you attempt to choose an audio device that is currently unavailable in Device Setup , Dorico will no longer incorrectly show you that this device is chosen, instead showing you the device that is actually in use.
STEAM-5553	Playback	Articulations such as staccato, accent etc. now only affect notes in the voice to which they belong.
STEAM-5718	Playback	Short appoggiaturas before dotted notes now play back with the correct length.
STEAM-5719	Playback	Grace notes before the beat now always correctly truncate the preceding rhythmic note in playback.
STEAM-5727	Playback	Short (unmeasured) grace notes that coincide with a change of tempo now play back with the correct length.
STEAM-5748	Playback	Notes played as keyswitches defined in expression maps for octave-transposing instruments are no longer themselves incorrectly transposed by one or more octaves.

ID #	Component	Issue
STEAM-5749	<i>Playback</i>	Measured two-note tremolos now play back with the correct duration for notes of an eighth (quaver) and shorter in duration.
STEAM-5756	<i>Playback</i>	When multiple projects are open, the playhead now only moves in the project that is playing back.
STEAM-5837	<i>Playback</i>	The playhead no longer incorrectly jumps back to the start of the system it has just finished playing before proceeding to the next system.
STEAM-5407	<i>Playback</i>	Hitting the button to rewind to the beginning in the Transport during playback now correctly restarts playback from the start of the flow.
STEAM-5851 STEAM-5802	<i>Playback</i>	Notes with tremolos or arpeggio signs within slurs no longer sometimes fail to play back correctly because of the Playback Options to humanize the start positions of notes.
STEAM-5982	<i>Playback</i>	After changing the endpoint for an instrument in Play mode, manually assigning an endpoint for a newly-created instrument would result in no playback. This problem has now been fixed.
STEAM-5982	<i>Playback</i>	Players and instruments added to your project after you have overridden the VST instrument or MIDI output used by an existing instrument in your project will now be played back correctly.
STEAM-6072	<i>Playback</i>	MIDI program changes defined as actions in VST Expression Maps are now output correctly during playback.
STEAM-6128	<i>Playback</i>	Program changes arising from switches in VST Expression Maps are now output before all notes at that rhythmic position.
STEAM-6290	<i>Playback</i>	If you start playback immediately after selecting a note, that note no longer sometimes incorrectly holds on after playback has started.
STEAM-5747	<i>Players</i>	Single letters such as I or A at the end of an instrument's name will no longer incorrectly be interpreted as a Roman numeral and converted into a number.
STEAM-4942	<i>Playing techniques</i>	Changing the properties of one or more selected playing techniques now correctly updates the appearance of the playing technique across its whole range.
STEAM-4943	<i>Playing techniques</i>	When entering playing techniques using the Shift+P popover during note input (i.e. when the caret is visible), the chosen playing technique now appears immediately after confirming the popover, rather than after a note has been input at that rhythmic position.
STEAM-5768	<i>Playing techniques</i>	Text playing techniques are no longer incorrectly scaled to a smaller size when attached to grace note positions.
STEAM-5389	<i>Printing</i>	When selecting multiple layouts to be printed or to be exported as graphics, all pages of all selected layouts are now correctly printed or exported under all circumstances.
STEAM-5791	<i>Printing</i>	Rests are no longer incorrectly printed in color when the View options to show Voice colors or Implicit rests are switched on.
STEAM-5561	<i>Rests</i>	Setting the color of a bar rest via Properties now correctly updates the score immediately.
STEAM-5701	<i>Rests</i>	Changing the number of empty bars at the end of a flow no longer incorrectly causes the <i>tacet al fine</i> multi-bar rest to disappear if shown.

ID #	Component	Issue
STEAM-5680	<i>Selections</i>	Using Shift +left/right arrow to extend block selections now works in any music frame chain, not only the main music frame chain from the master page.
STEAM-6320	<i>Selections</i>	Select All now works correctly in any music frame chain, not only the main music frame chain from the master page.
STEAM-5746	<i>Slurs</i>	Setting the End offset property for a single-segment slur no longer incorrectly also sets the End handle offset property.
STEAM-5832	<i>Slurs</i>	It is no longer possible to create zero-length slurs (for example, by selecting multiple notes of the same chord and hitting S), which can cause the placement of other items, like articulations, to be incorrect.
STEAM-6134	<i>Slurs</i>	It is no longer possible to create linked slurs across multiple staves that do not start and end at the same rhythmic position.
STEAM-5101	<i>Staff labels</i>	Changing the Staff labels paragraph style now correctly updates the appearance of the staff labels in the score.
STEAM-4614	<i>Tempo</i>	Tempo marks are now correctly aligned at the start of a bar with a special barline but no time signature.
STEAM-5693	<i>Tempo</i>	If a tempo item's properties are set such that no printable text will appear (e.g. the text is empty, and the metronome mark is hidden), a signpost will now always appear.
STEAM-6113	<i>Tempo</i>	Tempo marks are no longer sometimes incorrectly offset to the right in galley view.
STEAM-5552	<i>Text</i>	Double-clicking a text item in Setup or Engrave mode now switches to Write mode before opening the editing popover.
STEAM-5856	<i>Text</i>	Changing the name of a player in Setup mode now correctly immediately updates any text items in the score that are using the {@playerName@} token.
STEAM-5875	<i>Text</i>	Changing a font style now correctly shows the effect on any styles that inherit from it without having to confirm and reopen the Font Styles dialog.
STEAM-5786	<i>Time signatures</i>	If a bar is split either side of a system break, the time signature no longer incorrectly draws at the start of the second system.
STEAM-5890	<i>Time signatures</i>	The signpost text that appears for an aggregate time signature now correctly shows the broken pipe character that indicates the dashed barline subdivisions between the different time signatures.
STEAM-6020	<i>Time signatures</i>	The Pick-up bar of control in the Create Time Signature section of the Time Signatures panel now correctly creates a pick-up bar using the beat length of the time signature to be created, not a fixed quarter note (crotchet) beat length.
STEAM-5745	<i>Tremolos</i>	Strokes on one-note tremolos no longer sometimes draw too close to the notehead.
STEAM-5696	<i>Tuplets</i>	The ratio for a hidden triplet number shown in the signpost now matches the ratio that will be shown when the triplet number is shown, rather than its lowest common denominator.
STEAM-5704	<i>Tuplets</i>	If triplets are hidden by way of the options in Engraving Options , an appropriate signpost will now always appear.

ID #	Component	Issue
STEAM-2201 STEAM-1786	<i>User interface</i>	All items in Dorico's panels now draw at the correct high-resolution pixel density on high-DPI or Retina displays. Previously some panel items were still drawing in low resolution.
STEAM-5299	<i>User interface</i>	The Expression Maps dialog now correctly shows which expression map is loaded when the dialog opens by selecting it in the left-hand list.
STEAM-5517	<i>User interface</i>	To make it clear that you cannot transpose up or down when transposing by a unison, but rather can only transpose by a quality, e.g. augmented or diminished, the Up and Down buttons are now disabled in Write ▶ Transpose when transposing by a unison.
STEAM-5604	<i>User interface</i>	Entering or exiting full screen mode by clicking the green traffic light button in the window title bar now correctly updates the checked state of the View ▶ Full Screen menu item.
STEAM-5614	<i>User interface</i>	Key commands edited in the Preferences dialog when only the Hub window is open rather than a project window now correctly take effect immediately, rather than only taking effect when a project window is opened.
STEAM-5715 STEAM-6095	<i>User interface</i>	The Expression Maps dialog now shows the correct information for the initially selected expression map when the dialog opens.
STEAM-5717	<i>User interface</i>	The guided tour is now correctly triggered for the mode a project opens in, rather than waiting until the user changes mode to trigger the tour.
STEAM-5793	<i>User interface</i>	The spin box showing the chosen channel in the track header in Play mode is now wide enough to show channel numbers higher than 9.
STEAM-5891	<i>User interface</i>	Under some circumstances it was possible for changes made in one options dialog to be incorrectly applied to another open project, if the corresponding options dialog was also open for that project. This problem has been resolved.
STEAM-5892	<i>User interface</i>	It is now possible to use undo and redo (and other key commands) while a modeless options dialog is in focus.
STEAM-5898	<i>User interface</i>	Moving the focus between the two panes of a horizontally or vertically split view now correctly updates the state of Dorico's menus immediately.
STEAM-5901	<i>User interface</i>	Changing the selected layouts and flows in Layout Options and Notation Options respectively now always ensures that the option values shown in the dialog reflect the current selection of layouts or flows.
STEAM-5984	<i>User interface</i>	When you remove a player from a flow in Setup mode, you will now be prompted that completing this operation will delete the player's music, and ask you to confirm the action.
STEAM-6135	<i>User interface</i>	Some minor problems with assigning playing techniques in the Expression Maps dialog have been resolved.
STEAM-6166	<i>User interface</i>	Repeated key commands that include a modifier (e.g. holding down Alt +left arrow) are no longer sometimes interpreted as if the modifier is not held down (Mac only).
STEAM-6191	<i>User interface</i>	Dragging a tab from one group to another within the project window (i.e. with a horizontal or vertical split) now correctly activates the tab immediately after the drag is completed.
STEAM-6206	<i>User interface</i>	Dorico will no longer crash if you attempt to undo with the Steinberg Hub window in focus, or if the current tab in the project window does not contain a layout.
STEAM-6250	<i>User interface</i>	Attempting to save default options from one of Dorico's options dialogs will no longer crash if the user application data folder is non-writable.

ID #	Component	Issue
STEAM-6281	<i>User interface</i>	Enabling editing of frames, staff spacing, or note spacing, or switching back into Engrave mode with one of these tools active, now correctly clears any selection from Write mode.
STEAM-6283	<i>User interface</i>	When deleting a flow from the Flows panel in Setup mode, Dorico no longer incorrectly changes the selection in the panel, making it appear as if the wrong flow will be deleted.
STEAM-6349	<i>User interface</i>	Moving one or more players up or down in the custom player order list on the Players page of Layout Options now always keeps the selected players in view.
STEAM-5795	<i>Views</i>	A problem whereby some items could move further and further away from the staff while the music is being edited in galley view has been resolved.
STEAM-5926	<i>Views</i>	It is no longer possible to set a non-percentage zoom level (such as zooming to page width or height) in galley view.

Dorico 1.0.30

February 2017

This version contains the following improvements and issue resolutions.

Improvements

Accidentals

Accidentals are now listed in the **Accidentals** section of the **Key Signatures and Accidentals** panel in Write mode in order of ascending pitch delta (i.e. accidentals that lower the pitch are listed before those that raise the pitch). (STEAM-5545)

Auto-backup

Dorico now makes a backup copy of your project each time you save it. By default, backups are stored in a folder called **Backup Projects** inside your chosen save location (which is, by default, a folder called **Dorico Projects** in your user account's documents folder). A subfolder inside the backup location is created for each project, and each time you save, that version is timestamped and placed in that location. To conserve disk space, Dorico will keep only five backups of each project by default, with the oldest backup being deleted as each new backup is created. You can change the number of backup projects saved by setting **Number of backups per project** in the **Files** group of the **General** page of **Preferences**.

To open a backup project, simply open it in the usual way, either by choosing it from the **File ► Open** dialog or by double-clicking it in Windows Explorer or the Finder. Dorico will open the backup project as if it were a new, untitled project, so that you can choose where to save it and what to call it. (STEAM-5639)

Bar numbers

A new option **Position bar numbers at start of system after clef and key signature** has been added to the **Bar Numbers** page of **Layout Options**, switched off by default. When switched on, if a bar number would appear at the start of the system, it will be positioned immediately to the right of the preamble at the start of the system, rather than aligned with the initial systemic barline. (STEAM-5513)

Barlines

A new thick barline type has been added. It can be created from the **Barlines** section of the **Bars and Barlines** panel in Write mode, or by typing **thick** into the **Shift+B** popover. (STEAM-5493)

Brackets and braces

Two new options have been added to the **Brackets and Braces** page of **Engraving Options**: (STEAM-5504)

- **Brace distance from systemic barline** allows you to control the default distance of the brace from the initial systemic barline.
- **Brace distance from bracket** allows you to control the default distance of the brace from the thick bracket line, if the **Secondary bracket appearance** option is set to **Brace**.

Clefs

The **Shift+C** popover for adding clefs now accepts French names for common clefs: **sol** for treble G clef, **fa** for bass F clef, **ut5** for baritone clef, **ut4** for tenor clef, **ut3** for alto clef, **ut2** for mezzo soprano clef, and **ut1** for soprano clef. (STEAM-4582)

Color

More items in the score can now have their colors changed via the Properties panel: slurs, tuplet brackets, ornaments, arpeggios, playing techniques, and holds and pauses. (STEAM-5477)

Dynamics

It is now possible to create *forzando* dynamics with higher intensities than ***fz*** by typing e.g. **fffz** into the **Shift+D** popover.

Grace notes

- The interpretation of grace notes during playback has been improved. An unslashed grace note of an eighth (quaver) or longer in duration will by default be interpreted as a so-called long appoggiatura (as described in Robert Donington's *The Interpretation of Early Music*), being played on the beat of the rhythmic note it precedes, and taking half of its duration (or half of its undotted duration, if the rhythmic note is dotted). An unslashed grace note of a 16th (semiquaver) or shorter in duration will be interpreted as a so-called short appoggiatura, being played on the beat of the rhythmic note it precedes, but being played as short as possible. (STEAM-5448)
- A new group of options has been added to the **Timing** page of **Playback Options**, allowing you to specify whether single unslashed grace notes should be played back as a long appoggiatura, and the threshold for the written duration of the grace note below which it should be played back as a short appoggiatura. You can also specify the exact duration of a short appoggiatura, expressed as a fraction of the duration of a quarter note (crotchet) played at 120 quarters per minute, i.e. 0.5 seconds. (STEAM-5451)

- A new option **Horizontal offset from stem** has been added to the **Grace notes** section of the **Notes** page of **Engraving Options**, allowing you to specify the default horizontal offset of the grace note slash relative to the note stem.

(STEAM-5534)

Hub window

A new **Tutorials** tab has been added to the left-hand pane in the Hub window, which provides a list of the latest videos added to the Dorico YouTube channel. There are now many useful tutorial videos available to help you learn how to use the software.

A new **Videos** button has also been added at the top of the Hub window, which links directly to the Dorico YouTube channel.

Instruments

The following changes have been made to transposing woodwind and brass instruments:

- All common (and some uncommon) horn transpositions are now provided, with variants both with and without key signatures.
- Bass in B \flat and E \flat now have variants that show a bass clef either at transposed pitch or at concert pitch.
- Sousaphone in B \flat and E \flat now have variants that show a treble clef at transposed pitch.
- Variants of euphonium in B \flat , baritone horn in B \flat and tenor trombone in B \flat that show bass clef at concert pitch without an octave transposition have been added.
- Piccolo in D \flat , soprano flute, contrabass flute, tenor trumpet in E \flat , bass trumpet in C (also known as valve trombone), alphorn in F \sharp , cornett (or zink) in C and D have all been added.

An organ instrument that uses only two staves (manuals only) and an SATB choir set up for two staves have also been added. (STEAM-5702)

Lyrics

A new option **Punctuation for verse numbers** has been added to the **Lyrics** page of **Engraving Options**, allowing you to specify whether verse numbers should be appended with a period (full stop). (STEAM-5492)

Players

The option **Uses custom player order** on the **Players** page of **Layout Options** is now fully functional, and allows you to change the order of players in one layout from the order specified in the **Players** panel in Setup mode. (STEAM-3686)

Popovers

Except for the **Shift+K** key signatures and **Shift+T** tempo popovers, all the popovers in Write mode are now case insensitive. (STEAM-5532)

Printing

A new option **Collate copies** has been added to the right-hand panel in Print mode, switched on by default. When switched on, Dorico will print all pages of each copy of each layout to be printed in sequence; when switched off, Dorico will print the desired number of copies of the first page, then the desired number of copies of the second page, and so on. (STEAM-5491)

Project Info

The **File ▶ Project Info** dialog now defaults to showing you the information for the current flow, rather than the entire project. If you select a flow in the **Flows** panel in Setup mode, if you invoke the dialog either from the **File** menu or from the right-click context menu, the dialog will open to the page for the first selected flow. If no flows are selected in Setup mode, the dialog will instead open to the page for the current flow you are editing, which is denoted by the flow whose name is shown in the document title bar. (STEAM-5530)

Rests

Dorico automatically fills the gaps between notes with rests of the appropriate duration. These are known as *implicit rests*, because they are implied by the gaps between the notes. Rests that are explicitly entered during note input using Force Duration, or rests that were explicitly created by way of importing a MusicXML file, are known as *explicit rests*. Explicit rests cannot be suppressed using the **Starts voice** and **Ends voice** properties. Dorico 1.0.30 introduces new tools for working with rests.

First, a new command **Edit ▶ Remove Rests** has been added, which will set the **Starts voice** and **Ends voice** properties appropriately such that any rests in the selection are removed. If you see extra rests arising from secondary voices that you would prefer did not appear, simply select them individually, or select a range of bars containing rests that you would prefer did not appear, and choose **Edit ▶ Remove Rests**. (STEAM-5213)

Second, a new option **View ▶ Note and Rest Colors ▶ Implicit Rests** has been added. When switched on, implicit rests will be colored gray in the score. Explicit rests will continue to be shown in black when this option is switched on.

This option can be useful in diagnosing why, for example, a rest does not disappear when you set the **Starts voice** or **Ends voice** property on a nearby note: once you

identify a rest as an explicit rest, you can delete it, and the implicit rest that replaces it will respect the **Starts voice** or **Ends voice** property. (STEAM-5525)

It is also now possible to suppress implicit rests before the first note in a voice by setting **Starts voice** on the first note in that voice, which will suppress all rests before that note to the start of the flow. You can also suppress implicit rests after the last note in a voice by setting **Ends voice** on the last note in that voice, which will suppress all rests after that voice. It is also possible to suppress implicit rests in any gaps between different voices that might occur in the middle of a flow, though this will require you to set **Ends voice** on the last note of the first voice, and **Starts voice** on the first note of the second voice, if the gap between those notes spans multiple barlines. (STEAM-5565)

Tempo

A new **Circa appearance** option has been added to the **Absolute Changes** group on the **Tempo** page of **Engraving Options**, allowing you to choose whether a metronome mark that shows an approximate tempo should show the equals sign between the note value and the approximate indication. (STEAM-5495)

Text

A new option **Position of text relative to other items** has been added to the **Text** page of **Engraving Options**, which is set to **Avoid collisions** in new projects. This option allows Dorico to move text items vertically to avoid collisions with other items. This will not be enabled by default in existing projects, since you may have already moved text items to avoid collisions, but you can enable it if you want to. (STEAM-5014)

Tremolos

A new group of options has been added to the **Timing** page of **Playback Options** to control the playback of unmeasured tremolos. You can specify the minimum number of tremolo strokes that will be interpreted as unmeasured in playback. This considers both the number of tremolo strokes and the number of beam lines that would be used for the note; for example, if the option is set to require three tremolo strokes, an eighth note (quaver) with two tremolo strokes will be played as unmeasured, because the eighth note's single beam is included in the calculation.

You can also specify the default length of the notes in an unmeasured tremolo, expressed as a fraction of the length of a quarter note (crotchet) played at 120 quarters per minute, i.e. 0.5 seconds in length. (STEAM-5435)

Issues resolved

ID #	Issue
STEAM-5226	<i>Audio export:</i> A problem that would result in exported audio files being exported to the correct length but ending up either mostly or completely silent if the project had been played back completely before exporting audio has been resolved.
STEAM-5537	<i>Accidentals:</i> Attempting to add a new glyph to an accidental definition without a glyph selected in the list of glyphs no longer causes a crash.
STEAM-5413	<i>Accidentals:</i> The accidentals in the Accidentals section of the Key Signatures and Accidentals panel now stick on during note input in the same way as the accidentals in the notes panel on the left-hand side of the window.
STEAM-5496 & STEAM-5457	<i>Arpeggio signs:</i> The spacing of arpeggio signs relative to cross-staff notes has been improved. In particular, if two cross-staff arpeggio signs exist at the same rhythmic position on different instruments, each arpeggio sign will now be offset only by the width of the accidentals etc. on the instrument to which the arpeggio sign applies, rather than the width of accidentals on all instruments that have arpeggio signs at that rhythmic position.
STEAM-5490	<i>Arpeggio signs:</i> Arpeggio signs no longer move slightly to the left or right while dragging them in Engrave mode.
STEAM-5485	<i>Arpeggio signs:</i> The length of cross-voice arpeggio signs is now correctly updated when the pitches of the notes changes sufficiently that the highest or lowest note is now in a different voice.
STEAM-5475	<i>Arpeggio signs:</i> The length of cross-staff arpeggio signs now updates correctly after the distance between staves changes.
STEAM-5112	<i>Articulations:</i> The appropriate properties are now displayed in the Articulations of duration group of the Properties panel depending on whether a tenuto is present.
STEAM-5617	<i>Audio export:</i> Exporting to WAV will now always use the sample rate used by the current audio device; exporting to MP3 will always export at 44.1 kHz.
STEAM-5695	<i>Bars:</i> In rare circumstances, it was possible for deleting bars using the Shift+B popover to cause Dorico to crash. This problem has been resolved.
STEAM-5573	<i>Beams:</i> Beam direction is no longer affected by the staff positions of rests within the beamed group, unless stemlets are in use.
STEAM-5518	<i>Dynamics:</i> A problem that prevented immediate dynamics immediately following a gradual dynamic (a <i>crescendo</i> or <i>diminuendo</i>) from playing back correctly has been resolved.
STEAM-5503	<i>Dynamics:</i> Typing e.g. f cresc. into the Shift+D dynamics popover will no longer discard the specified gradual dynamic when popover is closed.
STEAM-5685	<i>Dynamics:</i> Typing sf or sfz into the popover will now set the rfz/sfz style property as appropriate, so the dynamic will match the popover input.
STEAM-5494	<i>Exporting graphics:</i> A problem whereby graphics would not be correctly exported if the name of the layout to be exported contained one or more characters that are illegal in filenames has been resolved.
STEAM-5567	<i>Exporting graphics:</i> PDFs exported with the Mono option set are now always correctly exported in a true monochrome color space.
STEAM-5500	<i>Layouts:</i> Empty part layouts numbered higher than 10 are now correctly renamed when assigning players to them.

ID #	Issue
STEAM-5476	<i>Layouts:</i> Changes made to player groups in the Players panel are now reflected immediately in the open layout, instead of incorrectly requiring the layout to be closed and opened again.
STEAM-5464	<i>Lyrics:</i> Attempting to start lyric input with the final barline selected will no longer cause a crash.
STEAM-5619	<i>Lyrics:</i> A problem whereby lyrics could sometimes be pasted out of order when copying and pasting between flows or projects has been resolved.
STEAM-4954 STEAM-4994	<i>Mixer:</i> Mute/Solo buttons now work correctly in the Mixer, and new buttons have been added to clear all Mute and Solo states.
STEAM-4993	<i>Mixer:</i> The state of the insert and send slots in the Mixer, including whether each is enabled or disabled, is now correctly saved and restored when saving and reopening a project.
STEAM-5285	<i>Mixer:</i> The Mixer now correctly updates in response to changes in the project, for example adding or removing players and instruments, without requiring that the window be closed and reopened.
STEAM-5621	<i>Mixer:</i> The responsiveness of the faders in the Mixer has been improved. It is no longer possible to move the faders with a two-fingered swipe gesture, but it is still possible to use a sideways swipe gesture to scroll the Mixer window.
STEAM-5610	<i>Mixer:</i> The Mixer is no longer forced to be on top of all other windows (Windows only).
STEAM-5482	<i>Mixer:</i> It is now possible to route signal from any instrument output to the global effects channel; previously, this routing would only work for the default HALion Sonic SE 2 plug-in.
STEAM-5635	<i>Multi-bar rests:</i> Gradual tempo changes (such as <i>rit./accel.</i>) no longer cause multi-bar rests to break incorrectly.
STEAM-5602	<i>Multi-bar rests:</i> Deleting music from a part layout in which two or more instruments are included and multi-bar rests are enabled no longer causes a crash under certain circumstances.
STEAM-5728	<i>Note input:</i> When selecting notes in instruments whose sounds require a transposition of one or more octaves in playback (e.g. double bass, bass guitar), the correct octave transposition is now applied.
STEAM-5481	<i>Note input:</i> You can now correctly override the choice of octave for the first note of a chord when inputting a chord using the computer keyboard in step input.
STEAM-5577	<i>Note input:</i> It is now possible to set key commands for double sharp and double flat accidentals that can be used to specify those accidentals during note input.
STEAM-5600	<i>Note input:</i> The initial duration chosen when note input starts will only be taken from the selected note if a single note is selected; if there are multiple notes and rests selected, or if the selected rest is longer than a quarter note (crotchet) in duration, the initial duration chosen will be a quarter note (crotchet).
STEAM-5487	<i>Note input:</i> Switching on Lock Durations during note input now correctly switches off rests, tuplets, or grace notes, if any of those tools were engaged.
STEAM-5543	<i>Notation options:</i> Some options from the Notation Options dialog were not correctly applied to new flows or new projects after having been saved as defaults; this problem has now been resolved.
STEAM-5526	<i>Ornaments:</i> When selecting a mordent or turn and editing it by clicking another ornament type in the Ornaments panel in Write mode, the correct button now shows as selected in the panel after the edit.
STEAM-5460	<i>Playback:</i> Dorico no longer crashes if it attempts to play notes lower than MIDI note 0.

ID #	Issue
STEAM-5522	<i>Playback:</i> Starting playback in a large project is now considerably faster. This also reduces the time it takes to open larger projects.
STEAM-5456	<i>Playback:</i> A problem that would cause the playback of legato (either triggered by slurs or the legato playing technique) to be overridden, so that there is no audible legato effect, has been resolved.
STEAM-5367	<i>Playback:</i> The nat. playing technique now correctly resets all other active playing techniques.
STEAM-5498	<i>Playback:</i> Grace notes at the same position in multiple voices or instruments are now correctly played at the same time.
STEAM-5533	<i>Playback:</i> Only those flows assigned to the current layout are played back, in the order in which they are listed in the Flows panel in Setup mode, rather than relying on the presence of a full score layout (the absence of which would previously have caused there to be no playback at all).
STEAM-5638	<i>Playback:</i> Audio devices with ampersand characters in their names can now be chosen correctly in the Device Setup dialog.
STEAM-5396	<i>Playback:</i> Keyswitch notes are now correctly cleared when playback stops, so that starting playback again does not sometimes result in Dorico playing the wrong technique.
STEAM-5721	<i>Playback:</i> Keyswitch notes and MIDI controllers are now correctly chased when starting playback from the middle of a flow.
STEAM-5595	<i>Playback:</i> When opening an existing project, the correct playback data for the current layout is now set up immediately, and switching the Flow drop-down in Play mode correctly updates the event display.
AD-281	<i>Playback:</i> A problem whereby Waves NX plug-ins would not load or correctly display their user interface has been resolved.
STEAM-5750	<i>Playback:</i> Reverb send level is now correctly set post-fader rather than pre-fader.
STEAM-5647	<i>Players:</i> When changing between two instruments with different numbers of staves held by the same player, if the option to allow one staff of a multi-staff instrument to be hidden if empty is enabled, Dorico no longer shows both staves of the two-staff instrument unless both contain music.
STEAM-5616	<i>Players:</i> Certain edits to music at or near a transition between different instruments held by the same player can no longer cause the following system to disappear temporarily.
STEAM-5549	<i>Players:</i> Changing the instrument held by a player no longer causes any arpeggio signs written for the original instrument to be lost.
STEAM-5711	<i>Players:</i> Under rare circumstances it was possible for Dorico to crash when moving a player from one group to another in Setup mode. This has now been resolved.
STEAM-5640	<i>Printing:</i> It is no longer necessary to switch on the View options checkbox in the Annotations section of the print options panel to print colored objects in color.
STEAM-5615	<i>Printing:</i> Typing a page number into the To spin control to determine the page range and then hitting Tab to move the focus to another control no longer causes a crash under some circumstances (Mac only).
STEAM-5716	<i>Printing:</i> Reopening a project that was last saved with Print mode active will now correctly show the print preview immediately, without requiring you to switch to a different mode and back again.
STEAM-5656	<i>Properties:</i> A problem whereby selecting a bar containing a playing technique that is otherwise empty could cause Dorico to crash has been resolved.

ID #	Issue
STEAM-5563	<i>Rests:</i> Under some circumstances, bar rests that appear when notes that had been crossed to an otherwise empty staff from the staff above or below could appear at the wrong vertical position. This has now been resolved.
STEAM-5478	<i>Rests:</i> Deleting a tuplet containing rests now always correctly renotates the rests that remain.
STEAM-4875	<i>Rests:</i> Under some circumstances, removing the Starts voice property from the first note in a tuplet would not cause any suppressed rests earlier in the tuplet to reappear right away. This has now been resolved.
STEAM-5538	<i>Staff spacing:</i> Edits to staff spacing are no longer incorrectly removed if the layout whose staff has been edited has been viewed in galley view during the current editing session.
	<i>Text:</i> A problem whereby double-clicking a text item to edit it would not work in certain circumstances involving music in multiple frame chains has been resolved.
STEAM-5323	<i>Time signatures:</i> A problem whereby setting the Ends interchangeable property on a time signature would not immediately cause the following bars to be redrawn correctly has been resolved.
STEAM-5090	<i>Time signatures:</i> Deleting and recreating a time signature change within an interchangeable range will now have the correct effect on the time signatures that come after it.
STEAM-5470	<i>Time signatures:</i> Rests are now correctly grouped according to the instrument-specific time signature, if one is present.
STEAM-5609	<i>Transposing:</i> Making a selection of music at the beginning of a flow that starts with a C major or A minor key signature will now correctly allow that key signature to be transposed.
STEAM-5527	<i>Tremolos:</i> When selecting a tremolo with four strokes, the correct button now shows as selected in the Tremolos panel in Write mode.
STEAM-5564	<i>Tremolos:</i> The playback of measured tremolos has been improved, such that the number of tremolo strokes now determines the note value of the repeated notes (one stroke = eighth note, two strokes = 16th note, etc.), instead of simply dividing the written note value by two, four, etc.
STEAM-5510	<i>Voices:</i> When you use Edit ► Stem ► Swap Voice Order to swap the order of two voices, the resultant Voice column index values now appear correctly in the Properties panel.
STEAM-5474	<i>User interface:</i> The keyboard focus is now always returned to the main document area after clicking any of the buttons in the right-hand panels in Write mode, so that all key commands operate on the music as expected without having to click into the music area again.
STEAM-5471	<i>User interface:</i> A problem whereby the scrollbars in the right-hand panels in Write mode could either appear the wrong height (Mac and Windows), or too wide (Windows only), has been resolved.
STEAM-3033	<i>User interface:</i> It is now possible to assign key commands to key combinations that normally act as dead keys producing combining diacritics, such as Alt+E (Mac only).
STEAM-4934	<i>User interface:</i> The way scroll bars appear in Dorico's panels has been revamped to ensure that they only appear when necessary.
STEAM-5614	<i>User interface:</i> Changes to key commands now take effect immediately, even if no project window is open.
STEAM-5692	<i>User interface:</i> Changing the selection of layouts in Layout Options without having made any changes to any of the options no longer incorrectly prompts that there are unsaved changes.

ID #	Issue
STEAM-5605	<i>User interface:</i> When running in full screen, menus that pop up from buttons (e.g. in the status bar at the bottom of the window) no longer appear too high, as if the Dock were visible (Mac only).
STEAM-5620	<i>User interface:</i> When attempting to open many projects at the same time, Dorico no longer sometimes crashes.
STEAM-5638	<i>User interface:</i> Audio devices with an ampersand (&) in their name now appear correctly in the Device Setup dialog.
STEAM-5574	<i>Localisation:</i> Dorico will now start correctly if your user account name uses Japanese or other CJK Unicode characters (Windows only).
STEAM-5471 STEAM-5321 STEAM-5590	<i>Localisation:</i> Several issues related to assigning key commands using specific key combinations on French, German, Italian, Japanese and Russian keyboards have been resolved.
	<i>Localisation:</i> The key command Ctrl+A (Windows) or Command-A (Mac) was missing from the default sets of key commands in languages other than English; this has now been resolved.
STEAM-5585	<i>Performance:</i> A problem whereby commands (e.g. notes input in quick succession) could be executed in the wrong order or skipped has been resolved.
STEAM-5629	<i>Performance:</i> The speed of note input and editing in projects containing multiple flows has been significantly increased.
STEAM-5579	<i>Performance:</i> The speed of note input and editing in flows that have a lot of trailing empty bars has been significantly increased.

Dorico 1.0.20

December 2016

This version contains the following improvements and issue resolutions.

Improvements

Performance improvements

Building on the improvements in Dorico 1.0.10, this update includes further significant improvements to the performance and reliability of Print mode. For example, selecting multiple layouts in Print mode is now considerably faster.

(STEAM-5386)

Arpeggio signs

A new **Arpeggiation** section has been added to the **Ornaments** panel in Write mode, allowing the creation of arpeggio signs indicating upwards and downwards arpeggiation, as well as a *non arpeggio* bracket line indicating that a chord should not be arpeggiated.

To create an arpeggio sign on a chord in a single voice, select any notehead in the chord, and either select the desired arpeggio sign from the **Ornaments** panel, or type **Shift+O** to open the ornaments popover, in which you can type **arp** (or **arpeggio**) for an upwards arpeggio, **arpdown** (or **arpeggiodown**) for a downwards arpeggio, or **nonarp** (or **nonarpeggio**) for a *non arpeggio* sign. Dorico will create the arpeggio line spanning all of the notes in the chord. Dorico will not create an arpeggio sign if only a single note exists in the selected voice. Arpeggio signs can also be created during note input in chord mode using the ornaments popover.

To create an arpeggio sign that spans chords in multiple voices (e.g. across both staves of a piano or harp instrument), select any notehead in the first voice, then hold **Ctrl** (Windows) or **Command** (Mac) and select any notehead in the second voice, then create the arpeggio sign either using the panel or the popover, as described above.

Dorico will automatically adjust the length of the arpeggio sign as the pitches of the notes in the voices to which the sign belongs change, or as notes are added to or deleted from the chords, and will automatically delete the arpeggio sign when only a single note remains at that rhythmic position in that voice.

By default, any grace notes at the same rhythmic position as an arpeggio sign will be positioned to the left of the arpeggio sign. To make the arpeggio sign appear to

the left of the grace notes, select the arpeggio sign and set the **Arpeggio before grace notes** property in the Properties panel.

Downwards arpeggio signs have an arrowhead at the bottom of the line by default, but upwards arpeggio signs have no arrowhead by default. Arpeggio signs can alternatively show a Couperin-style swash at their top or bottom. To override an individual arpeggio sign, select it and open the Properties panel, then set the **Sign end** property. The length of arpeggio signs can also be adjusted on a case-by-case basis in Engrave mode.

Options controlling the default appearance of arpeggio signs have been added to the new **Arpeggio Signs** page of **Engraving Options**.

Arpeggio signs do not yet have any effect in playback, but this is planned for a future update.

Brackets and braces

A new option **Additional vertical protrusion beyond top or bottom of staff** has been added to the **Design** group on the **Brackets and Braces** page of **Engraving Options**, allowing the thick vertical line of the bracket to be lengthened slightly if needed to ensure a good join with the chosen bracket tip glyphs in the current music font. (STEAM-5408)

Instruments

A keyless timpani instrument type, i.e. a timpani that does not use a key signature and instead shows accidentals for each note as required, has been added and can be chosen from the instrument picker. (STEAM-5339)

Key commands

- It is now possible to change the default key commands for changing the pitch of notes (**Alt**+up/down arrow to move by step, **Shift+Alt**+up/down arrow to move by chromatic step, and **Ctrl+Alt**+up/down arrow to move by octave). These commands can now be found in the **NoteEdit** category. (STEAM-5453)
- It is also now possible to assign key commands for **Edit ► Stem ► Force Stem Up**, **Force Stem Down** and **Remove Forced Stem**. These commands can now be found in the **Edit** category. (STEAM-5454)

Lyrics

A new **Italic** property has been added to the **Lyrics** group in the Properties panel, allowing any non-italic lyric to be made italic if necessary, for example for occasional words in a different language, or vocalizations interspersed within the text. (STEAM-5404)

Music fonts

Dorico now reads the JSON metadata files for SMuFL-compliant fonts from the locations recommended by the SMuFL specification:

- Windows: **C:\Program Files\Common Files\SMuFL\Fonts**
- Mac: **/Library/Application Support/SMuFL/Fonts/**

Dorico will load the JSON file if it is named *fontname.json* (e.g. **Bravura.json**) and located inside a folder called *fontname* (e.g. **Bravura**) in the appropriate path for the operating system.

If Dorico can load the JSON metadata file correctly, then the font will appear in the list of available music fonts in **Engrave ► Music Fonts**. (STEAM-2290)

Note input

To create a time signature or key signature that applies only to the staff on which the caret is currently located, enter the time signature or key signature into the **Shift+M** or **Shift+K** popover as usual, and type **Alt+Return** (instead of **Return** alone) to confirm the item to be created. (STEAM-5422)

Notes

A new option **Stem direction for notes on the middle line of the staff** has been added to the **Stems** group on the **Notes** page of **Engraving Options**, allowing you to choose whether Dorico should use musical context (i.e. the staff positions of notes preceding and following the notes on the middle line of the staff) or a fixed default to determine the stem direction of notes on the middle line of the staff. (STEAM-5348)

Ornaments

A new option **Horizontal gap between trill marking and trill extension line** has been added to the **Trills** group on the **Ornaments** page of **Engraving Options**, allowing you to determine the distance between the *tr* sign and the extension line to its right.

Page layout

A new **Rastral size** menu has been added to the **Space Size** group on the **Page Setup** page of **Layout Options**, allowing the specification of staff size according to the rastral sizes used in traditional music engraving. The largest size is Size 0 (9.2mm or 0.36"), and the smallest size is Size 8 (3.7mm or 0.15"), and the default staff size in a new project is now Size 3 (7mm or 0.28"). It is naturally still possible to choose any custom size, as before, by editing the **Space size** value directly. (STEAM-5353)

Two new options have been added to the **Hide Empty Staves** group on the **Vertical Spacing** page of **Layout Options**:

- **Allow individual staves of multi-staff instruments to be hidden:** When switched on, Dorico will allow (say) the left-hand staff of a piano instrument to be hidden on a system on which it has no music; when switched off, the piano will only be hidden on a system if both staves can be hidden. (STEAM-5382)
- **Players excluded from hide empty staves:** This provides a list of all of the players in the current layout, and allows you to specify a list of players that should never be hidden, even if their staves are empty throughout a system. (STEAM-4755)

Playback

- A new **Playback Options** dialog has been added to the **Play** menu. This dialog contains options to determine how Dorico should interpret specific markings during playback, such as the percentage by which the written duration of notes should be extended under a slur or when encountering a *legato* playing technique, by how much the dynamic should be increased when playing an accent or marcato articulation, and so on. The dialog also includes an initial set of options for beat stress (the amount by which the dynamic should be increased on primary and secondary beats in the current meter) and for humanization of dynamic level and note start position.
- Single- and multiple-note tremolos now play back. Measured single-note and all multiple-note tremolos are played back directly by rendering additional note events, while unmeasured single-note tremolos can be played back using unmeasured tremolo samples if they are provided by the VST Expression Map in use for the instrument. (STEAM-3904)
- Slurs and the *legato* playing technique are now played back by extending the duration of all but the last note under a slur. (STEAM-5148)
- Grace notes now play back. Any number of slashed and unslashed grace notes at present all play back immediately before the rhythmic note they precede, stealing time from the preceding rhythmic note. Playback of a single unslashed grace note, taking half the written duration of the rhythmic note that follows, and stealing time from that following rhythmic note, will be added in a future update.
- A new option **Show playhead when stopped** has been added to the **Play** group on the **General** page of **Preferences**. When switched on, the playhead (vertical green line) will appear both during playback and when stopped; when switched off, the playhead will appear only during playback. (STEAM-4718)

Preferences

The **General** page of **Preferences** has been organized into groups of related options.

Rests

A new option **Bar rests in additional voices** has been added to the new **Rests in additional voices** group on the **Rests** page of **Notation Options**. In new projects, this option is set to **Omit bar rests**, which means that when an additional voice (typically a down-stem voice) stops, any subsequent bars in which that voice has no notes or chords prior to its reappearance will not be padded with bar rests. This reduces the number of occasions you would have to search backwards through the music to set the **Ends voice** property on the last note in the voice, which might be dozens or even hundreds of bars earlier.

If you would prefer that Dorico continue to pad all intervening bars with bar rests, set the new option to **Show bar rests**, which will also be the value chosen in any projects created in versions of Dorico earlier than 1.0.20.

Furthermore, when this new option is set to **Omit bar rests**, bar rests no longer appear in bars where the only notes and chords present have been crossed from another staff. (STEAM-5212, STEAM-4831)

In addition, a new option **Allow dotted rests equal to the length of a compound beat** has been added to the **Compound Time Signatures** group on the **Rests** page of **Notation Options**. When set to **Allow dotted rests**, a rest of a dotted quarter (dotted crotchet) in 6/8 will be rendered as a single dotted quarter rest; if it is set to **Split at beat subdivisions**, it will be rendered as a quarter (crotchet) rest followed by an eighth (quaver) rest. (STEAM-5109)

Finally, it is now possible to create explicit bar rests during note input. Either click the new **Insert Bar Rest** button in the **Bars and Barlines** panel in Write mode, or type **rest** into the **Shift+B** popover. (STEAM-5036)

Templates

The **Brass band** template has been improved, with corrected staff labels for the cornet and horn instruments, and appropriate clefs for the trombones. (STEAM-5334)

Tempo

It is now possible to control the appearance of absolute and gradual tempo changes independently in **Engrave ► Font Styles**. Absolute, relative and reset tempo markings use the **Immediate tempo text font** style, while gradual tempo changes used the **Gradual tempo text font** style. (STEAM-5387)

Views

When changing view type from galley view to page view, or vice versa, if there is a selection, Dorico now attempts to center the selected item or items in the new view. (STEAM-5025)

Issues resolved

The following table lists all issues that have been resolved in this version:

ID #	Issue
STEAM-5344	<i>Copy and paste:</i> Notes within tuplets that have been created with Force Durations set now retain their forced duration when pasted.
STEAM-5269	<i>Copy and paste:</i> Using R to repeat a selection no longer sometimes pastes items (such as dynamics) in the wrong location.
STEAM-5414	<i>Dynamics:</i> Dynamics between the two staves of a keyboard instrument are now correctly centered. The option Allow dynamics between braced staves to violate minimum distance by n spaces has been removed from the Dynamics page of Engraving Options .
STEAM-5403	<i>Holds and pauses:</i> Caesuras at the end of a bar now cause multi-bar rests to break at the bar in which they appear, rather than at the following bar.
STEAM-5391	<i>Holds and pauses:</i> Caesuras that precede a change of time signature or key signature no longer cause the time or key signature to be spaced incorrectly relative to the barline.
STEAM-5380	<i>Instrument changes:</i> Items that apply to the whole system, such as tempo markings, rehearsal marks, etc., now appear correctly above the top staff when the top staff uses instrument changes.
STEAM-5352	<i>Key signatures and accidentals:</i> Setting a non-Western accidental on a note no longer incorrectly also sets the same accidental on the note in transposing layouts; now, the accidental is only set in transposing layouts if the relative offset between the concert and transposed pitch notes are identical.
STEAM-5341	<i>Key signatures and accidentals:</i> Notes with non-Western accidentals now behave correctly when repitched, and do not continue to show the same accidental even if the offset of the pitch changes.
STEAM-5162	<i>Key signatures and accidentals:</i> The rule that every tonality system must have an accidental type that fulfils the role of the natural (i.e. does not change the pitch) is now enforced, and it is no longer possible to delete any built-in accidental type, or any accidental type that is in use in the project.
STEAM-5383	<i>Key signatures and accidentals:</i> Accidentals types that contain graphics now display correctly in the Accidentals section of the Key signatures and accidentals panel in Write mode.
STEAM-5347	<i>Key signatures and accidentals:</i> The option Notes following a change of key signature that shows cancellation naturals on the Accidentals page of Notation Options now works as expected. This option only takes effect if Dorico will show cancellation naturals at a change of key, as determined by the two options immediately above this one in the dialog.
STEAM-5338	<i>Key signatures and accidentals:</i> A problem whereby instruments that don't show a key signature (e.g. Horn in F) would under some circumstances not show the required accidentals on some notes in extreme keys (i.e. key signatures of 7 sharps or flats) has been fixed.
STEAM-5264	<i>Key signatures and accidentals:</i> Cancellation naturals now appear if necessary at changes of key arising from changing between instruments with different transpositions.
STEAM-5192	<i>Key signatures and accidentals:</i> Changes of key that occur in the middle of a bar now correctly take effect on the notes that follow the key signature before the end of the bar.
STEAM-5274	<i>Key signatures and accidentals:</i> When importing MusicXML files that use other accidentals than the standard 12-EDO or 24-EDO accidentals, Dorico now automatically creates an appropriate tonality system in the resulting project.
STEAM-5426	<i>Layouts:</i> Custom layout names are now correctly preserved when re-opening saved projects.

ID #	Issue
STEAM-5255	<i>MusicXML import:</i> Dorico no longer crashes when encountering a MusicXML file that specifies an invalid number for slur elements.
STEAM-5074	<i>MusicXML import:</i> Dorico no longer fails to open compressed MusicXML (.mxl) files that contain internal filenames that use extended Unicode characters.
STEAM-5354	<i>Navigation:</i> Using up/down arrow to navigate to the staff above/below from a selected bar rest no longer sometimes skips over the next staff.
STEAM-5318	<i>Navigation:</i> Using Ctrl +up/down arrow to navigate to the system above/below now works correctly, for any number of staves in the system.
STEAM-3035	<i>Note input:</i> Specifying that the next note to be input should explicitly be above or below the previous note now works more reliably.
STEAM-5351	<i>Note input:</i> Moving the caret to the staff above/below with up/down arrow now correctly takes into account whether the caret is at a tuplet position on the original staff, and moves to an appropriate position on the destination staff.
STEAM-5430	<i>Note input:</i> When inputting notes into transposing instruments in a transposing layout, notes are no longer sometimes input in successively higher octaves for no discernible reason.
STEAM-5359	<i>Note spacing:</i> Tempo markings are no longer considered when determining the width of multi-bar rests, unless another tempo marking in a later bar would collide with a previous tempo marking, preventing some multi-bar rests from being made much wider than necessary.
STEAM-5402	<i>Notes:</i> Augmentation dots are no longer hardwired to be drawn using Bravura, so if you choose to use another music font via Engrave ▶ Music Fonts , you will see the appropriate glyph from the new font.
STEAM-5163	<i>Notes:</i> Pairs of opposing voices where notes in both the left- and right-hand columns show an accidental on the same staff position, and where the note in the right-hand column closest to a note in the left-hand column is at an adjacent staff position, are no longer offset by an unexpectedly large distance.
STEAM-4989	<i>Notes:</i> Syncopated patterns of the form short-dotted long (e.g. quarter-dotted half in 4/4) are now notated according to the options set in Notation Options regardless of whether or not the dotted long note is also tied out of the bar.
STEAM-5357	<i>Page layout:</i> Changing the master page set of a layout on the Page Setup page of Layout Options is now reflected immediately in the display in the Master Pages section of the right-hand panel in Engrave mode.
STEAM-5187	<i>Page layout:</i> Under rare circumstances, staff labels would sometimes fail to update after undoing an edit that results in the point at which an instrument change occurs changing. This has now been resolved.
STEAM-5287	<i>Playback:</i> Dynamics are no longer ignored during playback if the flow begins with a rest.
STEAM-5394	<i>Playback:</i> Multiple dynamics on the same note are now played back more sensibly.
STEAM-5369	<i>Playback:</i> Accents now play back correctly when notes with accents alternate with notes without accents.
STEAM-5371	<i>Playback:</i> Playing techniques on the very first note of the flow now play back correctly.
AD-269	<i>Playback:</i> Typing Command-Q while a VST plug-in window is in focus no longer incorrectly quits the VST audio engine, resulting in Dorico itself hanging upon exit.

ID #	Issue
AD-253	<i>Playback:</i> A problem whereby the VST audio engine could crash when used on a computer with on-board Realtek sound hardware has been fixed (Windows only).
AD-260	<i>Playback:</i> When reopening a saved project that uses Kontakt, a burst of static is no longer sometimes emitted as the project loads (Mac only).
STEAM-5401	<i>Rests:</i> It is now possible to set properties, including the staff position, of bar rests correctly once more.
STEAM-5356	<i>Selections:</i> Edit ▶ Select All now selects only the music in the current flow, not across all flows in the project.
STEAM-5385	<i>Slurs:</i> Slurs are no longer temporarily incorrectly positioned if Edit ▶ Reset Appearance is invoked when both the slur itself and the notes at either end of the slur are selected.
STEAM-5399	<i>Staff spacing:</i> Using Alt +click-drag to drag a staff containing one or more instrument changes now works correctly.
STEAM-5370	<i>Staff spacing:</i> Copy Staff Spacing will now work even if the user has not made any adjustments to the staff spacing on the source page.
STEAM-5406	<i>Text:</i> Pasting text terminated by a null character (e.g. from a text block in Finale) into Dorico will no longer cause the project to become corrupted when saving.
STEAM-4963	<i>Text:</i> Changing the stretch for text in a text item or text frame now correctly changes the shape of the characters themselves, rather than merely the distance between characters (Mac only).
STEAM-4971	<i>Text:</i> Changing the stretch for text in a text item or text frame now displays correctly on screen and is reproduced correctly both when printing and when exporting PDF graphics (Windows only).
STEAM-5358	<i>Text:</i> Changing the point size of multiple selected paragraphs using the controls in the text editing popover now works correctly, rather than changing the size of only the first selected paragraph.
STEAM-5434	<i>Text:</i> The size of the text editor is no longer incorrect when editing a text item belonging to a staff that uses a non-default staff size.
STEAM-5177	<i>Ties:</i> When Tie endpoint positioning in chords is set to Outermost ties above/below noteheads, others between , Dorico no longer sometimes incorrectly offsets the wrong tie in multi-voice contexts.
STEAM-5395	<i>User interface:</i> Message boxes spawned from one of Dorico's options dialogs no longer cause the options dialog itself to disappear behind the main project window (Windows only).
STEAM-5381	<i>User interface:</i> It is no longer possible under some circumstances to show more than one instance of the Layout Options or Notation Options dialog for a given score simultaneously.
STEAM-5263	<i>User interface:</i> The color picker dialog no longer increases in height slightly with each invocation within a session (Mac only).
STEAM-5392	<i>User interface:</i> It is no longer possible to click the various Save as Default buttons in the Layout Options and Notation Options dialogs when more than one layout or flow respectively is selected; being able to do this in earlier versions could result in the saved options data being incomplete or inconsistent.
STEAM-4527	<i>User interface:</i> Menu items that can be checked to show their state now correctly show the assigned key command, if any.
STEAM-5393	Dorico will no longer fail to start if the user's saved layout options data is incomplete or inconsistent; instead, the data will simply be ignored.

ID #	Issue
STEAM-5360	Dorico will no longer crash on start-up if it is unable to create the user's chosen default project save folder.



Dorico 1.0.10

November 2016

This version contains the following improvements and issue resolutions.

Improvements

This maintenance update introduces the following improvements:

Performance improvements

- The speed of note input, and undoing note input, has been substantially increased.
- The speed of changing the pitch of a selection of notes using Alt+up/down arrow has been substantially increased.
- The speed of adding and removing players in Setup mode has been substantially increased.
- Unnecessary screen redraws during editing operations have been eliminated, providing a substantial improvement in the speed of redraw during editing operations.
- The speed of creating a new project from a template has been substantially increased.
- The speed of entering and working within Print mode has been substantially increased.

Articulations

A new group of options **Slurs** on the **Articulations** page of **Engraving Options** allow you to determine whether articulations of force (accent, marcato) or articulations of stress (stress, unstress) should be positioned inside or outside slur endpoints.

A new option **Position of tenuto relative to tied notes** has been added to the **Ties** group on the **Articulations** page of **Engraving Options**, allowing you to choose whether tenuto articulations should be positioned on the first or last note of a chain of tied notes by default. An additional property has also been added to allow this default to be overridden for an individual tenuto.

Beams

A new option has been added to the **Advanced Options** section of the **Slants** group on the **Beams** page of **Engraving Options**, allowing you to specify whether beams containing repeated patterns of pitches should be allowed to have slants, or should always be horizontal.

Brackets and braces

A new option has been added to the **Approach** group on the **Brackets and Braces** page of **Engraving Options**, allowing you to specify whether groups consisting of a single staff should show a bracket.

Two new choices have been added to the **Ensemble type** option in the same group: **British brass band** (which provides separate bracketing groups for cornets; flugelhorn; tenor horns; baritone horns; trombone and bass trombone; euphonium; and percussion), and **Big band** (which provides separate bracketing groups for saxophones; trumpets; trombone and bass trombone; and rhythm section).

Key signatures and accidentals

- Instruments with **(no key)** in their names (e.g. French horn, timpani, etc.) are now correctly created with no key signatures, and instead show accidentals on every note as necessary.
- An open or atonal key signature can now be created via the **Shift+K** popover by typing **open** or **atonal**.
- It is now possible to change the enharmonic spelling of notes in part layouts independently of the full score layout.

Licensing

When using a time-limited or trial license, Dorico will now report the time remaining in the license at start-up, every 10 days, and every day during the final five days of the license period.

Lyrics

New **Minimum distance from other items** option in the **Vertical Position** section of the **Lyrics** page in **Engraving Options** provides a small amount of padding between items protruding outside the staff and the closest edge of the innermost line of lyrics.

New option to show or hide elision slurs on lyrics in Japanese and other East Asian languages by default, in the **East Asian Lyrics** section of the **Lyrics** page in **Engraving Options**. In addition, there is a new property to override this default setting for an individual lyric.

Note input and editing

- A new scissors tool (shortcut **U**) has been added. Outside of note input, the scissors tool will remove any ties in the selected notes and chords. Inside note input, the scissors tool will cut any sounding notes in the voice indicated on the caret that are sounding at the current caret position.

- A new option **Play notes during note input and selection** has been added to the **General** page of **Preferences**.
- New **Write ▶ Input Pitch** submenu allows you to choose between inputting in **Written Pitch** or **Sounding Pitch**, which is useful when inputting into transposing instruments or when copying instrumental parts.

Page layout

- The **Edit ▶ Breaks** and **Edit ▶ Note Spacing** menus have been removed, with their functions moved to the **Engrave** menu, in recognition of the fact that system and frame breaks can only be created in Engrave mode. New **Edit ▶ Format Systems** and **Edit ▶ Format Music Frames** submenus have been added, containing not only **System Break** and **Frame Break**, but also **Lock Frame**, **Lock System**, **Make Into System**, and **Make Into Frame**.
- The default key command for system break is now **Shift+S**, and for frame break it is now **Shift+F**.

Playback

- A new option **Suspend audio device in background** has been added to the **General** page of **Preferences**, switched off by default. When switched on, this option releases the audio device when Dorico loses focus, unless it is playing back at the time, in which case Dorico retains ownership of the audio devices so that playback can continue.
- Basic playback of changes in playing techniques has now been implemented for HALion Symphonic Orchestra, allowing playback of e.g. pizz. and arco instructions.
- The Mixer window now labels each fader with the plug-in output channel and the short instrument name, and each fader is also color-coded using the same colors used in the track header for each instrument in Play mode.
- The playhead is now shown in Play mode, and it moves through the music during playback.

Selections

- Navigating around the music with the arrow keys in Write mode has now been substantially improved.
- Use **Tab** and **Shift-Tab** to select the next/previous barline in Write mode.
- It is possible to start navigation in Write mode without the mouse: simply press any arrow key, which will select the first item closest to the top left corner of the view.
- Extending the selection by holding **Shift** and using the arrow keys now works more reliably; hold **Ctrl** (Windows) or **Command** (Mac) to extend the selection by a bar at a time.

- Clicking within the staff but not on a note or other item now selects all of the music in that bar on that staff; hold **Shift** and click on another item or a blank part of the same or another to extend the selection.
- New **Edit ▶ Select to End of System** and **Edit ▶ Select to End of Flow** menu items, to quickly extend the selection on the selected staff or staves to the end of the system or the end of the flow, respectively. In addition, **Edit ▶ Select All** now works as expected.
- Holding **Ctrl** (Windows) or **Command** (Mac) while making a marquee selection now adds to an existing selection; holding **Ctrl+Alt** (Windows) or **Command+Opt** (Mac) while making a marquee selection now subtracts from an existing selection.
- The middle mouse button can now be used instead of **Shift** to toggle between the default action when clicking and dragging, i.e. between moving the view or making a marquee selection.
- Dragging a marquee selection over a barline will no longer select the barline.

Time signatures

Hidden time signatures are now shown using signposts, which allows them to be selected for copying and pasting, or for deletion. A new **View ▶ Signposts ▶ Time Signatures** menu item allows you to choose whether or not signposts for hidden time signatures should be displayed.

Transposing

A new **Write ▶ Transpose** dialog has been added, allowing the selected music or, if there is no selection, the entire flow to be transposed. Transposition can be specified either by quality of interval (e.g. major, minor, perfect, augmented, diminished) or by number of divisions of the octave. The dialog will not allow illegal transpositions that would result in notes that cannot be notated (e.g. sharper than a triple sharp, or flatter than a triple sharp, or using a microtonal accidental that does not exist in the current tonality system).

In addition, a new **Write ▶ Add Notes Above or Below** dialog has been added, allowing the addition of notes of a given interval above or below the selected notes, providing a quick way of building chords over an extended passage of music.

Tuplets

Tuplets now show signposts if the triplet ratio number/string is hidden, which allows them to be selected for copying and pasting, or for deletion. A new **View ▶ Signposts ▶ Tuplets** menu item allows you to choose whether or not signposts for hidden tuplets should be displayed.

Vertical spacing

A new **Staff Spacing** section has been added to the left-hand panel in Engrave mode, allowing you to edit the vertical spacing of the music when switched on. Staves can be dragged with the mouse by clicking anywhere in the staff itself, or in the handle at the left-hand side of the system. The whole system can be dragged by clicking in the colored stripe immediately above the top staff in the system.

Hold **Alt** while dragging a staff or system to also adjust the distance between all of the staves and systems below the staff or system being dragged, when there is no further room at the bottom of the music frame.

Use the up/down arrow keys to select the handles at the left-hand side of the system; use **Tab** to cycle between selecting handles for systems and handles for staves. Hold **Shift** and use up/down arrow to extend the selection to the handle above/below.

Nudge the selected staff, staves and/or systems using **Alt**+up/down arrow, and add **Ctrl** (Windows) or **Command** (Mac) to nudge in larger steps.

Use **Alt**+**J/K** to nudge the selected staff, staves and/or system such that the distance between all of the staves and systems below the staves being nudged will also change, once there is no further room at the bottom of the music frame.

When a staff or system has an overridden position, its handle or the colored stripe will be colored red. To remove a specific override, select the relevant handle and click **Delete**.

To specify an exact distance, click on the numeric read-out in the left-hand margin, which allows the entry of a specific measurement, using the preferred units of measurement as determined in Preferences.

To clear all overrides in the selected frame, choose **Engrave ► Reset Staff Spacing**.

To copy the staff spacing from one page to other pages within the layout, click **Copy Staff Spacing** in the **Staff Spacing** section of the left-hand panel. A dialog appears in which you can choose the source page and range of destination pages. The staff spacing will be copied if the destination page has the same number of systems each containing the same number of staves as the source page.

If the layout of music within the music frame changes because the music is cast off again, any staff spacing overrides for that passage of music will be removed.

Voices

- The option **Gap between adjacent noteheads in different voices** in the **Voices** section of the **Notes** page of the **Engraving Options** dialog now

respects negative values, allowing notes a second apart in opposing voices to be positioned more closely together.

- New **Edit ▶ Voice** submenu, containing options to change the default stem direction of the voice of the selected note, or if note input is active, to change the default stem direction of the voice indicated on the caret.

VST Expression Maps

- A new dialog **Play ▶ VST Expression Maps** has been added, allowing you to create and edit expression maps to determine how changes in playing technique should be handled by the chosen virtual instrument.
- VST Expression Maps for Cubase can be imported into your project via **Play ▶ VST Expression Maps**.
- A new **Endpoint Setup** dialog has been added, accessed via each entry in the **VST Instruments** panel in Play mode, allowing you to specify which expression map is used by each channel on the chosen VST instrument.

Issues resolved

The following table lists all issues that have been resolved in this version:

ID #	Issue
STEAM-4712	<i>Bars:</i> Using the Shift+B popover to delete bars now also adjusts the position of any time signatures and key signatures that are affected by the deletion of bars preceding them.
STEAM-5129	<i>Beaming:</i> The behaviour of Edit ▶ Beaming ▶ Beam Together has been improved such that any selection that includes a tied note at its start or end will produce the expected beaming.
STEAM-5040	<i>Beaming:</i> A problem whereby rests under beams could be positioned incorrectly under some circumstances has been fixed.
STEAM-5003	<i>Brackets and braces:</i> The options to show sub-brackets and to draw sub-brackets using braces on the Brackets and Braces page of Engraving Options now work as expected.
STEAM-5094	<i>Brackets and braces:</i> Organ instruments with three staves now correctly show a brace spanning the upper two manual staves, leaving the pedal staff unbracketed.
STEAM-4997	<i>Brackets and braces:</i> Groups of players created in the Players panel in Setup mode now have separate brackets.
STEAM-4981	<i>Brackets and braces:</i> Staff labels now draw correctly even when partially out of the viewport.
STEAM-5050	<i>Brackets and braces:</i> Long staff labels are now automatically wrapped if they exceed half the width of the music frame.
STEAM-5099	<i>Brackets and braces:</i> Instruments whose names have been overridden are no longer automatically numbered.
STEAM-5119	<i>Brackets and braces:</i> Saving and reloading a project in which there are multiple groups of players no longer incorrectly changes the order of players on reloading.

ID #	Issue
STEAM-4944	<i>Copy and paste:</i> Copying and pasting individual dynamics from within a larger group of dynamics will now create new groups containing only the selected dynamics, rather than all of the dynamics from the original groups.
STEAM-4948	<i>Copy and paste:</i> Items of different types that are either specific to staves or voices are now mapped consistently when pasting, so that they don't end up on different staves than expected.
STEAM-5085	<i>Copy and paste:</i> Attempting to paste an implicit rest followed by an explicit rest no longer causes a crash.
STEAM-5007	<i>Copy and paste:</i> When copying and pasting a selection that includes one or more empty instruments, the destination passage will also offset the appropriate number of empty instruments.
STEAM-5027, STEAM-5041	<i>Copy and paste:</i> It is now possible to copy from e.g. the right-hand staff of a piano instrument to the left-hand staff, provided the source selection contains only material from a single staff.
STEAM-5030	<i>Copy and paste:</i> When copying and pasting dynamics, the pasted dynamics are now correctly left selected.
STEAM-4837, STEAM-4839	<i>Copy and paste:</i> Pasting material that includes dynamics or slurs into other staves at the same rhythmic position now result in the pasted dynamics and slurs becoming linked to the dynamics and slurs on the source staves.
STEAM-5086	<i>Dynamics:</i> Attempting to set the color of a selected hairpin in Engrave mode no longer causes a crash.
STEAM-4911	<i>Holds and pauses:</i> It is now possible to add a fermata to the final barline of a flow written in open meter.
STEAM-5181	<i>Holds and pauses:</i> A transitory spacing problem that could result in adding a caesura not resulting in space being added immediately has been fixed.
STEAM-5145	<i>Holds and pauses:</i> Fermatas attached to barlines now always draw correctly in galley view.
STEAM-5116	<i>Holds and pauses:</i> Fermatas attached to barlines no longer sometimes cause a bar number at the start of the system to move incorrectly.
STEAM-5171	<i>Instrument changes:</i> Instrument change warning labels now appear correctly when the new instrument starts playing on the following system
STEAM-5167	<i>Instrument changes:</i> Instrument changes that occur near the start of the flow are now snapped to the start of the flow if the first instrument held by the player doesn't play at all before the new instrument starts playing.
STEAM-5160	<i>Instrument changes:</i> The light blue staff labels in galley view are now shown on each instrument, rather than for each player, making it easier to identify which staff is for which instrument held by each player.
STEAM-5131	<i>Key commands:</i> Key commands shown in tool tips are now correctly updated when key commands are edited.
STEAM-4672	<i>Key commands:</i> Setting a key command in the global context now correctly reports if there is a conflict with the same key combination in another context.
STEAM-4985	<i>Key signatures and accidentals:</i> Attempting to create a new accidental type in the Edit Tonality System dialog no longer causes a crash if an existing accidental is not already selected.

ID #	Issue
STEAM-5095	<i>Key signatures and accidentals:</i> The Edit Key Signature dialog now correctly uses the bass F clef rather than the baritone F clef.
STEAM-5057	<i>Key signatures and accidentals:</i> Custom key signatures that use a newly-created accidental type are now shown correctly in the Custom Key Signatures section of the Key Signatures panel in Write mode.
STEAM-5194	<i>Key signatures and accidentals:</i> Custom key signatures now show the name supplied by the user as a tool tip when hovering over their button in the Key Signatures panel.
STEAM-5136	<i>Key signatures and accidentals:</i> Custom key signatures now transpose correctly in layouts set to transposing pitch rather than concert pitch.
STEAM-5028	<i>Key signatures and accidentals:</i> Repitching notes now works correctly in key signatures that have been chosen because they show one fewer sharp or flat than the enharmonic equivalent for transposing instruments.
STEAM-5070	<i>Layout Options:</i> Saving layout options as the defaults for future projects no longer causes new layouts to have either the wrong players and flows or no players and flows at all to be attached to them by default.
STEAM-4986	<i>Layout Options:</i> The option Use optical spacing for beams between staves on the Note Spacing page of Layout Options is now switched on by default in part layouts in new projects.
STEAM-5130	<i>Layout Options:</i> If the saved layout options refer to a non-default set of master pages that is not available in the new project, Dorico no longer crashes when creating the project.
STEAM-5001	<i>Lyrics:</i> Lyrics assigned to different voices but with the same line number now have the same vertical position.
STEAM-5107	<i>Lyrics:</i> Lyric extender lines and hyphens now stop correctly before the systemic barline at the end of the system.
STEAM-5065	<i>Multi-bar rests:</i> Grace notes positioned before a barline now draw correctly if the bar to which they are attached becomes consolidated into a multi-bar rest.
STEAM-5093	<i>Multi-bar rests:</i> Fermatas now correctly cause multi-bar rests to break.
STEAM-5237	<i>MusicXML import:</i> Key signatures in MusicXML files that specify a number of fifths but no mode now import correctly.
STEAM-4812	<i>Note input and editing:</i> Using Space to advance a hairpin past a tuplet no longer engages sticky tuplet input, causing subsequent music to be overwritten unexpectedly.
STEAM-5138	<i>Note input and editing:</i> It is now possible to create a tied note longer in duration than a maxima, or 64 quarter notes (crotchets).
STEAM-5002	<i>Note input and editing:</i> When using Lock to Duration, the caret now correctly advances to the end of the last note in the voice whose notes are being repitched.
STEAM-4760	<i>Note input and editing:</i> It is now possible to play chords on your MIDI keyboard when inputting ties with T or when Lock to Duration is active.
STEAM-5072	<i>Note input and editing:</i> The first note input via the mouse can now have an accidental and a rhythm dot if chosen from the panel.
STEAM-5078	<i>Note input and editing:</i> Double-clicking to start note input in galley view now always shows the caret at the correct location.

ID #	Issue
STEAM-5172	<i>Note input and editing:</i> MIDI step-time input now correctly compensates for the octave transposition of the instrument (e.g. piccolo, double bass, guitar, tenor voice), if any.
STEAM-5188	<i>Page layout:</i> Graphics placed in graphics frames on master pages are now correctly saved and loaded with the project.
STEAM-5083	<i>Page layout:</i> A problem that prevented text frames from being deleted in some circumstances has been fixed.
STEAM-5092	<i>Page layout:</i> Using the formatting commands (e.g. make into system/frame, lock system/frame) in one layout no longer incorrectly removes formatting from other layouts.
STEAM-4984	<i>Page layout:</i> You can now remove overrides from all pages in the layout by clicking the Remove Overrides button in the Pages section of the right-hand panel in Engrave mode with no pages selected.
STEAM-4886	<i>Playback:</i> Dorico will now load sounds into all 16 channels of each instance of HALion Sonic SE, rather than leaving the final channel in each instance empty.
STEAM-4496	<i>Playback:</i> Dorico now compensates correctly for HALion patches that are transposed by one or more octaves (e.g. double bass, bass guitar).
STEAM-4792	<i>Playback:</i> The playback of hairpins has been improved such that immediate dynamics at either or both ends of the hairpin are now properly respected.
STEAM-4988	<i>Playback:</i> Attempting to open another project when the Mixer window is already open for the current project no longer causes Dorico to hang.
STEAM-4955	<i>Playback:</i> The default voice count for HALion Sonic SE in new projects has been increased from 128 to 512.
STEAM-4998	<i>Print mode:</i> A problem whereby staff lines or other lines could appear the wrong thickness on the second and subsequent pages of exported PDFs has been fixed.
STEAM-5098	<i>Print mode:</i> Exporting graphics files from multiple layouts in a single operation no longer causes a crash.
STEAM-5042	<i>Print mode:</i> The default dots per inch (dpi) value for exported graphics is now 150dpi instead of 72dpi.
STEAM-5097	<i>Print mode:</i> Exporting multiple graphics no longer prompts separately to overwrite any found files: you can simply confirm that you want to overwrite all existing files at once.
STEAM-5125	<i>Print mode:</i> The Watermark text in the Annotations section of the print options panel will no longer be cleared incorrectly in the event that multiple selected layouts have conflicting values.
STEAM-5219	<i>Print mode:</i> Attempting to overwrite a graphics file that is locked by the filesystem (e.g. because it is open in another application) will no longer cause a crash.
STEAM-4834	<i>Properties:</i> It is no longer possible to set the values for dot diameter, dash length, and gaps between dots and dashes for ties and slurs to zero.
STEAM-5063	<i>Properties:</i> Properties for X and Y offset for force and combined dynamics now appear correctly.
STEAM-4570	<i>Rehearsal marks:</i> Rehearsal marks are now correctly centered above double and repeat barlines.

ID #	Issue
STEAM-4570	<i>Rehearsal marks:</i> If the option to position rehearsal marks at the start of the system is chosen, the rehearsal marks are now correctly left-aligned with the systemic barline.
STEAM-5035	<i>Rests:</i> Rests that have properties set on them, e.g. to force a specific duration or to set a particular staff position, are now positioned in a manner consistent with other rests that don't have properties set.
STEAM-5204, STEAM-4848	<i>Rests:</i> It is now possible to select all individual rests in Engrave mode.
STEAM-4979	<i>Selection:</i> A problem whereby the marquee rectangle could be left behind if you hit Esc during a marquee selection has been fixed.
STEAM-5143	<i>Slurs:</i> A problem that prevented slurs starting in one voice and ending in another from being created correctly has been fixed.
STEAM-4953	<i>Tempo:</i> The Shift+T popover for tempo input is now much more flexible and will allow a much wider set of terms to be input.
STEAM-5015	<i>Text:</i> Edit ▶ Reset Appearance now clears any changes of font, size, and other typographical control in a selected text item.
STEAM-5142	<i>Text:</i> A problem whereby some Japanese fonts were truncated during text editing has been fixed (Mac only).
STEAM-5061	<i>Text:</i> Creating a new text frame on a master page now sets the default paragraph style correctly.
STEAM-4975	<i>Text:</i> It is now possible to jump to the name of a specific font in the list of fonts in the text editor popover by typing the first letter or two of its name.
STEAM-5055	<i>Text:</i> Text frames that are too full now correctly truncate the text within the frame, rather than allowing the text to flow outside the frame.
STEAM-5043	<i>Text:</i> Copying and pasting text into Dorico from another application no longer causes the formatting of the text in the frame to be messed up.
STEAM-5044	<i>Text:</i> It is now possible to use the Unicode Hex Input input method to input extended Unicode characters into the text editor within Dorico (Mac only).
	<i>Text:</i> Paragraph styles in newly-created projects now inherit many of their settings from the Default Text paragraph style, making it possible to quickly change the main text font in use in your project by editing the Default Text paragraph style.
STEAM-5154	<i>Time signatures:</i> Newly-created time signatures now correctly show that they are selected after creation.
STEAM-5207	<i>User interface:</i> The Layout Options , Notation Options , and Engraving Options dialogs now remember which page you were last looking at when you opened the dialog, and show that page when the dialog is reopened.
STEAM-5208	<i>User interface:</i> A read-out of the current page size using the user's preferred measurement unit has been added to the Page Setup page of Layout Options .
STEAM-5182	<i>User interface:</i> The view type selector in the status bar no longer gets out of sync with the actual view used when switching layout.
STEAM-4656	<i>User interface:</i> When switching between modes, the state of the Hide/Restore Panels button on the toolbar correctly reflects which panels will be shown or hidden when clicked for that mode.

ID #	Issue
STEAM-5081	<i>User interface:</i> Dorico no longer crashes when you right-click on a tab and choose to create either a vertical or horizontal split.
STEAM-4978	<i>User interface:</i> Dorico no longer allows the Mixer or Transport windows to be shown as full screen windows (Mac only).
STEAM-4956	<i>User interface:</i> The buttons on the toolbar to hide or show the Mixer and Transport windows now correctly reflect whether or not the Mixer and Transport windows are actually shown.
STEAM-4908	<i>User interface:</i> When closing the final project window and the Steinberg Hub is set not to reappear, the menus no longer disappear (Mac only).
STEAM-4528	<i>User interface:</i> New Write ► Create Voice and Next Voice menu items, intended to make the Shift+V and V key commands for use in note input more discoverable.
STEAM-4039	<i>Zoom:</i> The behaviour of zooming in when the selected item is close to the edge of the viewport has been improved.
STEAM-5166	<i>Zoom:</i> A problem whereby Dorico could crash when switching window mode when the zoom level is set to Whole page has been fixed.
STEAM-5089	<i>Platform support:</i> Dorico now uses DirectWrite to render all text and glyphs in its user interface, which should resolve the problem with icons appearing stretched or out of proportion until Dorico is restarted (Windows only).
STEAM-4992	<i>Localization:</i> The names of templates that appear in the Steinberg Hub are now localised.
STEAM-5305	<i>Localization:</i> Typing characters that require the use of the Alt modifier (e.g. [,] and \) into popovers now works correctly on non-English keyboards.
STEAM-5312	<i>Localization:</i> A number of problems with keys that produced accented characters when specifying key commands in the Key Commands page of Preferences have been fixed.
STEAM-4893	<i>Localization:</i> The handling of key commands in the Japanese language version of Dorico has been overhauled.
STEAM-5310	<i>Localization:</i> Changing the keyboard language on the Key Commands page of Preferences now takes effect immediately, rather than requiring a restart of Dorico.
STEAM-5313, STEAM-5314	<i>Localization:</i> The default key commands for French, Spanish, Italian, and Portuguese have been revised in relation to the various keyboard handling fixes.

Dorico 1.0.0

October 2016

Initial release version.



Known issues and solutions

Frequently asked questions

Answers to frequently asked questions about Dorico can be found online in the [Dorico forum](#).

Knowledge base

For the latest information about issues and solutions you may encounter when running Dorico, please [consult the Knowledge Base](#).

Entering the eLicenser Activation Code (Mac only)

When you first run Dorico and are prompted to enter your Activation Code, you may find that after you have successfully activated your Soft-eLicenser, you must quit and restart Dorico for the application to detect that it is fully licensed.

Key commands to transpose notes by an octave (Windows only)

The Intel Graphics Adaptor drivers used by many Windows computers define a default key command to flip the screen by 90, 180 and 270 degrees via a shortcut **Ctrl+Alt+up/down/left/right** arrows.

Ctrl+Alt+up/down option conflicts with the key commands in Dorico note input for transposing notes by an octave.

For information about how to disable the default Intel Graphics Adaptor key command, [consult the Knowledge Base](#).

Audio export

No progress dialog appears on Mac during audio export. A busy cursor will appear for the duration of the export operation. Check that the operation has completed successfully before you try to play back the exported audio file. You can verify that the export has completed successfully by checking the file size of the exported file: if it is reported as 0 bytes, the file is still locked for writing.