



Version history Known issues & solutions

August 2018

Steinberg Media Technologies GmbH

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Dorico 2.1

10 August 2018

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

New features

Swing playback

Dorico 2 now includes support for swing playback. It is possible to set up a project-wide default swing pattern, or to change the amount of swing (or indeed to switch between straight and swing) at any point in the music, and it is also possible for different players to play different swing patterns at the same time.

Based on academic research into how swing is actually rendered by real musicians by authors Anders Friberg and Andreas Sundström, Dorico's swing patterns are tempo-dependent, with the swing feel more pronounced at lower tempos, and trending towards a straight feel at higher tempos. Swing feels that produce the same ratio at all tempos are also included, and it's possible to define your own swing patterns.

Project-wide swing. To enable swing for your whole project, open **Play ▶ Playback Options** and choose the **Timing** page. Choose the desired swing pattern from the **Default rhythmic feel** menu:

- **2:1 swing (fixed)** – sometimes called *triplet swing*, this elongates the first eighth (quaver) in a pair of eighths to be twice as long as the second, creating a strict triplet 2:1 ratio; this ratio is maintained regardless of the tempo.
- **3:1 swing (fixed)** – this elongates the first eighth in a pair of eighths to be three times as long as the second, creating a dotted eighth-16th (dotted quaver-semiquaver) ratio; this ratio is maintained regardless of the tempo.
- **Heavy swing** – this produces a tempo-dependent swing ratio of between 3:1 at low tempo and 1.5:1 at high tempo.
- **Light swing** – this produces a tempo-dependent swing ratio of between 1.5:1 at low tempo and 1:1 (i.e. straight) at high tempo.
- **Medium swing** – this produces a tempo-dependent swing ratio of between 2:1 at low tempo and 1.5:1 at high tempo.
- **Straight (no swing)** – this produces even eighth notes in the ratio 1:1 at all tempos.

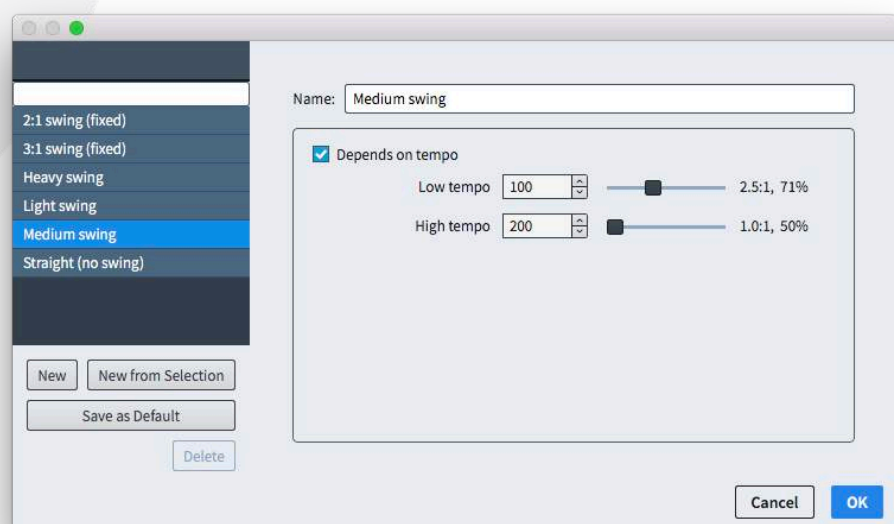
Changing swing mid-flow. To change the swing pattern for a particular section of the project, select a note, rest or other item at the location where you want to change the swing pattern, then type **Shift+T** for the tempo popover. Type the beginning of the name of the swing pattern you want to use, e.g. typing **med** will show **Medium swing** in the list of suggestions: use down arrow to select it, then hit **Return** to confirm your choice. A signpost will appear on the top staff in the system, showing the name of the rhythmic feel.

To change the swing pattern used by just one of the players in the ensemble, first select a note, rest or other item on the staff in question, or position the caret there, then use the **Shift+T** popover to select the swing pattern using the down arrow key. Finally, type **Alt+Return** to confirm the popover: now a signpost appears on the chosen staff, showing the name of the rhythmic feel.

Changes in rhythmic feel only take effect from the start of a bar, so if you create a change of rhythmic feel in the middle of a bar, it will take effect from the start of the following bar.

To delete a change of swing pattern, simply select the corresponding signpost and hit **Delete**. You can choose whether or not rhythmic feel signposts should be shown via **View ► Signposts ► Rhythmic Feel**.

Editing swing patterns. To edit one of the default swing patterns or define your own, first open the **Timing** page of **Play ► Playback Options**, then click the **Edit** button in the **Rhythmic Feel** section to open the **Edit Rhythmic Feel** dialog:



The rhythmic feel definitions in the project are listed on the left. Click **New** to create a new default rhythmic feel; click **New from Selection** to create a copy of the currently-selected rhythmic feel; click **Save as Default** to save the currently-

selected rhythmic feel into your user library so that it will be available in every new project you subsequently create.

On the right-hand side of the dialog are some simple controls to define the swing pattern:

- **Depends on tempo** determines whether or not the swing pattern should use the same ratio at all tempos; when switched off, the **Low tempo** and **High tempo** controls are disabled, and a single swing ratio slider is shown.
- **Low tempo** specifies the tempo (in quarters per minute) at and below which the swing ratio for the slider to the right should be used.
- **High tempo** specifies the tempo at and above which the swing ratio for the slider to the right should be used.
- The swing ratio sliders cover a range from 1:1 (straight) to 5:1 (sextuplet, with the first eighth occupying five divisions, and the second eighth occupying the final division), and display both the ratio and a swing percentage to its right.

When **Depends on tempo** is activated, the swing ratio defined for **Low tempo** is used at and below that tempo; as the tempo increases, Dorico interpolates the swing value towards the swing ratio defined for **High tempo**, until that tempo is reached. If **Depends on tempo** is not activated, then the swing ratio defined by the single slider is used at all tempos.

Notehead set editor

A new **Engrave ▶ Notehead Sets** dialog has been added, which allows you to modify the built-in notehead sets and design your own.

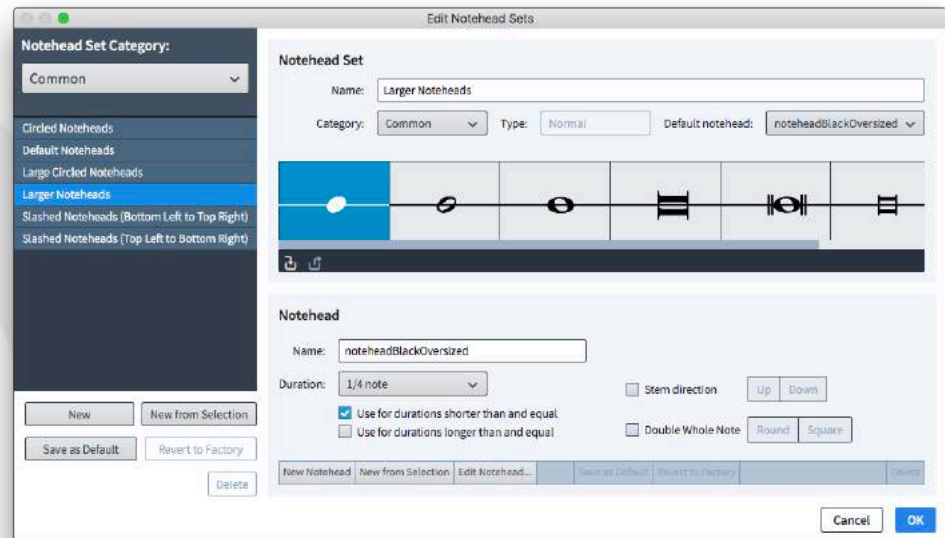
A *notehead set* is a collection of related noteheads: it is important to know that the same notehead can appear in more than one notehead set, which means that if you edit a notehead within one notehead set, it will be edited in all notehead sets that contain that notehead.

A normal notehead set typically contains at least four noteheads: the black notehead for notes up to a quarter (crotchet) in duration; the white notehead for half notes (minims); the wider white notehead for whole notes (semibreves); and the wider white notehead with one or two vertical strokes at either side, or a square white notehead, for double whole notes (breves). Dorico also supports two other types of notehead sets: *pitched*, where the notehead chosen will be different depending on the pitch of the note; and *scale degree*, where the notehead chosen will be different depending on the scale degree of the note, relative to the current key signature. The most common kind of pitched notehead set is the **Note names** notehead set, which shows the letter name (and accidental, if applicable) of the

current note within the shape of the notehead; an example of a scale degree notehead set is the **Aikin 7-shape** set for sacred harp or shape note singing.

A notehead set of a particular type – normal, pitched, or scale degree – can only contain noteheads of the same type. It is not possible to use, say, a normal notehead within a pitched notehead set, so you cannot change the type of an existing notehead set or an existing notehead.

The **Engrave ► Notehead Sets** dialog is split into three areas:





On the left, you can choose which category to work with: the categories here correspond to the submenus in the **Edit ► Notehead** menu. You can change which noteheads appear in which submenu by selecting the notehead set in the list on the left, then changing the **Category** drop-down in the Notehead Set section at the top-right.

Below the list on the left are the buttons to create and delete notehead sets:

- **New** creates an empty notehead of the **Normal** type, in the **Common** category.
- **New from Selection** creates a copy of the currently-selected notehead set, of the same type and in the current category. Be aware that the noteheads contained in the new set are the same as the ones in the set the new set is based on: if you want to make changes to the noteheads only in the new set, be sure to also create new noteheads based on the ones currently in the set.
- **Save as Default** saves the selected notehead set into your user library, so that it will be available in all new projects that you subsequently create.

- **Revert to Factory** is only enabled for built-in notehead sets; if you have made any changes to a built-in set, this reverts it to its default state.
- **Delete** allows you to delete custom notehead sets, provided they are not currently being used by any notes in the project; built-in notehead sets cannot be deleted.

The **Notehead Set** section at the top-right shows the noteheads in the current set. Click  to add an existing notehead to the current set: a menu listing all of the noteheads of the same type as the current set appears. To remove a notehead from the current set, click , which is only enabled when the notehead is not in use in the project. To specify the category in which this notehead set should appear, choose the desired entry from the **Category** list. The **Default notehead** specifies which notehead within the set Dorico should use if it is unable to find a notehead that exactly matches the requirements of a note (for example, if you have a note longer than a whole note, but no notehead of a suitable duration defined in the set, the default notehead will be used instead).

You cannot change the **Type** of a notehead set: if you want to create a pitched or scale degree notehead set, select an existing notehead set of the desired type and use **New from Selection** to create a new notehead set based on it.

The **Notehead** section at the bottom-right shows the properties for the notehead currently selected in the grid control in the **Notehead Set** section above. You can edit the following properties of each notehead:

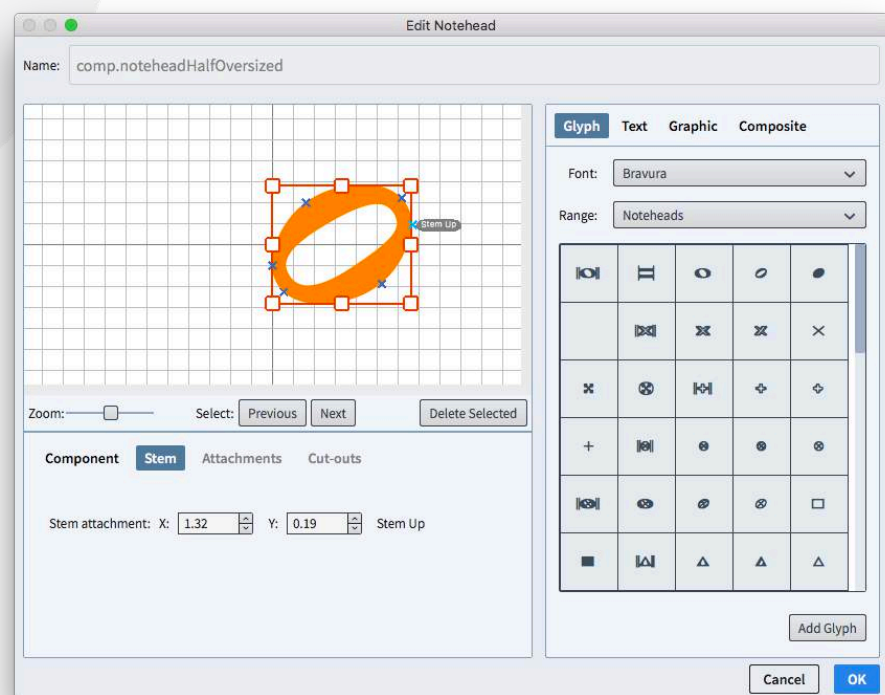
- **Name:** the name of the notehead as it will appear in the menu in the action bar for the grid control above.
- **Duration:** the primary rhythmic duration for which the notehead is intended to be used. For most notehead appearances, the same notehead is used for notes of a quarter (crotchet) and shorter in duration: it is sufficient to choose **1/4 note** for that notehead, then set **Use for durations shorter than and equal** directly below.
- **Use for durations shorter than and equal** specifies that this notehead should be used not only for the **Duration** specified above, but also for shorter notes.
- **Use for durations longer than and equal** specifies that this notehead should be used not only for the **Duration** specified above, but also for longer notes.
- **Stem direction** allows you to specify that this notehead should be used specifically for up-stem or down-stem notes. (For example, in shape note systems, the triangular notehead points in opposite directions for up-stem and down-stem noteheads.)

- **Double whole note** allows you to specify that this note is nominally a **Round** or **Square** notehead, which determines which will appear depending on whether **Round** or **Square** is set for **Appearance of double whole note (breve) notehead** on the **Notes** page of Engraving Options.
- **Pitch** (only for noteheads of **Pitched** type) specifies the note name and accidental for which this notehead should be used.
- **Degree** (only for noteheads of **Scale Degree** type) specifies the scale degree (an integer from 1 to 7) for which this notehead should be used.

In the action bar at the bottom of the **Notehead** section are found the following buttons:

- **New Notehead** creates a new notehead of the **Normal** type, based on the default black notehead.
- **New from Selection** creates a new notehead of the same type and appearance as the notehead selected in the grid control in the **Notehead Set** section above.
- **Edit Notehead** opens the notehead editor, allowing you to change the appearance of the notehead itself; see below.
- **Save as Default** saves the selected notehead into your user library, so that it will be available in all new projects that you subsequently create.
- **Revert to Factory** is only enabled for built-in noteheads; if you have made any changes to a built-in notehead, this reverts it to its default state.

Clicking **Edit Notehead** opens the notehead editor:



On the right-hand side, choose between the different types of components that can be added to the notehead design:

- **Glyph** allows you to add a character from any font installed on your computer; if you choose a SMuFL-compliant font such as Bravura, the **Range** list will show all of the SMuFL character ranges, making it easier to find the character you're looking for.
- **Text** allows you to add one or more characters using any of the font styles defined in **Engrave ▶ Font Styles**. This would be an unusual choice for a notehead, but the option is provided nevertheless.
- **Graphic** allows you to add a graphic in PNG, JPG or SVG format. It is recommended that you use a vector format like SVG so that it will appear high-resolution at any size.
- **Composite** allows you to add any other symbol that is already defined in the project, though at present you will need to know its name, as no graphical preview is currently available.

When you have chosen the component you wish to add, click the **Add** button at the bottom of the current panel to add the component to the display.

You should position the notehead design such that the left-hand edge is aligned with the slightly thicker vertical grid line that represents the horizontal origin (you can think of this as a nominal stem on a stem-down note), and such that the middle is aligned with the slightly thicker horizontal gridline that represents the vertical origin (you can think of this as a nominal staff line, with the notehead sitting on the staff line).

You can specify exactly where the stem should join the notehead on the right-hand side for a stem-up note and on the left-hand side for a stem-down note; you can also specify additional attachment points for stems that join the note diagonally when the notehead is used for a split stem altered unison. Click the **Stem** button below the main notehead display to add or delete stem attachment points. For more information about stem attachment, please consult the SMuFL specification:

<https://w3c.github.io/smufl/gitbook/specification/glyphswithanchors.html>

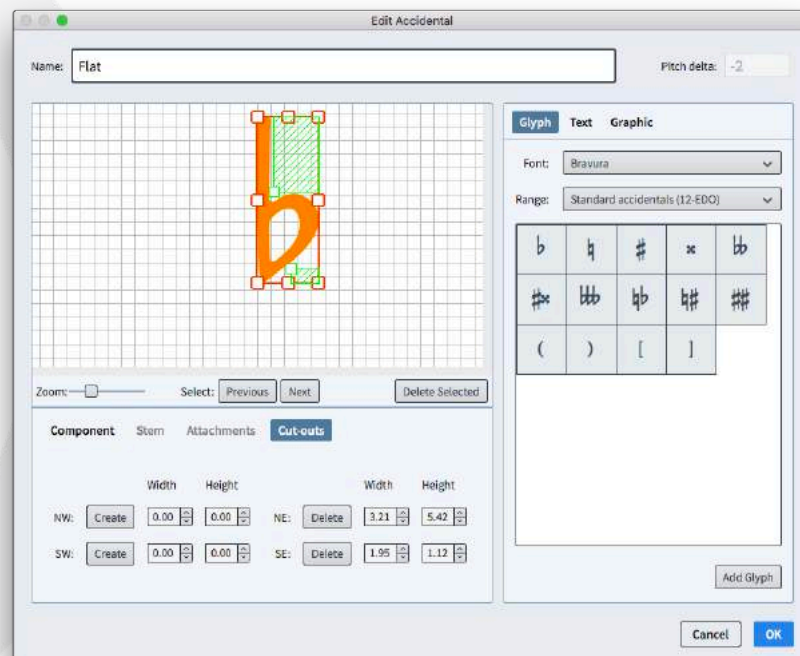
Improvements

Audio export

It is now possible to export individual flows to separate audio files, and to export individual players to separate audio files as well, with audio files for each flow being exported to separate folders. This makes it very quick and easy to export “stems” suitable for dragging and dropping into Cubase or another DAW for further mixing and mastering. (STEAM-8128)

Accidentals

Cut-outs for accidental tucking. The **Edit Accidental** dialog now allows the editing of cut-outs in each of the four corners of the symbol, to instruct Dorico how it can tuck or kern the accidentals in adjacent columns. (STEAM-8113)



To edit the cut-outs for an accidental, click the **Cut-outs** tab in the lower area of the dialog, and click the **Create** button for the corner of interest (**NW** = north-west, **SW** = south-west, **NE** = north-east, **SE** = south-east), then click the handle on the inner corner of the shaded green area to change the size of the cut-out. To remove a cut-out, click the **Delete** button for the corner of interest.

For more information about cut-outs, consult the SMuFL specification at:

<https://w3c.github.io/smufl/gitbook/specification/bbox-cut-outs.html>

Accidentals and ledger lines. It is now possible to specify that Dorico should not shorten the left-hand side of ledger lines when an accidental is present: set **Ledger lines on notes with accidentals** to **Do not adjust ledger lines** on the

Notes page of Engraving Options to enable this behavior. Ledger lines will then use their default length as defined by **Ledger lines protrude beyond noteheads by n spaces** instead of the value defined by **Ledger lines protrude left of notehead with accidental by n spaces**. Furthermore, the default gap between the rightmost accidental and a default ledger line is determined by the new **Gap to right of rightmost accidental, if to left of unshortened ledger line** option on the **Accidentals** page of Engraving Options. (STEAM-8179)

Tucking accidentals on back notes. A new option **Gap to right of rightmost accidental, if to left of back note n spaces** has been added to the **Gaps** section of the **Accidentals** page of Engraving Options. Normally accidentals are allowed to encroach on the usual margin when a back note is present, and this value specifies the minimum gap that must be present. (STEAM-6902)

Arpeggio signs

A new option **Arpeggio signs on slash voices** has been added to the **Arpeggio Signs** page of Engraving Options, controlling whether or not arpeggio signs should be shown in slash voices. By default, an arpeggio sign shown on a slash voice will be very short, but its length can be adjusted in Engrave mode. (STEAM-8180)

Barlines

Collision avoidance. Dorico now consistently takes barlines than protrude above and below the staff (e.g. for single-line percussion instruments) and wings on repeat barlines, if shown, into account when determining the placement of items above the staff. (STEAM-5752, STEAM-7413)

Thin-thin repeat barlines. Building on the support for hymnal-style barlines introduced in Dorico 2.0, a new option **Start repeat at start of system** has been added to the **Repeats** section of the **Barlines** page of Engraving Options: this option allows you to choose whether or not both the chosen barline type and the repeat dots or only the repeat dots should appear for a start repeat at the start of the system. (STEAM-7668)

Triple barline. Sometimes used in musicological analysis to demarcate structural units larger than a single bar, it is now possible to create a triple single barline by typing **triple** into the **Shift+B** popover. (STEAM-8139)

Chord symbols

A new option **Position of accidental relative to alteration** has been added to the **Alterations** section of the **Chord Symbols** page of Engraving Options. This allows you to follow the recommendations in Russell Garcia's book series *The Professional Arranger Composer*: Garcia advocates the use of minus and plus

instead of accidentals in intervals and alterations in chord symbols, because they occupy less horizontal space. However, when using these symbols, it is important to reverse their usual order relative to the scale degree, i.e. to show **9-** instead of **-9**, as having the minus or plus precede the degree can cause ambiguity in case the player expects - to be used to denote a minor quality, or indeed **+** for an augmented triad. Therefore, the new option allows you to specify that the accidental should follow the scale degree if required. (STEAM-8326)

Cues

Rhythmic cues. When creating a rhythmic cue, no octave transposition is now shown in the cue label by default, even when cueing onto an octave transposing instrument. (STEAM-8339)

Divisi

Mid-system divisi labels. A new **Show divisi change labels above staves** option has been added to the **Staves and Systems** page of Layout Options. When switched on, the staff label defined for each divisi soloist or section will appear above each divisi staff at the point at which the divisi begins, and a corresponding *tutti* label will appear above each divisi staff at the point at which the divisi ends.

New options on the **Divisi** page of Engraving Options allow you to determine the default distance above the staff for these mid-system divisi change labels. The labels can also be nudged or dragged freely in Engrave mode. It is also possible to override the content of an individual divisi change label in Engrave mode by way of the new **Custom text** property in the **Divisi** group of the Properties panel.

(STEAM-8007)

Creating divisi at the caret. You can now create a divisi change when note input is active: instead of being created at the start of the selection, the divisi change will be created at the caret's location. (STEAM-8002)

Tutti signposts. When using **Restore Tutti** to end a divisi region, the resulting signpost is now labeled **Tutti** to differentiate from the start of a divisi range.

(STEAM-8091)

Filters

Filtering slash voices. You can now filter for slash voices by choosing **Edit ▸ Filter ▸ Voices ▸ All Slash Voices**, or by choosing the specific up-stem, down-stem or stemless slash voice from the list in the submenu. (STEAM-8078)

Flows

Trim flow. Type **trim** into the **Shift+B** popover to execute **Write ▸ Trim Flow**.

(STEAM-7453)

Layouts

Default part layouts. In the event that you have inadvertently deleted the part layouts for your project, the new **Setup ► Create Default Part Layouts** command provides a quick way of recreating a default set of part layouts: one part layout for each player, with each flow attached. (STEAM-8226)

Multi-bar rests

Fixed width H-bar. A new **H-bar width** option has been added to the **Multi-bar Rests** section of the **Rests** page of Engraving Options. When set to **Fixed width**, the H-bar will be drawn using the value of **Fixed H-bar width** instead of being inset from the barline at either side of the multi-bar rest. (STEAM-8240)

Bar count on grand staff instruments. In published music it is usual for the bar count for a multi-bar rest to appear only between the two staves of a grand staff instrument such as piano, but in parts for recording sessions in Hollywood it is usual to show the bar count above both staves. It is now possible to choose between these two conventions by way of the new **Bar count on grand staff instruments** option in the **Multi-bar Rests** section of the **Rests** page of Engraving Options. (STEAM-8342)

Threshold for “tacet al fine”. A new option **Minimum number of bars’ rest at end of flow to show tacet al fine** has been added to the **Rests** page of Engraving Options, defaulting to 4 bars in new projects, and defaulting to 1 bar in projects created in versions of Dorico earlier than 2.1 to preserve their appearance. This allows you to specify that Dorico should now show “tacet al fine” for very short multi-bar rests at the end of a flow. (STEAM-8238)

Hidden tempo items. Tempo items that do not appear in Write mode, for example those that are created in the tempo track in Play mode, are no longer considered for the purposes of splitting multi-bar rests. (STEAM-8151)

MusicXML import

Text items. A new **Text items** option has been added to the **MusicXML Import** page of Preferences, switched off by default. When switched on, all text items in the MusicXML file will be imported as **Shift+X** text items; you will very likely find that these text items duplicate other items that have been imported using as tempos, dynamics, etc. (STEAM-8221)

Rhythm slashes. Dorico now imports rhythm slash regions and slash voices as appropriate from MusicXML files, for both pitched and unpitched instruments. (STEAM-8212, STEAM-8166)

Bar repeat regions. Dorico now imports one-, two- and four-bar repeat regions from MusicXML files. (STEAM-7780)

Notes

Rhythm dot consolidation. The **Rhythm dot consolidation** option in the **Rhythm Dots** section of the **Notes** page of Engraving Options has been revamped, both to make the behavior clearer and to provide a separate option to specify how rhythm dots should be handled for unisons in opposing voices.

Rhythm dot consolidation describes how Dorico handles situations whereby dotted notes of similar pitches in adjacent voice columns can be positioned together, with their rhythm dots appearing in a single column to the right of both voice columns. This makes efficient use of horizontal space, but can introduce ambiguity when reading the music at sight. Dorico provides three settings for rhythm dot consolidation:

- **Do not consolidate** means that rhythm dots should always be shown immediately to the right of the note or chord to which they apply.
- **Notes of the same duration** allows Dorico to consolidate rhythm dots for notes in adjacent columns, provided they have the same duration (e.g. provided both are dotted quarters, but not if one is a dotted eighth and the other is a dotted quarter).
- **Notes of any duration** allows consolidation for any combination of note values (e.g. an up-stem quarter note and a down-stem half note), which provides the most compact arrangement, but could be considered ambiguous.

In addition to this, a separate **Rhythm dots on unisons in opposing voices** option has been added, which allows you to determine whether two notes of the same duration and pitch in opposing voices should show a single rhythm dot, or one rhythm dot per voice. (STEAM-8228)

Horizontal position of rhythm dots. A new **Rhythm dot X** property has been added to the **Notes and Rests** group of the Properties panel, allowing you to adjust the horizontal position of rhythm dots in Engrave mode. When there are multiple notes at the same rhythmic position, be aware that the property applies to the whole group of rhythm dots; the group may have contributing notes from more than one voice. (STEAM-8214)

Hiding ledger lines. A new **Hide ledger line** property has been added to the **Notes and Rests** group of the Properties panel. This property appears only in Engrave mode, and when activated all ledger lines associated with a note are hidden. (STEAM-8137)

Page layout

A new command **Propagate Part Formatting** dialog has been added, which copies page formatting and layout options from a source layout to one or more

destination layouts. The dialog can be invoked either by right-clicking a layout in the Layouts panel in Setup mode (which initializes the selected layout as the source layout in the dialog) or from the **Setup** menu. This dialog appears:



Simply choose the source layout in the left-hand list, then select one or more layouts in the right-hand list. The two checkboxes below the lists determine the behavior when you confirm the dialog:

- **Include layout options** specifies whether key layout options, including page size and margins, default master page set, space size, vertical spacing, note spacing, casting off, multi-bar rest behavior, staff label options, should be copied from the source layout to the destination layouts.
- **Include system formatting** specifies whether Dorico should ensure that the same number of bars should appear on each system, and the same number of systems should appear in each frame, in the destination layouts as in the source layout; this is done by creating system and frame breaks at the start of each system in each destination layout as appropriate. Any existing system and frame breaks in the destination layouts are removed. Likewise, note spacing changes are copied from the source layout to all destination layouts (and any existing note spacing changes in the destination layouts are removed).

If the source layout's system formatting is largely un-edited or relies on the **Casting Off** settings from Layout Options, you may not need to use the **Include system formatting** option, as it is quite likely that using **Include layout options** will produce an identical or very similar layout without the use of breaks on every system.

Complex part layouts that use multiple music frame chains are not suitable as either source or destination layouts for the **Propagate Part Formatting** dialog; Dorico will make the best possible automatic determination of the primary chain of music frame in both the source and destination layouts, but if the setup of the source and destination layouts differs greatly, you may get unexpected results. In particular, page overrides made in Engrave mode are not propagated.

However, you should find that for many cases, checking the layout of the first instrument in a family or section and then using **Propagate Part Formatting** to quickly apply those changes to the remainder of the layouts saves a lot of time in the process of formatting instrumental parts. (STEAM-8315)

Playback

Background sound loading. Dorico now loads sounds into HALion Sonic SE in the background without locking up the user interface, which makes many operations feel much faster. For example, starting a new project and adding players is now much faster because the sounds required for each new player are loaded in the background, rather than making you wait for them to be loaded before you can add another player; when opening an existing project, you can start input and editing right away, without waiting for all of the sounds to be loaded; and when switching between projects, you can input or edit in the new project right away as the sounds are loaded in the background. (STEAM-6471)

Playback of bar repeats. Bar repeats now play back automatically. The bar (for a single bar repeat) or bars (for a two- or four-bar repeat) immediately preceding the bar repeat region will be played back for the duration of the bar repeat region. Dorico will follow the dynamics written in the bar repeat region, rather than repeating any dynamics in the source bars. (STEAM-7916)

Playback of non-standard tonality systems. Building on the playback of microtonal accidentals introduced in Dorico 2.0, Dorico 2.1 now supports full microtonal playback of tonality systems beyond 12-EDO or 24-EDO. Using VST3 Note Expression for HALion family virtual instruments (including the bundled HALion Sonic SE 3), and the VST2.x detune parameter for other instruments (including NotePerformer), Dorico now calculates the appropriate pitch delta for every note, regardless of whether the note is written with an accidental. In addition, it is now possible to specify the reference pitch for playback, defaulted to 440Hz, on the new **Tuning** page of Playback Options. (STEAM-7952)

Phrasing gradual dynamics. Dorico now interprets a series of gradual dynamics of the same direction in close proximity as phrasing dynamics, resetting to the prevailing dynamic level at the start of each gradual dynamic, rather than getting continuously louder or quieter. (STEAM-8220)

Choice of stereo output. A new **Stereo Output** control has been added to the **Edit ▶ Device Setup** dialog, allowing you to choose which pair of outputs on your audio interface should be used for Dorico's playback. (STEAM-5176)

App Nap. App Nap is a power-saving feature on macOS that automatically reduces the amount of processor time available to an application once it goes into the background in order to reduce its energy usage. For Dorico, this could have the result of causing playback to stutter or even stop altogether after putting Dorico into the background during playback. Dorico now signals to macOS that it should not use App Nap if it is playing back, which means that playback can continue unimpeded when Dorico is put into the background. (STEAM-8034)

Play mode

Restoration of state. The state of which tracks are expanded, the vertical sizes of lanes, and which MIDI controllers are currently set for each automation lane are now all saved and restored, so switching away from Play mode and then back again will retain all of those settings. (STEAM-8100, STEAM-8153)

Special tracks. A new **Play ▶ Tracks** submenu allows you to choose which of the four special tracks that can appear above the first player track in Play mode should appear: **Time**, **Chords**, **Video**, and **Markers** can now be individually hidden or shown. When a video is attached to a flow in the project, the Video and Markers tracks are automatically shown. (STEAM-8149)

Fine control of automation. It is now possible to hold the **Alt** key while dragging a point in the tempo or MIDI automation lanes in Play mode to move the point by a smaller amount, allowing finer adjustment. (STEAM-8124)

Increase/decrease track size. New commands to change the height of the selected track in Play mode have been added, with the default key commands **Shift+G** and **Shift+H**. (STEAM-8197)

Silence playback template. If you want to prevent Dorico from loading any sounds in your current project, you can choose the new **Silence** playback template from **Play ▶ Playback Template**. To make a project play back again, simply reopen this dialog and apply one of the other playback templates. (STEAM-8194)

Choosing which sound to use for MIDI thru. Clicking on a track header in Play mode now sets the end point that will be used to echo notes played from your MIDI keyboard when note input is not active. It is also possible to change the sound by making a selection on a staff in Write mode. (STEAM-8201)

Playing techniques

Playing techniques that use imported graphics now show an orange outline selected, to make their selection state easier to see. (STEAM-8075)

Project files

When opening a project that was last saved in an earlier version of Dorico, an informational message box appears, informing you of the version of Dorico in which it was saved (if that can be determined), and alerting you to the fact that opening it in a later version will automatically update it. The project is opened “clean”, i.e. it will not prompt you to save if you try to close it immediately after opening it in the current version, because all of the updates that have been carried out can be carried out in the same way if you subsequently reopen the project in this later version. If you don't want to see this message, it can be disabled by switching off **Warn when opening projects last saved in an earlier or later version** in the **Files** section of the **General** page of Preferences.

If you want to guard against inadvertently overwriting a project last saved in an earlier version of Dorico after opening it in the current version, you can switch on **Prompt to save projects from an earlier or later version to a new location**, found in the same location in Preferences. When this option is switched on, Dorico will not automatically overwrite the project if you choose **File ▶ Save** or type **Ctrl+S** (Windows) or **Command-S** (Mac): instead, you will see the standard file picker dialog and be prompted to choose a new name and save location for the project. You can of course choose to overwrite the existing project file at this point if you wish. (STEAM-8193)

Properties

A new command **Edit ▶ Propagate Properties** has been added, which copies the properties of the selected item or items from the current layout to all other layouts in which they appear. When invoked from Write mode, only the properties that appear in the Properties panel in Write mode will be propagated to other layouts; when invoked from Engrave mode, the properties that appear in the Properties panel in both Write and Engrave mode will be propagated.

In general, properties that appear in Write mode (which may apply to all layouts, or which can vary by layout, but not by chain of music frames) tend to be more semantic in nature, while properties that appear only in Engrave mode (which can typically vary not only by layout, but also by chain of music frames) tend to be more concerned with fine graphical appearance and positioning.

By way of example, slur placement and design (solid, dashed, etc.) are properties that appear in Write mode and will be applied if **Propagate Properties** is invoked from Write mode, while the precise position of slur end and control points are

properties that appear only in Engrave mode and will only be applied if **Propagate Properties** is invoked from Engrave mode. In this way, you can choose whether all properties should be propagated, or only those that typically can apply regardless of the specifics of the way each layout is formatted. (STEAM-8314)

Rhythm slashes

Hiding music behind slash regions. By default, slash regions now cause any existing music in other voices under their span to be hidden: this allows you to write, say, a possible solo realization for the purposes of playback, and still show only the slashes in the score and part. If, however, you require other voices to appear during a slash region, you can activate the **Show other voices** property in the **Slash Region** group of the Properties panel. (STEAM-8138)

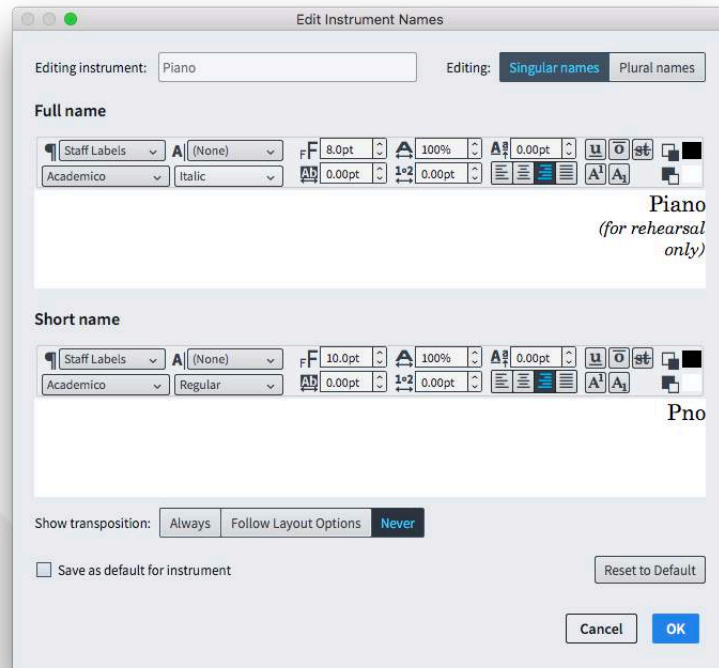
Bar count for slash regions. New options to display bar count numbers on rhythm slash regions have been added via a new **Count** section on the **Notes** page of Engraving Options:

- **Show slash region bar count every n bars** specifies the interval at which the bar count should appear; setting this to 1 will cause the bar count to be displayed on every bar.
- **Appearance of slash region bar count** specifies whether the count should be shown **With parentheses**, **Without parentheses**, or not at all (**Do not show**).
- **Placement of slash region bar count** determines whether the count should be shown above or below the staff.
- **Bar count distance outside staff n spaces** specifies the distance between the top or bottom staff line and the bar count number.

If necessary, bar count numbers can be nudged and dragged in Engrave mode. (STEAM-8114)

Staff labels

Rich text for staff labels. The **Edit Instrument Names** dialog now provides additional controls to allow more complex formatting of staff labels. To edit the staff label that appears in the margin for a given instrument, expand the card of the player holding the instrument in the Players panel in Setup mode, hover over the name of the instrument so that the chevron > appears, then click and choose **Edit Names** from the context menu. This dialog appears:



The text entered in this dialog is used not only for the staff label that appears to the left of the staff in the margin, but also for labelling changes of instrument above the staff, in which case any line or paragraph breaks will be removed, and the label reduced to a single line. Furthermore, the alignment specified in the dialog is ignored: instead, the alignment of the paragraph style will always be used. This is to ensure that you can achieve a consistent alignment of staff labels from the top of the system to the bottom.

To restore an instrument's labels back to the defaults, click **Reset to Default**.
(STEAM-8273)

Staff group labels. A new option **Staff labels for identical adjacent solo instruments** has been added to the **Staff Labels** page of Engraving Options. Setting this to **Group between staves** will center the name of the instrument between all of the adjacent staves belonging to identical instruments: for example, two flutes will show a label "Flute" centered between the two staves, with the upper staff being labeled "1" and the lower one "2".

The group label is centered on the staves belonging to the identical instruments: for an odd number of staves, the group label is centered on the middle staff line of the middle staff; for an even number of staves, the group label is centered on the gap between the two central staves.

A new paragraph style **Staff labels (inner)** is used for the instrument numbers and for divisi sections, while the existing **Staff labels** style is used for instruments with

no grouping, for the group labels, and for divisi group or player labels. This illustration shows which kinds of labels use which paragraph style:



The distances for inner and outer staff labels from the systemic barline are determined using the options under **Start of System** on the **Staff Labels** page of Engraving Options. (STEAM-8324)

Labels at the start of the flow. When a player holds multiple instruments, it is important that the player knows which instrument he or she should be playing at the start of each movement. In a full score layout, there will normally be a staff label to the left of the first system, but in a part layout, this is not normally shown. A new **Show instrument change label at start of flow** option has been added to the **Instrument Changes** section of the **Players** page of Layout Options, switched on by default in part layouts in new projects, but switched off in projects created in Dorico 2.0 or earlier in order to preserve their appearance. When switched on, an instrument change label will appear at the start of the first bar, reinforcing for the player which instrument should be played. (STEAM-8242)

Divisi group labels. The **Show player or group name** option in the **Change Divisi** dialog now takes precedence over the options on the **Staves and Systems** page of Layout Options: the default instrument name shown as an outer staff label for a divided system is the group name for the divisi if no groups are defined; otherwise, the divisi group name is shown. (STEAM-8070)

System dividers

It is now possible to specify that system dividers should appear only between systems of differing numbers of staves (rather than when a flow contains at least a certain number of staves), a convention that is followed in parts prepared for recording sessions in Hollywood. To enable this behavior, set **Show system dividers** to **When number of staves differs** in the **System Dividers** section of the **Staves and Systems** page of Layout Options. The previous default behavior is obtained by instead choosing **When minimum number of players present**.

(STEAM-8349)

Time signatures

Large time signatures. The option to show a single time signature for unpitched percussion and keyboard instruments has been refined: now, any and all instruments in any family between brass and strings will be grouped together and a single large time signature will be shown. To reflect this change, the option is now described as **Instruments between brass and strings: Treat separately or Treat as single bracket**. (STEAM-7726)

Open meter. Type **open** into the **Shift+M** popover to create an open meter that shows no symbol. (STEAM-8150)

Tuplets

Choice of font for tuplet digits. A new **Plain font** choice has been added to the **Tuplet digit style** option on the **Tuplets** page of Engraving Options. When this option is chosen, instead of using the traditional bold or light digits from the current music font (Bravura, by default), the text font specified for **Tuplet plain font** in **Engrave ▸ Font Styles** will be used instead. (STEAM-8218)

Positioning of tuplet bracket hooks. Two new Engraving Options have been added under the heading **Offsets for Start and End of Bracket** in the **Horizontal Position** section of the **Tuplets** page to provide default values for the left and right delta for tuplet brackets. The **Additional offset for start of bracket on stem-down tuplets** value is only used when the tuplet bracket is shown and the stems are down, while the **Additional offset for end of brackets on stem-up tuplets** value is only used when the tuplet bracket is shown and the stems are up. The values are set to zero in existing projects to avoid changing their appearance, and to 1/4 spaces for new projects. (STEAM-8087)

User interface

Key commands. Three new commands in the Edit category in the Key Commands page of Preferences have been added, to allow some reasonably common layout-related operations to be performed directly via keyboard shortcut without opening a menu or dialog:

- **Change Bar Consolidation** allows you to set a specific key command for each of the three states for displaying multi-bar repeats (no consolidation; multi-bar rests only; multi-bar rests plus bar repeats).
- **Toggle Bar Consolidation** can have a single key command assigned, and which cycles through the three states when repeatedly invoked.
- **Toggle Layout Transposition** can have a single key command assigned, and toggles between **Edit ▶ Transposing Pitch** and **Edit ▶ Concert Pitch** when repeatedly invoked. (STEAM-8239)

Transport display. Clicking on the time display in the mini transport in the toolbar now cycles between bar.beat.tick, elapsed time, and timecode read-outs. In the main Transport window, clicking on the right-hand time display toggles between elapsed time and timecode. (STEAM-8115)

Restoring window sizes and positions. Dorico now more reliably restores the saved sizes and positions of windows when reopening previously-saved projects. (STEAM-3213)

Video

Locating missing video files. When opening a project with an attached video, if the video cannot be found at the original location specified in the project, Dorico will now look for the video file in the folder alongside the Dorico project itself and automatically re-attach it if it is located there. (STEAM-7897)

Apple ProRes videos. Videos that use Apple's ProRes codec will now play back correctly as the ProRes codec is now distributed with Dorico (required on Windows only; ProRes files play on Mac without requiring a separate codec). (STEAM-8177)

Issues resolved

ID #	Component	Issue
STEAM-5341	<i>Accidentals</i>	Changing the enharmonic spelling of a note with a microtonal accidental now works reliably.
STEAM-7506	<i>Accidentals</i>	A number of problems relating to the choice of specific accidental in note input when multiple accidentals in the tonality system have the same pitch delta have been resolved.
STEAM-8133	<i>Accidentals</i>	It is once again possible to select the symbols in the Edit Accidental dialog with the mouse.
STEAM-7673	<i>Articulations</i>	Staccato articulations are now positioned correctly under slurs on beamed grace notes.
STEAM-8174	<i>Audio engine</i>	Switching away from Dorico while it is starting up with the Suspend audio engine in background preference enabled no longer sometimes causes it to hang (Mac only).
STEAM-8162	<i>Audio export</i>	Attempting to switch to another open project while exporting audio from the first no longer causes a crash.
STEAM-8227	<i>Barlines</i>	Start repeat barlines now appear correctly at the start of the system if they coincide with a time signature that is set to appear above the staff.
STEAM-8143	<i>Bars</i>	When deleting bars at the end of the project, Dorico now ensures that tempos, rehearsal marks, note spacing changes and breaks in the deleted range are correctly removed.
STEAM-5767	<i>Beaming</i>	Further improvements have been made to Dorico's algorithms for avoiding "beam corners" when beaming between notes on different staves.
STEAM-8148	<i>Beaming</i>	Under some circumstances, stems on notes crossed between staves could appear on the wrong side of the notehead when reopening an existing project; this is now fixed.
STEAM-5767	<i>Beams</i>	A problem that caused beam corners (where a partial beam is positioned on the wrong side of a between-staves beam) to appear for some rhythmic patterns has been fixed.
STEAM-8204	<i>Beams</i>	A problem whereby noteheads could draw on the wrong side of notes when crossed to other staves when first opening an existing project has been fixed.
STEAM-8156	<i>Breaks</i>	Moving a system or frame break signpost with Alt +left/right no longer causes the signpost to be removed altogether.
STEAM-8098	<i>Chord symbols</i>	Chord symbols no longer incorrectly appear on extra staves added to instruments.
STEAM-8213	<i>Chord symbols</i>	Chord symbols now correctly cause multi-bar rests to split on grand staff instruments where one staff is hidden because it is empty.
STEAM-8022	<i>Clefs</i>	A problem whereby redundant clefs appear in extra staves belonging to an instrument has been fixed.
STEAM-8069	<i>Clefs</i>	Dorico no longer shows restorative clefs and key signatures at the end of a <i>tutti</i> passage at the end of a system belonging to the divisi staves that were present earlier in the system.
STEAM-8023	<i>Divisi</i>	Staves in galley view will no longer be spaced sufficiently far apart to make room for all divisi staves, when the last divisi change has been deleted from a section player.
STEAM-8071	<i>Divisi</i>	Time signatures at the end of a system that coincides with the end of a <i>tutti</i> range (following the end of a divisi section on that system) now appear reliably in all staves.

ID #	Component	Issue
STEAM-8085	<i>Divisi</i>	Changes of key signature in unison ranges before or after a divisi change on a system no longer collide with the double barline after reopening the project.
STEAM-8223	<i>Divisi</i>	Key signatures on divided transposing instruments in the preamble at the start of the system now always show the correct transposition.
STEAM-8284	<i>Divisi</i>	Disabling instrument changes for a given layout no longer causes the staff labels for divisi staves to stop appearing correctly.
STEAM-8288	<i>Divisi</i>	Pasting a divisi event that references a custom paragraph style into another project no longer causes a crash.
STEAM-8322	<i>Divisi</i>	Under some circumstances, pasting a divisi signpost could cause Dorico to crash; this is now fixed.
STEAM-7942	<i>Dynamics</i>	Dynamics will no longer sometimes be positioned incorrectly in galley view after editing them, e.g. changing their placement.
STEAM-8254	<i>Dynamics</i>	The <i>cresc./dim.</i> gradual dynamics in the Dynamics panel are no longer incorrectly shown as hairpins in additional windows opened for a project.
STEAM-8325	<i>Dynamics</i>	Under some circumstances, edits to notes on one system could cause dynamics on the previous system to change position incorrectly; this has now been fixed.
STEAM-8068	<i>Flows</i>	Playback is now always initialised correctly when importing flows into an empty project.
STEAM-8095	<i>Flows</i>	Splitting an existing flow no longer causes notes on the left-hand staff of a piano instrument to be moved incorrectly to the right-hand staff in the new flow.
STEAM-8103	<i>Flows</i>	Layouts that contain only a subset of flows now play back correctly, and can be exported as audio correctly.
STEAM-8282	<i>Flows</i>	Improvements to the handling of players with multiple identical instruments when importing flows.
STEAM-7482	<i>Graphics import</i>	Graphics files imported from OneDrive using the “on-demand files” feature now appear correctly (Windows only).
STEAM-8183	<i>Holds and pauses</i>	Caesuras that are not positioned immediately before a note, rest or barline no longer cause an unexpected spacing distortion at the following barline.
STEAM-8183	<i>Holds and pauses</i>	A caesura positioned at an arbitrary rhythmic position within a bar no longer causes the spacing of a time signature at the start of the following bar to be incorrect.
STEAM-8085	<i>Key signatures</i>	Key signatures no longer incorrectly collide with double barlines to their left when they appear within a <i>tutti</i> range preceding or following a divisi change.
STEAM-8208	<i>Key signatures</i>	Under rare circumstances, defining a tonality system with specific combinations of divisions could cause a crash; this has now been resolved.
STEAM-8223	<i>Key signatures</i>	Key signatures in divisi staves are now always correctly transposed if required in a transposing layout.
STEAM-8279	<i>Layouts</i>	Reset to Factory in Layout Options now restores staff label options to the correct values for parts in part layouts; previously it was incorrectly using the defaults for full scores.

ID #	Component	Issue
STEAM-8267	<i>MIDI import</i>	A problem whereby shorter notes contained entirely within the duration of longer notes on the same instrument would be omitted when importing MIDI files has been fixed.
STEAM-8296	<i>MIDI import</i>	The last note in a MIDI file is no longer sometimes incorrectly omitted if its duration is shorter than a quarter note (crotchet).
STEAM-8178	<i>Mixer</i>	For some projects, the initial displayed position of the Video fader in the Mixer did not match its actual output level when first opened; this problem has now been resolved.
STEAM-8083	<i>Multi-bar rests</i>	Edits to grace notes close to divisi change events no longer sometimes result in multi-bar rests being split incorrectly.
STEAM-8121	<i>Multi-bar rests</i>	Multi-bar rests no longer disappear at transitions between instruments when the player has local time signature changes.
STEAM-8144	<i>Multi-bar rests</i>	Creating a system break following a divisi change no longer incorrectly causes multi-bar rests to be split.
STEAM-8164	<i>Multi-bar rests</i>	Divisi changes belonging to players who are cued into the current layout no longer incorrectly cause multi-bar rests to be split.
STEAM-5809	<i>MusicXML import</i>	Transposing instruments created via MusicXML import are now correctly numbered, taking their transposition into account.
STEAM-7884	<i>MusicXML import</i>	Switching off the Beam groups option on the MusicXML Import page of Preferences now correctly takes effect for all noteheads within a tie chain.
STEAM-8122	<i>MusicXML import</i>	Some specific combinations of coincident tuplets in MusicXML files exported from Finale could cause Dorico to crash; this has now been fixed.
STEAM-8203	<i>MusicXML import</i>	Importing a MusicXML file into an existing empty project no longer results in some of the required default notehead types being missing from the project.
STEAM-8256	<i>MusicXML import</i>	Under some circumstances, the import of nested tuplets in MusicXML files could fail. This problem has now been fixed.
STEAM-5625	<i>Note input</i>	The default enharmonic spelling chosen for grace notes now matches the spelling chosen for normal notes.
STEAM-7113	<i>Note input</i>	It is no longer possible to input notes on a staff not currently visible (e.g. an extra staff, ossia, or divisi staff, or a staff belonging to another instrument held by the same player.)
STEAM-7493	<i>Note input</i>	It is now possible to lengthen or shorten the duration of an implicit rest repeatedly without needing to reselect the rest after each edit.
STEAM-7506	<i>Note input</i>	The input of accidentals with equivalent pitch deltas in tonality systems that define multiple such accidentals has been substantially improved.
STEAM-7585	<i>Note input</i>	Multi-paste now works reliably when copying material crossed from one staff to another.
STEAM-7585 STEAM-8167	<i>Note input</i>	Under some circumstances, cross-staff notes could be pasted onto the wrong staff; this problem has now been resolved.
STEAM-7852	<i>Note input</i>	After using Edit ▸ Paste Special ▸ Move to Staff Above/Below , rests that were moved as part of the selection now correctly remain selected.

ID #	Component	Issue
STEAM-8021	<i>Note input</i>	Slurs that end at tuplet positions are no longer incorrectly unscaled when using Edit ▶ Paste Special ▶ Reduce .
STEAM-8066	<i>Note input</i>	Copying and pasting material between instruments with differing numbers of staves now works correctly.
STEAM-8082	<i>Note input</i>	Attempting to change existing notes into a slash voice no longer sometimes causes Dorico to crash.
STEAM-8086	<i>Note input</i>	Copying and pasting between instruments with different numbers of staves, or between divisi staves and regular staves, now works as expected.
STEAM-8105	<i>Note input</i>	Copying and pasting an ossia or extra staff signpost from one instrument to another now correctly creates additional staves if necessary.
STEAM-8134	<i>Note input</i>	Grace notes are now handled correctly by Edit ▶ Paste Special ▶ Explode .
STEAM-8147	<i>Note input</i>	Edit ▶ Paste Special ▶ Explode now works correctly if invoked on a staff that contains both notes and dynamics.
STEAM-8249	<i>Note input</i>	The enharmonic spellings chosen for octave-transposing instruments no longer unexpectedly differ for non-octave-transposing instruments.
STEAM-8262	<i>Note input</i>	It is no longer possible to use N/M to cause notes to disappear because they have been crossed to an ossia or extra staff that is not visible at the selected rhythmic position.
STEAM-8263	<i>Note input</i>	Inputting notes via MIDI keyboard into a new voice now always produces the expected enharmonic spelling.
STEAM-8270	<i>Note input</i>	The notes input on one instrument no longer incorrectly affect the enharmonic spellings chosen for notes input on another instrument during the same input session.
STEAM-8289	<i>Note input</i>	Divisi, ossia and extra staff signposts are now excluded from block selection.
STEAM-8297	<i>Note input</i>	Using Alt+N/M to move items to the staff above or below no longer incorrectly attempts to move pedal lines or divisi/ossia/extra staff signposts.
STEAM-8298	<i>Note input</i>	Setting articulations and accidentals before specifying the pitch of the grace note to be input now works correctly.
STEAM-8319	<i>Note input</i>	Edit ▶ Paste Special ▶ Move to Staff Below (Alt+M) now correctly always moves to the next staff when the selection being moved is not on the first staff of an instrument.
STEAM-8329	<i>Note input</i>	Starting note input via the mouse by clicking the Lock Duration button in the note input toolbox now works correctly.
STEAM-6975	<i>Notes</i>	Under some circumstances, it was possible for a note's rhythm dot to be shown twice when the note is consolidated with a voice column to its left; this is now fixed.
STEAM-7665	<i>Ornaments</i>	Under some circumstances, single-stem tremolo slashes could collide with noteheads because the stem was insufficiently lengthened; this has now been fixed (Windows only).
STEAM-8206	<i>Ossias</i>	When an ossia is active on a grand staff instrument, only one of the main staves can be hidden if empty, rather than allowing all regular staves of the instrument to be hidden.

ID #	Component	Issue
STEAM-8063	<i>Page layout</i>	A problem whereby editing the position of a tempo mark could cause the vertical spacing to change unexpectedly has been resolved.
STEAM-8092	<i>Page layout</i>	Hiding empty staves now once again works correctly for players holding multiple instruments in layouts in which instrument changes are disabled.
STEAM-8165	<i>Page layout</i>	Spurious additional clefs and key signatures no longer sometimes appear in the middle of the system when extra staves are set via layout options to start at system breaks.
STEAM-8200	<i>Page layout</i>	Changes made to staff spacing for extra staves belonging to an instrument are now persisted correctly when saving and reopening a project.
STEAM-8243	<i>Page layout</i>	Under some circumstances, moving a rehearsal mark in Engrave mode could cause a tempo mark on another system to move; this is now fixed.
STEAM-8277	<i>Page layout</i>	Under some circumstances, repitching music could incorrectly cause lyrics above the staff to move further away from the staff; this is now fixed.
STEAM-8278	<i>Page layout</i>	Under some circumstances, editing or inputting notes directly before a multi-bar rest could cause the bar count number to move incorrectly away from the staff; this is now fixed.
STEAM-8287	<i>Page layout</i>	It is now possible to select the staff spacing handles for multiple instruments held by the same player independently when instrument changes are not shown for a layout.
STEAM-8312	<i>Page layout</i>	A series of fermatas positioned on adjacent barlines no longer sometimes move incorrectly when one of the fermatas is nudged in Engrave mode.
STEAM-8251	<i>Percussion</i>	Under rare circumstances it was possible for Dorico to crash when editing the names of instruments in a percussion kit from the Edit Percussion Kit dialog. This is now fixed.
STEAM-8157	<i>Performance</i>	The speed of inputting notes in projects that include changes in the number of staves for an instrument has been improved.
STEAM-8246	<i>Performance</i>	The speed of inputting and editing music in larger projects with percussion kits shown using the grid presentation type has been improved.
STEAM-8268	<i>Performance</i>	The speed of note input in larger projects with instrument changes has been improved.
STEAM-8103	<i>Play mode</i>	A problem whereby layouts that do not have all flows attached could play back with long periods of silence has been resolved.
STEAM-8174	<i>Play mode</i>	A problem that could cause Dorico to hang during start-up if the Suspend audio device in background preference was set has been fixed (Mac only).
STEAM-8285	<i>Play mode</i>	The correct VST Expression Map is now chosen by default when creating a solo double bass player when using the HALion Symphonic Orchestra playback template.
STEAM-7989	<i>Playing techniques</i>	Adding an ossia staff above the right-hand staff of a piano no longer incorrectly causes pedal lines to stop drawing.
STEAM-8224	<i>Playing techniques</i>	Under some circumstances, pedal lines would draw on the top staff in the system in galley view; this is now fixed.
STEAM-8327	<i>Playing techniques</i>	Editing the default placement of a playing technique in Engrave ▶ Playing Techniques now correctly updates any existing playing techniques in the score right away.

ID #	Component	Issue
STEAM-8136	<i>Print mode</i>	Lyrics colored by View ▶ Notes and Rests ▶ Voice Colors are no longer incorrectly displayed in color in Print mode.
STEAM-8198	<i>Print mode</i>	Commands from the Edit menu that can edit the score are now correctly disabled in Print mode.
STEAM-7482	<i>Project files</i>	Importing a graphic located in OneDrive when using the files on-demand setting now works correctly (Windows only).
STEAM-8195	<i>Project files</i>	Improvements have been made to the way that Dorico determines the filename to be used when exporting multiple flows to a new project.
STEAM-2812	<i>Setup mode</i>	Under certain circumstances, dragging an instrument from one player to another in the Players panel could cause a crash; this is now fixed.
STEAM-8269	<i>Setup mode</i>	Changing the instrument held by a player from one kind to another no longer incorrectly changes any slash voices in that instrument's music into regular voices.
STEAM-7501	<i>Slurs</i>	Creating a slur with a single note selected now always correctly advances the slur to the next note of a different pitch, instead of ending at the end of the current note if it is tied.
STEAM-7674	<i>Slurs</i>	The positioning of slurs on grace notes in multiple voice contexts has been improved.
STEAM-8241	<i>Slurs</i>	Attempting to create and extend a slur with the mouse when more than one window is open on the project no longer causes an error message to appear.
STEAM-8155	<i>System track</i>	The appearance of the system track in music in open meter has been improved.
STEAM-8190	<i>System track</i>	The system track now draws correctly for bars that span more than one system break.
STEAM-8271	<i>Text</i>	The values for the default distance of text items from the staff were incorrect by half a space; this has now been corrected.
STEAM-8320	<i>Text</i>	Clicking Revert to Factory for one of default paragraph styles in Engrave ▶ Paragraph Styles , no longer causes problems displaying items in the score or even a crash.
STEAM-8033	<i>Time signatures</i>	Time signatures local to a single staff now draw correctly when global time signatures are set to draw outside the staff.
STEAM-8227	<i>Time signatures</i>	Start repeat barlines now appear correctly at the start of the system when they coincide with a time signature change, and the time signature is shown outside the staff.
STEAM-8110	<i>User interface</i>	It is once again possible to define shortcuts for commands nested two levels deep in the Key Commands editor, e.g. for articulations, note durations, and so on.
STEAM-8129	<i>User interface</i>	The state of the various buttons in the user interface concerning the Video window now always correctly stay in sync.
STEAM-8185	<i>User interface</i>	Navigating through the entries in the drum map with the arrow keys now correctly updates the selection in the panel at the bottom of the Percussion Maps dialog.
STEAM-8219	<i>User interface</i>	Some list controls in Dorico incorrectly caused the Input Method Editor for CJK text input to become activated; this has now been fixed (Windows only).

ID #	Component	Issue
STEAM-8260	<i>User interface</i>	Under some circumstances, the instrument labels in expanded player cards in the Players panel in Setup mode would stop drawing; this is now fixed.
STEAM-8332	<i>User interface</i>	The Stereo output and Sample rate controls in Edit ▶ Device Setup no longer flicker when changing values.
STEAM-8090	<i>Video</i>	There is no longer a limit on the length of the path of an attached video file.
STEAM-8093	<i>Video</i>	Changing the project frame rate via the Video Properties dialog now always correctly sets timecode offsets for the current flow.
STEAM-8132	<i>Video</i>	Advancing the playhead position frame by frame now always displays the correct timecode in a newly-created project.
STEAM-8178	<i>Video</i>	The position of the video fader in the Mixer is now always correct when opening an existing project.
STEAM-8235	<i>Video</i>	Dorico now always correctly detects the framerate of a video at 23.976fps.
STEAM-8101	<i>Views</i>	The presence of a timecode staff no longer causes staves to become misaligned in galley view in projects in which instruments have a variable number of staves.
STEAM-8171	<i>Views</i>	Staff labels shown in the margin in galley view no longer disappear for a moment at certain points when scrolling music left and right.
STEAM-8176	<i>Views</i>	When multiple windows are open on the same project, only the window in focus will follow changes of selection.

Dorico 2.0

30 May 2018

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

New features

Video, markers and timecode

Dorico 2 now includes the same high-performance video engine as Cubase and Nuendo, providing many new possibilities for composing to picture, together with a suite of features for managing timecode, markers and tempo.



Supported video formats. The Cubase/Nuendo video engine was introduced last year to replace the old 32-bit QuickTime-based engine, and currently supports the most commonly-used video formats, with support for more formats planned for the future.

H263 and H264 video is supported in both MOV and MP4 containers, while Apple ProRes, DV/DVCPRO and Avid DNxHR codecs are supported in MOV containers. DV/DVCPRO and MJPEG/PhotoJPEG are supported in AVI containers. Videos with variable frame rates are not supported, but all the common frame rates (including 23.976, 24, 24.975, 25, 29.97, and 30 frames per second) are fully supported.

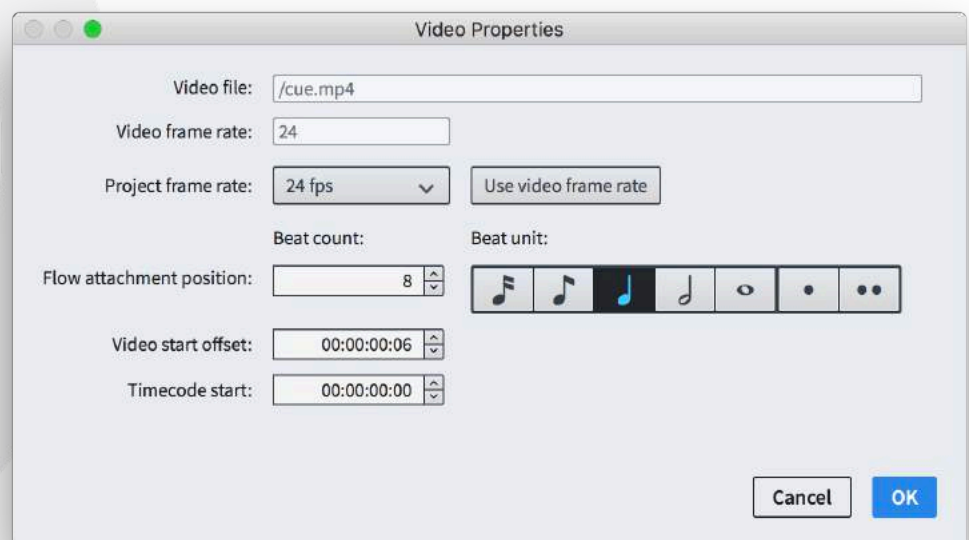
For more information about precisely which formats are supported, and for information about how to determine the format of a video and transcode it to a supported format, please consult the Steinberg support site:

<https://helpcenter.steinberg.de/hc/en-us/articles/115000808250-Video-support-in-Cubase-and-Nuendo>

Attaching a video. You can attach a video to each flow in your project; if you are working with a longer video (for example, a complete reel of a film), you can attach the same video to multiple flows, and work with different sections of the video with each flow. There are two ways to attach a video:

- In Setup mode, right-click the flow in the Flows panel to which you want to attach a video, and choose **Video** ► **Attach Video** from the context menu. A file chooser dialog appears, allowing you to choose the video to be attached: click **Open** and the video will be attached to the project.
- In Play mode, drag the video file from the folder where it is located and drop it on the timeline at the position where you want the video to be attached.

When you attach a video in Setup mode, the **Video Properties** dialog opens, with the following options:



- The read-only fields for **Video file** and **Video frame rate** report the complete path to the attached video file, and the frame rate detected by the video engine.
- **Project frame rate** specifies the frame rate that Dorico will use to determine the timecode displayed in markers and in the Transport window; click **Use video frame rate** to set this to the frame rate detected by the video engine. See below for more information about the available frame rates.
- **Flow attachment position** specifies the point in the flow at which the video will start playing: you specify this as a multiple of beats of the specified unit. For example, if you want two bars free at the start of a 4/4 flow, you would specify **8**

in the **Beat count** field and choose the quarter note (crotchet) from the **Beat unit** control.

- **Video start offset** specifies the frame of the video that will appear at the **Flow attachment position**. For example, it may be a requirement that no sound is played until the sixth frame of the video, so entering **00:00:00:06** in this field specifies that when the video starts, it will start from the sixth frame.
- **Timecode start** specifies what timecode should appear at the start of the video. For example, each reel of a film is by convention given a timecode position starting at a new hour, with the first reel often starting at **01:00:00:00** or sometimes even at **10:00:00:00**, with the second starting at **02:00:00:00** or **11:00:00:00**, and so on.

When you have set the properties as needed, click **OK**.

If you attach the video in Play mode, the **Video Properties** dialog does not open automatically, but it can be opened either via right-clicking the flow's card in Setup mode and choosing **Video ▶ Properties** from the context menu, or by clicking the **Video Properties** button at the top of the Markers panel in Write mode.

Once a video is attached, a film reel icon appears in the bottom left-hand corner of the flow's card in the Flows panel in Setup mode, together with the timecode of the first frame of the video, as specified in the **Video Properties** dialog.



The Video window will also appear as soon as a video has been attached: the window may appear black at first, but as soon as playback starts, the video will appear.

Locating attached video files. Attached video files are not embedded in your Dorico project: if you need to send your project to somebody else and they also need access to the video, you will need to send the video file or files separately.



When you open a project that has an attached video and the video cannot be located, the flow's card in the Flows panel shows a warning triangle icon in place of the film reel icon. To restore the video to the project, simply re-attach the same video file by right-clicking and choosing **Video ▶ Attach**: the video's existing properties will be preserved.

Working without an attached video. All of Dorico's features for composing to picture – including markers, timecode and finding tempo – can be used even if you don't have a video attached. You can specify a frame rate and initial timecode value using the Video Properties dialog without attaching a video simply by right-clicking the flow's card and choosing **Video ▶ Properties**.

Video window. The Video window can be hidden or shown by choosing **Window** ► **Video**, or using the default key command F4. The window's size and position are saved in the application's preferences, rather than on a per-project basis.

Frame rates and timecode. Dorico supports a wide range of frame rates used in professional film and TV production, from 23.976fps to 60fps, and includes supports for drop frame timecode. NTSC video, used in US and Canadian broadcast, has a frame rate of 29.97fps, and this requires the use of a drop frame timecode. In non-drop frame timecode, each frame is simply numbered sequentially from the preceding one; but in drop frame timecode, timecode numbers are periodically skipped to compensate for the 0.03fps difference between 29.97fps and 30fps. In every minute except every tenth minute, two timecode numbers are dropped from the frame count. The same principle applies to the distinction between 59.94fps and 60fps, a difference of 0.06fps.

In Dorico, non-drop frame timecodes are labeled with the suffix **fps**, while drop frame timecodes are labeled with the suffix **dfps**.

Timecode is displayed in the format *hh:mm:ss:ff*, i.e. two-digit hours, minutes, seconds, and frames. Drop frame timecode uses a semicolon separator between the seconds and frames parts of the timecode rather than a colon, so **00:00:01:05** would be for a non-drop frame timecode, while **00:00:01;05** would be for a drop frame timecode.

Timecode can be displayed in the Transport window (key command **F2**) instead of regular elapsed time: to enable this, set **Time display** to **Timecode** on the **Timecode** page of Playback Options.

Video soundtrack. The soundtrack of the attached video is played back in sync with score playback. To control the relative volume of the video's soundtrack, open the Mixer (key command **F3**) and click the **Video** filter button in the Mixer's toolbar to show the video fader, which appears at the right-hand side of the list of faders, immediately before the **Reverb** and **Output** faders. You can of course mute the video's soundtrack by muting the video fader.

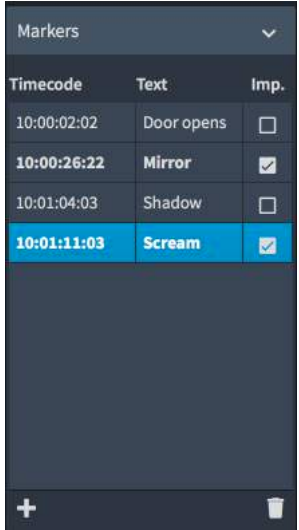
Advancing through the video. The frame of video displayed in the Video window always matches the playhead's current position. If you find that you cannot see the green playhead line when Dorico is not playing back, activate the **Show playhead when stopped** checkbox in the **Play** section of the **General** page of Preferences.

The playhead can be moved by clicking the fast-forward and rewind buttons in the Transport window, or using the **+** and **-** keys on your keyboard's numeric keypad, if it has one. If your keyboard does not have a numeric keypad, you can use **F7** to rewind and **F9** to fast-forward; add **Ctrl** (Windows) or **Command** (Mac) to move

by a single frame, rather than by a whole second. On Mac, you may also need to add the **Fn** key, as by default the row of function keys is reserved by the system to provide features like volume control, screen brightness, and media playback.

Markers. Markers are labels locked to a particular timecode in the video, typically indicating an important moment that should be given some musical prominence. Markers can be added at the playhead's current position by choosing **Write** ► **Create Marker** or using the default key command **Shift+Alt+M**. The marker appears in the score at the appropriate position, and the label in the marker (which says **Marker** by default) can be edited either via the **Marker text** property in the **Markers** group of the Properties panel, or via the Markers panel in Write mode.

Markers panel. Markers can also be added directly in the Markers panel in Write mode by clicking the **+** button at the bottom of the table that lists the markers in the current flow. This can be useful if you have already, for example, completed a spotting session and so already know the timecode for each marker in the cue. You can edit both the timecode and text for each marker directly in-line in the table in the Markers panel simply by double-clicking the field you need to edit.



Timecode	Text	Imp.
10:00:02:02	Door opens	<input type="checkbox"/>
10:00:26:22	Mirror	<input checked="" type="checkbox"/>
10:01:04:03	Shadow	<input type="checkbox"/>
10:01:11:03	Scream	<input checked="" type="checkbox"/>

The third column in the table in the Markers panel is labeled **Imp.**, which is an abbreviation for **Important**: important markers are the ones it is most crucial to call attention to musical terms, and play a vital role in Dorico's Find Tempo feature. To designate a marker as important, simply activate its checkbox in the **Imp.** column.

Marker design. Options for the design of markers can be found on the new **Markers** page in Engraving Options, allowing you to determine whether the timecode or the label should be positioned first, adjust the border thickness and padding. To adjust the font family, weight or point size, edit the **Marker text font** or **Marker timecode font** in **Engrave** ► **Font Styles**.

Choosing where markers appear. By default, markers appear above the top staff of the full score layout, and do not appear in part layouts. To change this, set **Vertical position** to **Above system** or **Below system** as appropriate, or alternatively you can choose to display markers on a dedicated timecode staff.

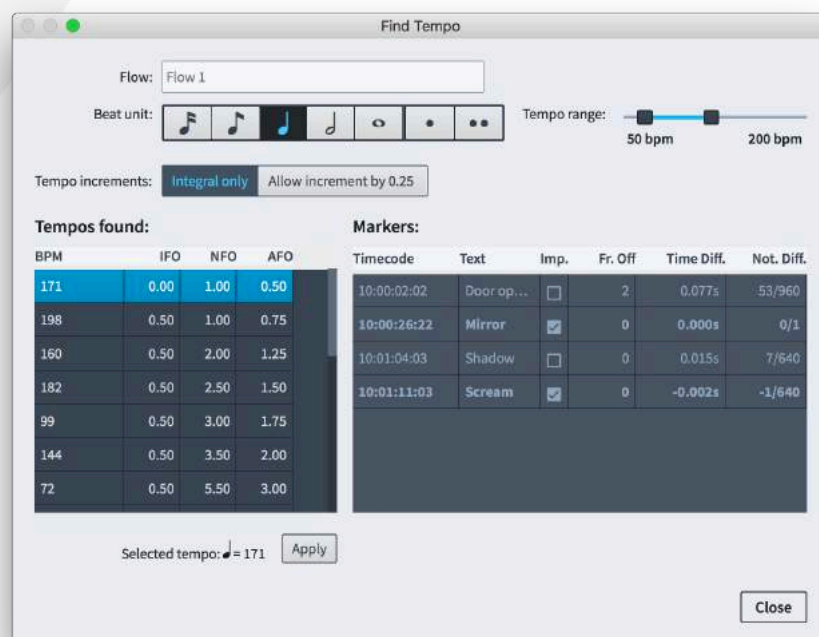
Displaying timecode in the score. Dorico can display timecode in the score on a special timecode staff. To show the timecode staff, choose the **Markers** page of Layout Options and set **Vertical position** to **Timecode staff**, then set **Position timecode staff above bracket** to the instrument family above which you want the timecode staff to appear. Finally, you can choose whether you want timecode to

appear on every bar, every system, or never (in which case only markers will appear on the timecode staff), by setting **Timecode frequency on timecode staff** as desired.

Dragging markers in Write mode. Markers have a fixed timecode position, and are effectively locked to a specific frame in the attached video. In order to adjust the position in the music where a marker appears, you can drag it left or right in Write mode: to accommodate the desired position for the marker, this adjusts the immediate tempo preceding the marker (or at the start of the flow, whichever is the later) and clears any gradual tempo changes between that immediate tempo and the marker. Dragging a marker to the right increases the tempo, while dragging it to the left decreases the tempo. This is a simple tool: it is not currently possible, for example, to drag one marker but lock the position of all previous markers, so that a tempo change takes effect only after a specific marker. For these kinds of more sophisticated edits, you can edit the time track in Play mode.

Editing the time track in Play mode. The new time track in Play mode allows fine graphical control over the tempo changes in the flow. When a video is attached, tracks for markers and the attached video also appear at the top of the event display in Play mode. When editing the tempo in the time track, the position of the markers is updated in real-time, making it easy to adjust the position of each marker relative to the music by inserting tempo changes at key points.

Find Tempo. Dorico can also help you identify an appropriate tempo for the whole flow using the new **Find Tempo** window, which can be opened by clicking the **Find Tempo** button in the Markers panel in Write mode:



The **Find Tempo** window can only be used if at least one of the markers is designated as important (**Imp.**) in the **Markers** panel. The window allows you to find the tempo that is the best fit for the important markers in the flow, such that the important markers fall as close as possible to beats.

Choose the desired **Beat unit** from the control on the left, then choose the lower and upper bounds of the tempos that can be found using the **Tempo range** slider on the right. As you adjust the beat unit and tempo range, the **Tempos found** list on the left is updated. The found tempos are listed in descending order of average “frames off” for important markers, i.e. the average number of frames by which the markers miss being aligned to beats.

The abbreviations **IFO**, **NFO** and **AFO** are for the average number of frames off for important markers (**IFO**), non-important markers (**NFO**), and all markers (**AFO**).

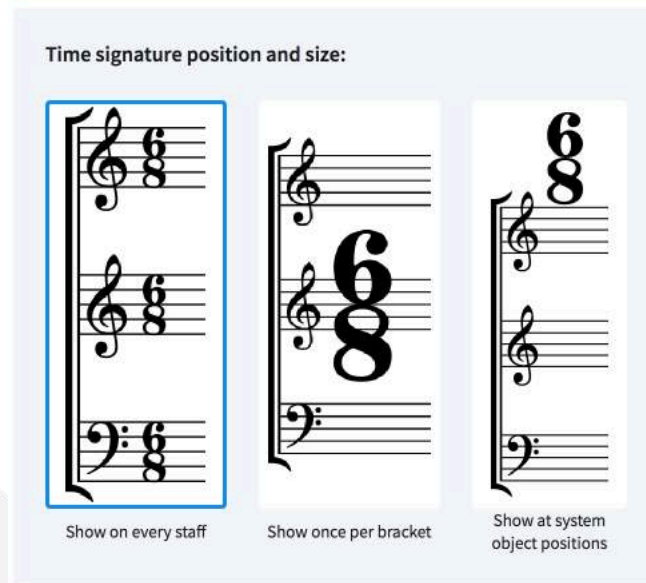
The **Markers** list on the right provides a more detailed view of the tempo selected from the **Tempos found** list: the list shows each marker, and then, assuming the selected tempo is used, the number of frames off the beat (**Fr. Off**), the time difference between the marker’s position and the beat expressed in fractions of a second (**Time Diff.**), and the notated difference between the marker’s position and the beat expressed in fractions of a whole note (**Not. Diff.**).

When you have chosen the most appropriate tempo, select it in the **Tempos found** list and click the **Apply** button below the list, which adds the chosen tempo at the start of the flow, clearing all other tempo markings from the flow.

Time signatures

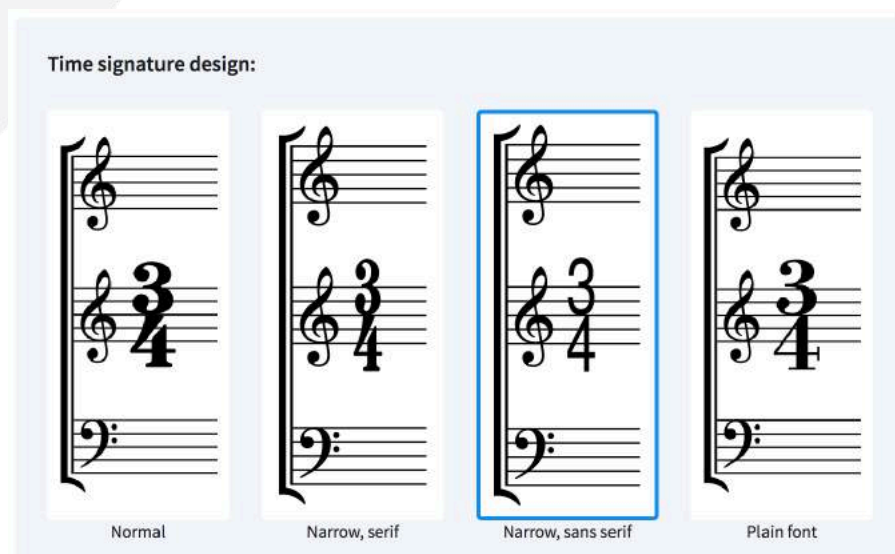
Dorico 2 introduces new features for the display of time signatures, with two new placement options, and three new design options. As alternatives to their usual placement within each staff, time signatures can now be displayed above the same staves as system items like tempo and rehearsal marks, or a single large time signature can be centered on each bracket. Both of these options can help to draw attention to time signatures in music with frequent changes of meter.

Choosing time signature placement. To choose one of the new placement options for time signatures, open the new **Time Signatures** page in **Layout Options**:



Choose the appropriate type of placement for the type of layout whose options you are editing: typically **Show once per bracket** and **Show at system object positions** would be used only in score layouts, with the exception that in some part layouts destined for the recording studio, you may choose to use **Show once per bracket** in order to use larger time signatures than normal.

Time signatures shown once per bracket. Large time signatures shown on brackets occupy horizontal space, and as they are often significantly larger than normal time signatures, they can occupy significantly more horizontal space. For this reason, it is usually advisable to choose one of the other design options for time signatures, which are also found on the new **Time Signatures** page of Layout Options:



The **Narrow, serif** option uses narrow versions of the traditional time signature numerals, and is similar in look to those used in editions of works by Britten,

Birtwistle, and other composers around the middle of the 20th century. The **Narrow, sans serif** option uses sans serif numerals comparable in appearance to Helvetica or other grotesque fonts, and is similar in look to those used in music prepared for film, TV and game recording sessions. You can alternatively choose the **Plain font** option, which will use the font defined by the **Time signature plain font** style (editable in **Engrave ► Font Styles**), but it is advisable to choose a narrow or condensed style.

A single time signature will appear on every bracket in the ensemble, by default centered vertically on the bracket: single, unbracketed staves will show a time signature, though by default it is larger than a normal time signature; pairs of braced staves will likewise show a time signature on each staff, larger than a normal time signature. If instead of showing a single time signature for each bracket you would prefer Dorico to consider the brackets for unpitched percussion, pitched percussion and keyboard instruments as a single group that should together receive only one time signature, open Engraving Options, go to the **Time Signatures** page, and set **Brackets for percussion and keyboards** to **Treat as single bracket**.

In score preparation for film, TV and game recording sessions, time signatures are sometimes aligned with the top of the bracket rather than the middle: to achieve this, open Engraving Options, go to the **Time Signatures** page, and set **Vertical alignment relative to bracket** to **Top**.

On the **Time Signatures** page of Engraving Options, you can also specify the scale factor for brackets with varying numbers of staves, relative to a normal time signature on a single staff when using the default **Show on every staff** option. Separate scale factors are provided for time signatures on single staves (1 1/4, or 125%), on brackets of two or three staves (4 or 400%), and on brackets of four or more staves (10 or 1000%).

Time signatures at system object positions. Time signatures shown above the top staff and, optionally, other staves above which system items such as tempo and rehearsal marks appear have the advantage of occupying no horizontal or rhythmic space, at the expense of occupying more vertical space. This type of placement for time signatures has become increasingly popular in art music through the course of the 20th century, with editions of works by composers including Carter and Henze making use of it.

The staves above which the time signatures will appear are the same as those above which rehearsal marks, tempos, repeat endings, etc. will appear, which can be controlled using the options in the **System Objects** section of the **Staves and Systems** page of Layout Options.

By default, time signatures above the staff are shown at twice the size of normal time signatures, and this can be changed via the **Scale factor for time signatures shown at system object positions** option on the **Time Signatures** page of Engraving Options.

Because time signatures above the staff do not occupy any rhythmic space, it is not crucial to use one of the narrower time signature designs, but it is worth considering that when a time signature coincides with a rehearsal mark or a tempo instruction, by default the time signature will force any such items to the right, so using one of the narrower designs will reduce the distance by which these items are displaced. If you would prefer tempo and rehearsal marks to be positioned above time signatures instead, change **Position of time signatures relative to coincident tempo and rehearsal marks** to **Position below** on the **Time Signatures** page of Engraving Options.

If a time signature above the staff coincides with a bar number, the bar number can optionally be hidden by activating **Hide bar numbers at time signatures at system object positions** on the **Bar Numbers** page of Layout Options.

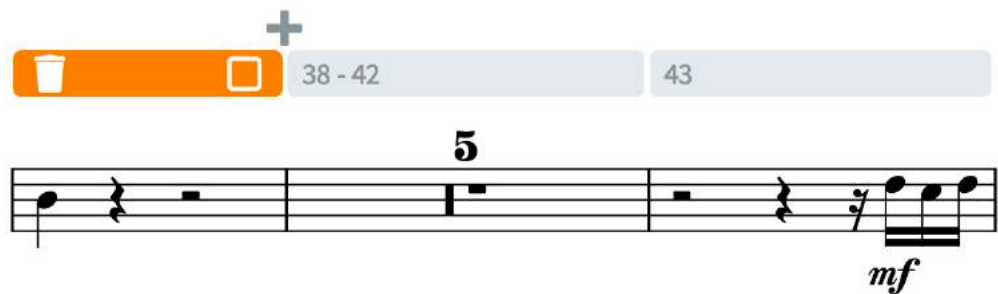
Time signatures above the staff can optionally be centered over the barline or left-aligned; time signatures announcing a change of meter at the end of a system will be right-aligned with the end of the system unless there is also a change of key of sufficient width that the time signature's chosen alignment can be used. Alignment is determined by the **Alignment relative to barlines** option on the **Time Signatures** page of Engraving Options.

When the time signature's denominator is shown as a note value, it is displayed to the right of the numerator rather than below, and using an up-stem note. You can adjust the scale factor of the denominator note independently from the scale factor of the numerator by changing **Scale factor for denominator when shown as note duration** on the **Time Signatures** page of Engraving Options.

Each time signature can be nudged independently in Engrave mode using **Alt**+arrow keys or by dragging it with the mouse. Use **Edit ► Reset Position** to remove the offset.

System track

The system track is a new user interface element that makes it easier to add and delete bars and to select music on all staves in the system.



The system track is shown by default in new projects, and can be hidden or shown by choosing **View ► System Track**. When shown, the system track appears above the top staff of the system, and is translucent until you move the mouse pointer over the track, at which point it becomes opaque. The system track only appears in Write mode.

If you would prefer the system track not to be shown by default, switch off **Show system track in new projects** in the **View** section of the **General** page of Preferences.

Clicking in the system track makes a selection in the system track: hold **Shift** and click in the system track above another bar and the selection is extended. Once there is a selection in the system track, additional buttons appear in and above the system track: at the left-hand extent of the selection is a delete button; at the right-hand extent is a button to select the music on all instruments in the range specified by the selection on the system track; and a button to insert a bar between the last bar selected in the system track and the following bar.

If you hold down **Alt** while the system track is visible, grid lines conforming to the current rhythmic grid value are drawn on the system track, allowing you to make partial bar selections by clicking and dragging across the system track. As with selections of complete bars, when the selection is complete, buttons appear at the left- and right-hand extents of the selection to delete or select the music respectively.

Selections on the system track are transitory: they are intended to persist only as long as needed to perform another action, such as inserting a bar or selecting all of the music in the system track selection range on all instruments. As such, the system track selection is cleared whenever you make any other kind of selection, or when you switch layout, but it is retained when switching between page and galley view.

Automation

Dorico 2 includes new tools for fine control over tempo and continuous MIDI controllers, expanding the capabilities of Play mode and showing the path for future developments in this area.



Time track. The time track at the top of the event display in Play mode allows you to edit the tempo of your project. Immediate tempo changes appear as step changes in the tempo profile, while gradual tempo changes appear as a slope between two points. You can click and drag any handle to adjust the tempo at that point, and a small read-out next to the mouse pointer provides visual feedback as to the tempo at that point.


It is also possible to create new tempo changes in the time track: use the draw tool to click new tempo changes onto the track; you can keep the mouse button held down and sweep it across to draw in multiple tempo changes at once. The frequency of the tempo changes created is determined by the rhythmic grid setting: the smaller the rhythmic grid value, the greater the number of tempo changes that will be created as you sweep the mouse across the track.

To create a smoother, linear gradual change, use the line tool: click the point at which the change should begin, then drag to the position where the gradual change should end.

Tempo changes inserted with the draw or line tools in Play mode appear as signposts in Write mode by default, so as to avoid changing the appearance of the printed score. If you want these tempos to be printed, you can select them in Write mode and then set the **Text** property in the **Tempo** group in the Properties panel to make them appear.

To delete tempo changes in Play mode, use the erase tool: simply click on each point in the time track to delete that tempo change.

MIDI controller tracks. Each instrument can now display a lane for editing MIDI controller data. Although only a single lane can currently be displayed, it is possible to create data for multiple MIDI controllers.

To show the MIDI controller lane, click the new button in the track header for the instrument for which you want to create automation data:  The lane appears directly below the instrument to which it belongs. Choose the MIDI controller for which you want to create data from the menu in the controller lane's track header: all 127 MIDI continuous controllers are listed. Any controller for which data already exists is annotated in the menu with an asterisk (*).

Creating automation data for MIDI controllers uses the same tools as creating tempo change data in the time track: the draw tool creates individual points and can be used to click and drag across the range, drawing discrete points at each division of the rhythmic grid; the line tool creates smooth, linear transitions between two values; and the erase tool can be used to clear any existing points by clicking on them.

MIDI export. All automation events drawn in the time and MIDI controller tracks are included when exporting MIDI files.

Divisi

Divisi – from the Italian “to divide” – is a common technique in orchestral string writing, especially though not exclusively for violins, and occasionally used in other instruments outside the string section, for example in choirs. By splitting a single section into multiple smaller sections, each written on its own staff, greater sonority, color or counterpoint is possible.

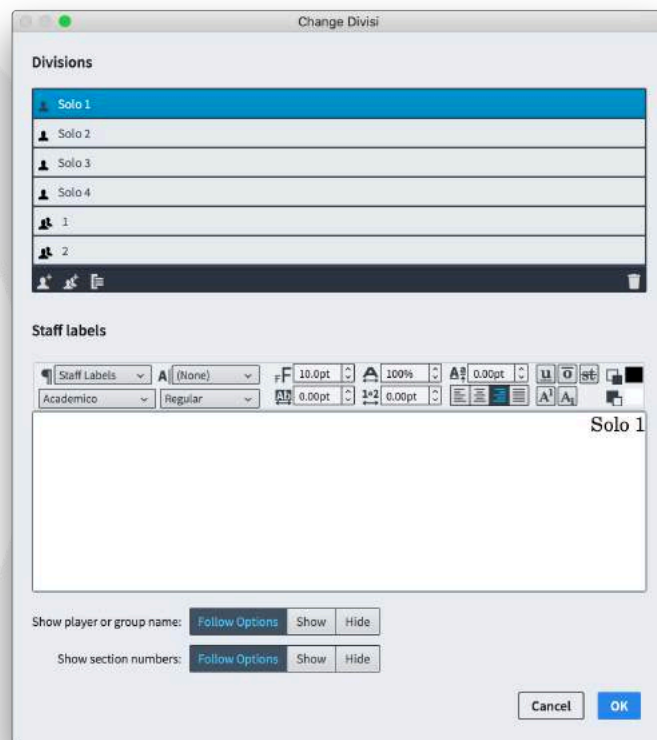


Working with divisi passages has historically been quite awkward in music notation software, but Dorico 2's unique new features for divisi change that for the better.

In simple terms, you create a divisi in the instrument that will divide, specifying how many staves should be used, and how each of those staves should be labeled. Dorico then takes care of managing those staves for you automatically: there is no need for you to arrange for a change in divisi sections to occur at a system or frame break, as Dorico will automatically show unison music in each divisi staff as

required if a divisi either starts or ends in the middle of a system. When the divisi section ends, you simply create an instruction to restore tutti, and again Dorico manages the removal of the additional staves completely automatically.


Creating divisi. Divisi can only be created for instruments held by section players: because a solo player represents only a single person, it's not possible for that instrument to be divided, but a section player represents multiple people all holding the same instrument, so that can be divided. To create a new divisi, select the point at which the divisi should begin, and choose **Edit ▶ Staff ▶ Change Divisi**. The following dialog appears:



The list at the top of the dialog shows the current divisions: when creating a new divisi, only a single division labeled **Tutti** is present. The action bar below the list of divisions allows you to create new divisions of two types: soloists, and sections. To add a soloist, click the **Add Solo Division** button (👤), and to add a section, click the **Add Section Division** button (👥). Each soloist or section you add corresponds to an additional staff in the score. There is no limit on the number of soloists and sections you can create: to make things as simple and flexible as possible, Dorico doesn't keep count of the total number of players involved, and simply trusts that you know what you're doing.

To change the label shown for a division, select the division from the list at the top of the dialog, and then edit the text in the **Staff labels** section below. The section label, which is normally simply number or possibly a letter to denote which desks or

players should play this music, appears directly to the left of that section's staff at the beginning of every system.

You can additionally group sections together, by selecting multiple adjacent divisions in the list of divisions at the top of the dialog and clicking the **Add Group** button (). The group label appears centered on all of the staves belonging to the divisions in the group, and will appear in place of the instrument name. When editing the group label, you can edit the **Full Name** and **Short Name** independently, using the buttons that appear directly above the editor.

Finally, the **Show player or group name** and **Show section numbers** options at the bottom of the **Change Divisi** dialog allow you to specify whether or not the labels defined for this particular divisi should follow the default options for whether or not staff and divisi labels should appear as specified on the **Staves and Systems** page of Layout Options (**Follow Options**), or whether they should be explicitly overridden such that they always appear (**Show**), or are always hidden (**Hide**).

When all the settings have been made to your satisfaction, click **OK** and the divisi change will be created. A signpost appears, and this can be dragged with the mouse or moved with **Alt+left/right** in Write mode to move the rhythmic position at which the divisi change occurs. The additional staves specified by the soloists and sections defined in the divisi change appear from the start of the system, with the appropriate labels to the left of the system, and if there are any whole or partial bars of unison music prior to the divisi change, that music is automatically shown in all of the new divisi staves until the divisi change. You can then simply input music into the new divisi staves as if they were any other kind of staff.

Editing an existing divisi change. To edit an existing divisi change, simply double-click the **Divisi** signpost, and the **Change Divisi** dialog will open, allowing you to make changes. If you remove a divisi section, be aware that the music that was previously on that staff is not removed, so it will continue to play back: you may want to delete any music from a divisi staff that you plan to remove before you remove the section. Conversely, if you subsequently recreate a divisi section that previously existed, all of its music will be restored.

Changing divisions. If a divisi passage becomes further divided, or indeed if some but not all divisions come to an end, you can create a further divisi change in the same way as described above at the appropriate point. Note that the staves that appear on a system are those defined by only the first divisi change; any further divisi change on the same system will take effect at the start of the following system.

Ending a divisi passage. When the divisi passage has come to an end, select a note or rest in the main staff at that position, and choose **Edit ► Staff ► Restore Tutti**. This creates a default divisi change with a single tutti section, without showing the dialog. If this change occurs before the end of the system, unison music will automatically be shown on the divisi staves for any whole or partial bars between the divisi change and the end of the system.

Unison passages. When you select unison music on a divisi staff, you will notice that the same items are selected on the main staff and indeed on all other divisi staves: the music cannot be edited independently, so any changes made on a divisi staff will be reflected on all other staves with that music.

To make it clear where unison passages occur, you can switch on **View ► Note and Rest Colors ► Divisi Unison Ranges**. This will show the notes and rests in unison passages in mid-gray, to help differentiate them from the actual divisi material.

Due to the complexity of showing the same source music on multiple staves, there are some modest limitations in what kinds of material Dorico can handle when it automatically shows unison music on divisi staves, either at the start of the system before a divisi passage begins or at the end of the system after a divisi passage ends. The primary limitation is with slurs: any slur that is ongoing at the point that the divisi passage begins will not be shown on the divisi staves. To work around this, move the start of the divisi passage to the beginning of the slur, and then manually copy and paste that music onto the divisi staves. Similar issues exist with lyrics, and octave lines will only apply on the main staff, though gradual dynamics (such as hairpins) are handled correctly.

If a divisi staff uses a different clef to the main staff at the point at which it returns to playing unison material, Dorico automatically creates the appropriate clef on that staff, but it may sometimes be spaced too close to the note immediately before it. If possible, try inserting an appropriate clef change somewhere before the end of the divisi passage to restore the same clef as the main staff.

Divisi and staff labels. Two new options have been added to the **Staff Labels** section of the **Staves and Systems** page of Layout Options:

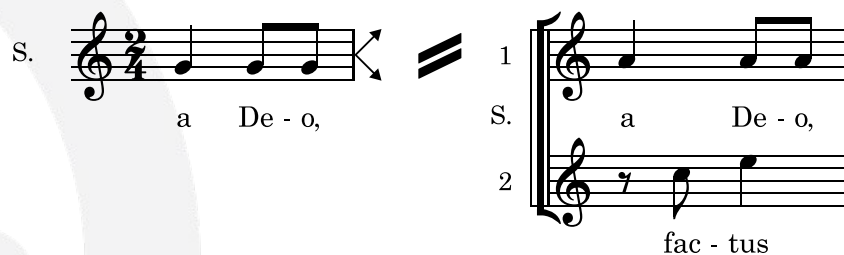
- **Show group names** is only enabled when either or both full and abbreviated staff labels are set to appear in the current layout; when switched on, the divisi group label will appear instead of the instrument name.
- **Show section names** can be set independently of whether either divisi group names or the instrument's name is shown; a typical scenario where divisi section names should be shown but regular staff labels should not is in part

layouts, where it is already known that all of the staves should be played by (say) Violin I, and so showing the staff label adds no further useful information.

These options can be overridden on a per-divisi change basis by the **Show player or group name** and **Show section numbers** options in the **Change Divisi** dialog.

Playback of divisi. In this release, all divisi material – including material for soloists – is played on a single channel, so only limited differentiation between the different sections is possible. In a future release, Dorico will make it possible to assign each soloist and section within a divisi passage to a separate channel, in order to provide fully flexible playback of divisi passages.

Divisi on vocal staves. When using divisi on a vocal section player, Dorico will automatically show choral divide arrows at the end of the system prior to the start of the divisi passage:

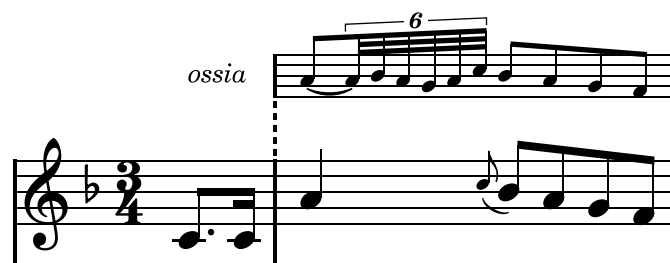


It will show corresponding arrows on each of the divisi staves directing the singers back to a single staff at the end of the system where the divisi passage ends.

To control this behavior, change the **Indicate divisi at end of system on vocal staves** option on the **Divisi** page of Engraving Options.

Ossias

Ossias show alternative passages that can be played instead of the original passage; sometimes they are used to show editorial recommendations for realizing ornaments, or deviations between different sources, or to show an easier version. Dorico 2 introduces comprehensive features for handling ossia passages.



Adding an ossia. To add an ossia, select the range over which you want the ossia staff to appear, then choose **Edit ► Staff ► Create Ossia Above** or **Create Ossia Below**. If you are writing for piano or another grand staff instrument, and require an

ossia that shows both staves, select material on both the right- and left-hand staves before you choose **Create Ossia Above** or **Create Ossia Below**.

You can create an ossia for an instrument held by a solo or section player, with the exception that you cannot create an ossia for a percussion kit instrument. An instrument can show an ossia both above and below if necessary, but only one ossia on the same side of the staff at once.

A signpost appears at the start of the ossia passage, and another at the end where the ossia staff disappears again. You can select these signposts and move them by dragging them in Write mode or nudging them with **Alt+left/right**, which will also move the start and end rhythmic position of the ossia.

Removing an ossia. To remove an ossia passage, you can simply delete the signpost at each end of the ossia passage, or select any note or rest in the ossia passage and choose **Edit ▶ Staff ▶ Remove Staff**.

Be aware that when you delete an ossia, unless you first deleted the music within the ossia, that music still exists but is simply not shown: if you recreate an ossia at the same position later on, that music will reappear.

Scale factor. By default, ossia staves are scaled to two thirds the size of a regular staff, and this can be adjusted via the **Ossia scale factor** option on the **Staves** page of Engraving Options.

Deciding where ossias appear. By default, ossia staves will appear in all layouts, but it may be more appropriate for ossias to appear only in the part layout for an individual performer, or possibly only in the score. To choose whether ossias appear in a layout, activate or deactivate **Show ossias** in the **Ossias and Extra Staves** section of the **Staves and Systems** page of Layout Options as appropriate.

Barline joins. There are several conventions in use in published music for how barlines in ossias should be joined to the main staff to which they correspond: assuming an ossia both starts and ends at whole bar positions, some publishers join the ossia to the main staff both at the start and the end; others join the ossia only at the end; and still others do not join the ossia to the main staff at all.

When an ossia is joined to the main staff, some publishers use the same kind of barline as used for the other staves (typically a single barline), but others instead join the ossia with a dashed barline.

Dorico provides options to accommodate all of these conventions in the **Ossias** section of the **Barlines** page of Engraving Options.

When an ossia appears between the main staves of an instrument – for example, an ossia below the right-hand staff of a piano – then it will always be joined by the same barline as the main staves, regardless of the options chosen on the **Barlines** page of Engraving Options.

Ossia labels. To label the beginning of an ossia staff with the word “ossia”, activate **Show label before ossia** in the **Ossias and Extra Staves** section of the **Staves and Systems** page of Layout Options. If you would prefer to use a custom label, set **Ossia label** to **Custom** and then provide the desired text in the **Custom ossia label** field.

The ossia label is drawn in the staff labels paragraph style, and is positioned according to the distances defined in the **Ossias** section of the **Staves** page of Engraving Options, with separate options for labels before single and braced pairs of ossia staves.

Ossias beginning or ending mid-bar. If an ossia begins or ends in the middle of the bar, Dorico pads the staff lines to the left and to the right of the musical material to ensure that notes, accidentals, rhythm dots and other items do not directly abut the ends of the ossia staff. To adjust the amount of padding to the left and to the right, change **Extend staff lines at start of ossia** and **Extend staff lines at end of ossia** in the **Ossias** section of the **Staves** page of Engraving Options.

Ossias crossing breaks. When an ossia starts on one system and then ends on the next, you may want to see the ossia’s clef and key signature restated at the start of the system, as it is for a regular staff; alternatively, to make it clear that the ossia is not an additional instrument, you may prefer that the ossia should restart following the fixed preamble of clef and key signature at the start of the system.

Dorico can accommodate either approach: set **Ossias crossing a system break** to **Include in preamble** or **Exclude from preamble** in the **Ossias and Extra Staves** section of the **Staves and Systems** page of Layout Options.

Vertical spacing. The default distance of an ossia from the main staff to which it corresponds is determined via the new **Ossia staff to staff** value on the **Vertical Spacing** page of Layout Options. This distance is not subject to vertical justification.

You can adjust the distance between an individual ossia staff and its main staff using the staff spacing tools in Engrave mode in the usual way: instead of the handle appearing at the left-hand side of the system, the handle for the ossia will appear at the start of the ossia staff on that system.

Ossias and playback. Music on ossia staves is never played back.

Changing the number of staves for an instrument

Dorico 2 now makes it easy to add or remove staves from an instrument at different points in the flow, allowing for example the notation of complex works for piano where three or sometimes more staves are required.

Adding an extra staff. To add an extra staff to an instrument, select a note or rest on the staff above or below which you want the extra staff to appear, at the rhythmic position at which you want the extra staff to begin, and choose **Edit ► Staff ► Add Staff Above** or **Add Staff Below**. The extra staff is added from that position, and a signpost appears, labeled with the number of staves that have been added (or removed).

The instrument must belong to a solo player: you cannot change the number of staves of instruments held by section players. It is also not possible to add additional staves to a percussion kit instrument.

Removing an extra staff. To remove an extra staff, either select the signpost that corresponds to the point at which the extra staff appears, or select the note or rest on the staff you want to remove at the point at which you want it to be removed, and choose **Edit ► Staff ► Remove Staff**. This can also be used to remove one of the primary staves of an instrument, for example either the right- or left-hand staff of the piano (though of course you cannot remove all of the staves belonging to an instrument: at least one will always appear).

Choosing when an extra staff should begin. When a staff starts or stops in the middle of a system, you may want that staff to appear or disappear exactly at that point, or you may prefer for that system to appear for the whole of that system. This is controlled by way of the new **Show extra staves across full system when starting or stopping** checkbox in the **Ossias and Extra Staves** section of the **Staves and Systems** page of Layout Options.

Hiding empty staves. When extra staves are added to an instrument, it will no longer be affected by the **Allow individual staves of multi-staff instruments to be hidden** option on the **Vertical Spacing** page of Layout Options.

Rhythmic slashes

Rhythmic slashes are used to indicate that a performer should play something, but without being especially specific about exactly what they should play: slashes without stems are generally interpreted as giving the performer complete freedom to play whatever he or she likes; slashes with stems are generally interpreted as dictating the rhythm to be played, but without being specific about the pitches. The former is sometimes called *slash notation*, while the latter is sometimes called *rhythmic notation*. Dorico 2 introduces sophisticated support for both kinds of rhythmic slashes.

Slash regions. The quickest way to add rhythmic slashes is to use a slash region, which allows you to fill a range of bars with slashes, where the rhythm of the slashes is automatically determined by the prevailing time signature: for example, in bars of 4/4, four quarter note slashes will be shown, while in 6/8, two dotted quarter note slashes will be shown. Changing the time signature causes the durations of the slashes in the region to be updated automatically.

Slash regions are created by selecting one or more bars and choosing **Write ► Create Slash Region**, or by opening the new **Shift+R** popover, typing **slash** and hitting **Return** to confirm the popover. The slash region is created to the duration of the selection, and by default shows a green highlight behind the slashes to show that the slashes are part of a region (to disable this, switch off **View ► Highlight Slash Regions**). Handles at the start and end of the slash region allow you to extend the region at either end; you can also use **Alt+left/right** to move the start of the slash range, and **Shift+Alt+left/right** to increase or decrease the duration of the slash region.

Cutting a slash region. You may find that you need to cut a slash region in two, for example because you want to write some more specific notation in the middle of the region. To achieve this, select the slash at the position at which you want to split the slash region, then click the scissors tool in the notes toolbox, or type **U**. The slash region is split in two at that location, and you can then, for example, drag the start handle of the second half of the region right to make room for whatever you need to write.

Rhythm dots for slash regions. In compound time signatures, there are different conventions for whether or not rhythm dots should be shown on slashes; by default, Dorico will show rhythm dots on slashes of the duration of a compound beat, but this can be changed via the **Slash regions in compound time signatures** option in the **Rhythmic Slashes** section of the **Notes** page of Engraving Options.

Appearance of slashes. Dorico provides several different appearances for rhythmic slashes, and you can choose between any of the provided designs by setting **Slashes with stems** and **Slashes without stems** to the desired appearance in the **Rhythmic Slashes** section of the **Notes** page of Engraving Options.

Slash voices. When you want to write more specific rhythmic notation than is provided by a slash region, you can write rhythmic notation using a slash voice. Input using a slash voice is exactly the same as when using a regular voice, except that whatever pitch you specify will be overridden, and instead of the note or chord you input, a single slash will appear on the middle line of the staff by default. You can convert an existing voice to and from a slash voice, so the underlying pitches of

the notes and chords are retained and will be restored if you change the voice back to a regular voice.

To start a new slash voice in note input, choose **Write ► Create Slash Voice**, or type the default command **Shift+Alt+V**; this is analogous to the default **Shift+V** command to add a new regular voice.



Typing **Shift+Alt+V** repeatedly cycles through the types of slash voice that can be added: slashes with stems, stem up; slashes with stems, stem down; and slashes without stems. As with a regular voice, the indicator to the left of the caret shows what kind of voice you are about to add.

Once you have input some slashes, the slash voice is available for reuse anywhere else on that instrument, and when cycling through the voices with **V**, the slash voice will be included.

Changing slash voice type. If after inputting rhythmic notation in a slash voice you want to, say, switch to slashes without stems, you can do so by selecting one of the slashes and choosing the desired voice type from **Edit ► Voices ► Rhythmic Slashes**: if you choose **Normal Notes** from this submenu, the voice will be converted to a regular voice, and the original pitches of the notes and chords as they were first input will be restored.

For slash regions, you can toggle between slashes with and without stems by selecting any slash in the region or either the start or end handle, then activating the **Stemless** property in the **Slash Region** group of Properties.

Changing stem direction. For slashes with stems, you can specify whether the default stem direction for the slash voice should be up or down in the same way as for a regular voice: choose **Edit ► Voices ► Default Stems Up** or **Default Stems Down** as desired.

For slash regions, you can specify stem direction by selecting any slash in the region or either the start or end handle, then activating the **Voice direction** property in the **Slash Region** group of Properties.

Changing staff position. By default, slash regions and slash voices both show slashes on the middle line of the staff. The staff position can be changed in the

same way: activate the **Slash pos.** property in the **Slash Region** or **Notes and Rests** groups respectively, and then set the desired value. A value of **0** corresponds to the middle staff line, with positive numbers moving slashes upwards, and negative numbers moving them downwards.

Rests before and after slash regions. If a slash region starts or ends in the middle of the bar, you may or may not want the remainder of that bar to be padded with rests, depending on whether any other music is going on at the same time in that staff. By default, slash regions will pad incomplete bars with rests at either end, but you can suppress these rests by activating the **Hide rests before start** and **Hide rests after end** properties in the **Slash Region** group in Properties.

Opposing slash voices. In the event that you have a slash voice opposing either another slash voice or a regular voice, Dorico will override the default staff position for the slash voice in order to reduce the likelihood of collisions between the voices. The amount by which the slash voice is offset is determined by the options in the **Rhythmic Slash Voices** group of the **Voices** page of Notation Options.

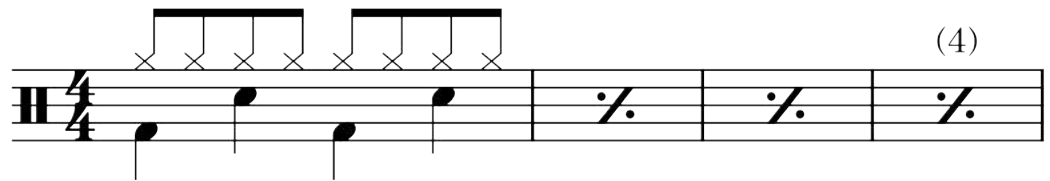
Slashes and unpitched percussion. To use slashes on a percussion kit, open the **Edit Percussion Kit** dialog (expand the card for the percussion player in the Players panel in Setup mode, and open the dialog from the instrument's context menu). You can add slashes with or without stems to the percussion kit using either of the **Slashes** buttons in the action bar below the **5-line Staff** editor. More than one set of slashes can be added to a percussion kit and positioned at different staff positions.

In note input, moving between the different instruments in the kit using the arrow keys will include any slashes you have added to the kit, and you can input slashes just as you would input any other music on a percussion kit.

Slashes in percussion kits only appear when using the five-line staff presentation type: if you switch to the grid or individual instrument presentation types, the slashes will not appear.

Bar repeats

Bar repeats indicate to the performer that the material in the preceding one, two or four bars should be repeated exactly: this notational shorthand can be very helpful to the performer as it is easier to read a bar repeat and understand that the music is to be repeated exactly than to read multiple bars of written-out music, trying to spot whether or not it is actually repeated exactly.



Bar repeat regions. After you have input the music that is to be repeated, make a selection beginning in the following bar and extending as far as you would like bar repeats to be shown (though you can of course change this later), and choose **Write ► Create Bar Repeat Region**. This creates a bar repeat region that shows the 1-bar repeat sign for the extent of the selection. You can alternatively type **Shift+R** to open the new repeats popover, then enter % to repeat the last bar, %2 to repeat the last two bars, or %4 to repeat the last four bars.

To change the number of bars to be repeated after you have created a bar repeat region, select any of the repeat bar symbols or the circular handle at the start or end of the region, and change the value of the **No. bars** property in the **Bar Repeat Region** group in the Properties panel.

By default, a light blue highlight appears behind bar repeat regions to help them stand out: to toggle the visibility of this highlight, choose **View ► Highlight Bar Repeat Regions**.

Counting bar repeats. Dorico automatically shows a count of the number of repetitions at intervals above the bar repeat region. By default, it shows the count every four bars, with the bar or bars of music being counted as “one”; so, for example, if you have a single bar of music followed by a bar repeat region covering three bars, the third bar repeat will be counted as “four.” To change the default count interval, set **Show bar repeat count every *n* bars** on the **Bar Repeats** page of Engraving Options. To prevent the count from appearing altogether, set **Appearance of bar repeat count** to **Do not show**.

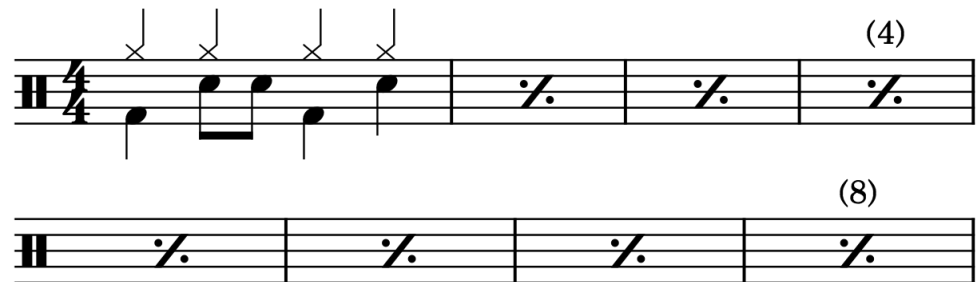
These defaults can be overridden for an individual bar repeat region: activate the **Count frequency** or **Count appearance** in the **Bar Repeat Region** group of Properties. You can also specify the number that Dorico should count from by activating the **Count from** property.

To change the font, size or style of the bar repeat count, edit the **Bar repeat count** font style in **Engrave ► Font Styles**.

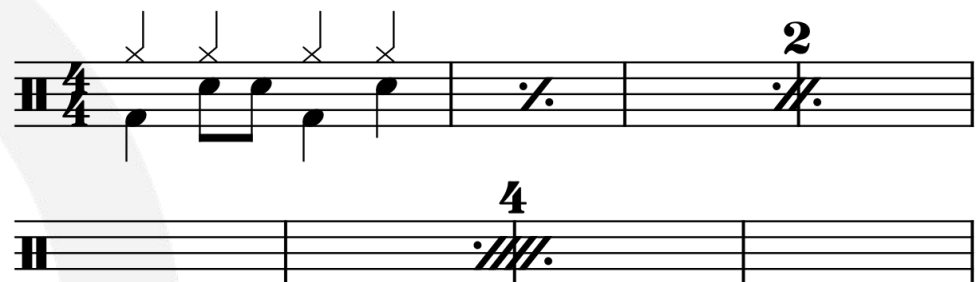
The precise position of the numbers above bar repeats can be adjusted in Engrave mode with the mouse or by nudging with **Alt** and the arrow keys.

Grouping bar repeats. In music with a very regular phrase structure it may be desirable to show that structure by grouping bar repeats. For example, in music

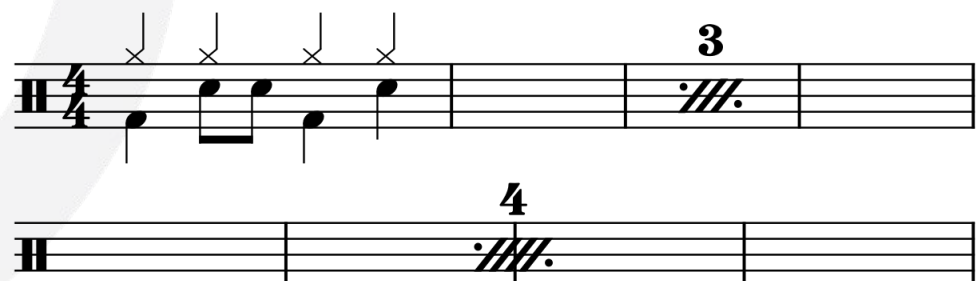
with a regular four-bar structure, you could choose to show two identical phrases of four bars like this:



Or you could choose to group at four-bar intervals, like this:



Although it is even less conventional, it is also possible to show the first four-bar phrase using a three-bar repeat, like this:



To enable grouping, select any bar repeat symbol or the handle at either end of the bar repeat range, then set the **Group every** property to the desired number of bars. To show a three-bar repeat when completing a four-bar phrase, set **Appearance for three-bar remainder of group** to **Use 3-bar repeat** on the **Bar Repeats** page of Engraving Options.

It is also possible to specify grouping when creating a bar repeat region using the **Shift+R** popover: **%1,4** will produce a one-bar repeat grouped every four bars, while **%2,4** will produce a two-bar repeat grouped every four bars, and so on. It is only possible to specify grouping at one, two or four bars, but if Dorico determines that the requested combination of settings is invalid, it will default to no grouping.

It must be noted that grouping bar repeats should be exercised with caution, as it can introduce ambiguity.

The range of bar numbers encompassed by a consolidated bar repeat region can be shown beneath the consolidated bar repeat by activating the **Show ranges of bar numbers under multi-bar rests and consolidated bar repeats** option on the **Bar Numbers** page of Layout Options.

New arranging tools

Dorico 2 introduces a number of new note editing tools to assist with common tasks during arranging, including multi-paste, explode and reduce, and moving and copying material to the staff above or below.

Multi-paste. When pasting copied material, Dorico can now paste multiple copies both horizontally and vertically to fill the range described by the extent of the selection: if only a single item is selected, then pasting works exactly as before, but if multiple items are selected, Dorico considers the nominal rectangle described by the contiguous range of instruments on which items are selected, the rhythmic position of the first selected item on the top instrument and the rhythmic position of the last selected item on any of the selected instruments, and then fills that rectangle with as many complete copies of the material as fit within it.

If there is a discontinuous selection of instruments, then Dorico will consider each contiguous range of instruments as separate regions for pasting: this allows you to (for example) copy dynamics from one instrument and then multi-paste them to several instruments, but omitting one or two instruments in the middle of the range.

Even if the rhythmic extent of the selection is shorter than the length of the copied material, Dorico will paste one complete copy of the material onto each instrument in the region, but if the selection is longer than the copied material, Dorico will paste as many complete copies of the material after each other as fit without overflowing the selected region. (STEAM-7450)

Moving music to the staff above or below. Two new commands have been added to the new **Edit ► Paste Special** submenu: **Move to Staff Above** and **Move to Staff Below**, which have the default key commands **Alt+N** and **Alt+M** (by analogy with **Edit ► Cross Staff ► Cross to Staff Above** and **Cross to Staff Below**, which have the default key commands **N** and **M**).

These commands cut the selected notes and other items from their current staff, and then paste them on the staff above or below in a single operation. This is very useful in a variety of situations: for example, after importing a keyboard part from a MIDI file, you may want to move individual notes from the right-hand staff to the

left-hand staff, or vice versa; after using the new explode or reduce features, you may want to make adjustments to individual voicings; and so on.

When moving notes within tuplets to the staff above or below, beware that unless the tuplet number/bracket (or signpost) itself is selected, the tuplet will not be moved to the staff above or below, so the notes will be unscaled and no longer part of a tuplet.

Duplicating music to the staff above or below. The new **Duplicate to Staff Above** and **Duplicate to Staff Below** commands in the **Edit ► Paste Special** submenu work similarly to **Move to Staff Above** and **Move to Staff Below**, except that instead of cutting and pasting, these commands copy and paste, so the selected material remains on the original staff and is duplicated on the staff above or below.

Reduce. Reduction is the process of taking music for more than one instrument and assigning it to fewer instruments (or even a single instrument, in the case of a keyboard reduction). The new **Edit ► Paste Special ► Reduce** command aims to partially automate this demanding task.

First, copy the material to be reduced to the clipboard using **Edit ► Copy**. Then select the instrument or instruments into which the copied material should be reduced, and choose **Edit ► Paste Special ► Reduce**.

Dorico pastes the copied material, and performs some transformations as it does so: if the rhythms match, it merges the material into a single voice; it removes unison notes, so that only a single note of the same pitch is pasted at a given rhythmic position; and it strips out clef changes, octave lines, and cues.

The disposition of the copied material onto the selected instruments for pasting is determined automatically, and will ensure that every destination instrument receives at least one instrument's music, duplicating that instrument's music if necessary: for example, if you copy material from four instruments and reduce into two instruments, the material will be split equally between the two instruments, from the top downwards in instrument order; if you copy material from five instruments and reduce into three, the first instrument will be assigned music from the first two instruments, the second will be assigned music from the third and fourth instruments, the third will be assigned music from the fifth instrument.

Explode. Exploding is the charming colloquial term for taking music written on a certain number of instruments (typically one or two) and pasting it onto a larger number of instruments, and this can now be performed by choosing **Edit ► Paste Special ► Explode**.

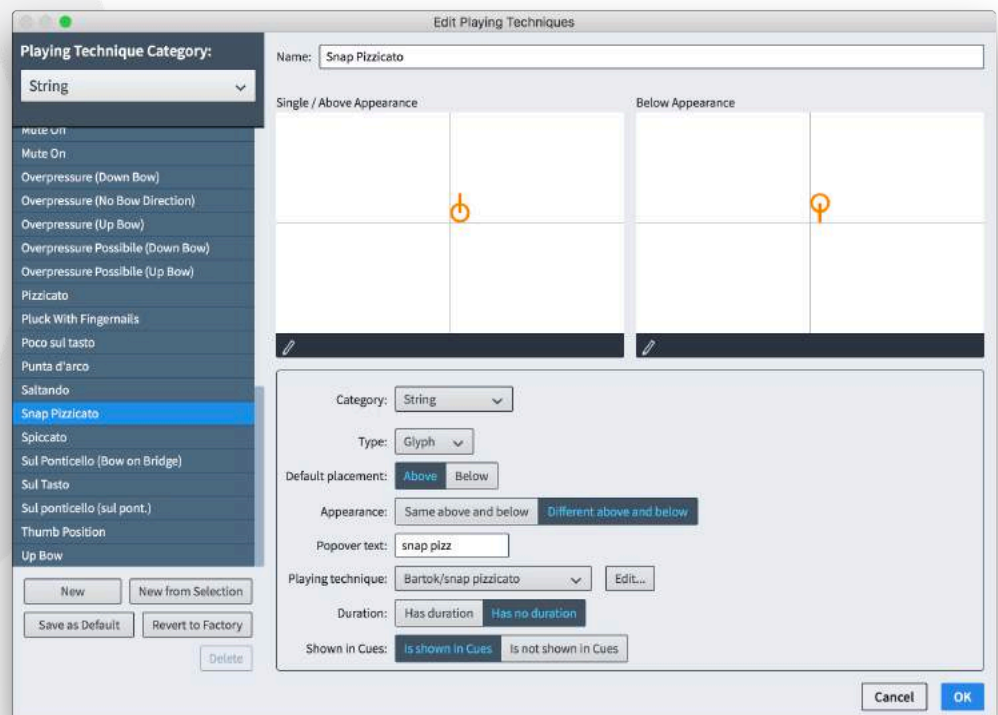
First, copy the material to explode to the clipboard using **Edit ► Copy**. Then select the instrument or instruments into which the copied material should be exploded, and choose **Edit ► Paste Special ► Explode**.

Dorico ensures that each destination instrument receives one of the notes in the source chords, allocated from top to bottom: if the number of notes in the chord matches the number of destination instruments, then each instrument will receive one note; if the number of notes in the chord is less than the number of destination instruments, then the same note will be allocated to more than one instrument.

Non-note items such as slurs and dynamics will also be duplicated to each destination instrument.

Playing techniques editor

It is now possible to edit existing playing techniques and create your own, with the new **Engrave ► Playing Techniques** dialog.

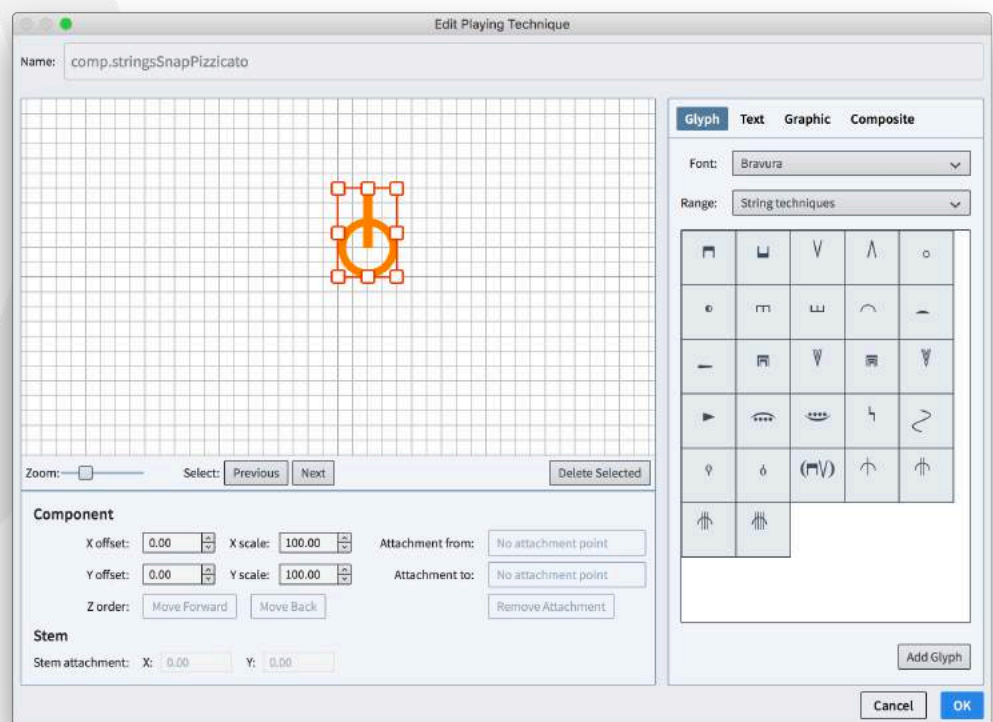


Editing an existing playing technique. To edit an existing playing technique, choose the appropriate category from the **Playing Technique Category** menu at the top left-hand corner of the dialog; this corresponds to the categories shown in the Playing Techniques panel in Write mode. The playing techniques in the chosen category are displayed in the list directly below the menu: the selected playing technique is then shown in the main editor that occupies the right-hand side of the dialog.

The editor will look different depending on the **Type** of playing technique chosen: **Text** playing techniques show the text to be displayed in the score; **Glyph** playing techniques show the graphical symbol (usually one or more characters from the music font, but this can in fact be any combination of glyphs from music fonts, characters from text fonts, and even graphics files).

Editing a **Text** playing technique is done directly in this dialog: simply change the displayed text by editing the **Text** field, and specify which font style should be used by choosing it from the menu immediately to the right of the **Text** field; by default, the font style used is **Playing technique font**.

Editing a **Glyph** playing technique involves opening a secondary dialog: depending on whether the playing technique uses the same or a different appearance when shown above or below the staff, there will either be a single pencil icon in the action bar in the large preview in the top half of the dialog, or one pencil icon for each appearance. Click the pencil icon, and the secondary editor opens:



To add a new component to the playing technique, select it from the panel on the right-hand side of the dialog: you can choose any character from any font in the **Glyph** tab, write one or more words in any font style in the **Text** tab, import a graphic in SVG, PNG, or JPG format via the **Graphic** tab, or add any of the existing other musical symbols that are used throughout the project from the **Composite** tab.

Once you have added a component, you can move it either by dragging it with the mouse or by using **Alt** with the arrow keys. Each component can be scaled, either by clicking and dragging on one of the handles, or using the **X scale** and **Y scale** spin controls; graphics components can be scaled independently in the horizontal and vertical dimensions, while glyphs, text and composite components must be scaled a uniform amount in both dimensions.

If you have multiple overlapping components, you can determine which should draw in front and behind each other using the **Z order** buttons to move the selected component towards the front or the back.

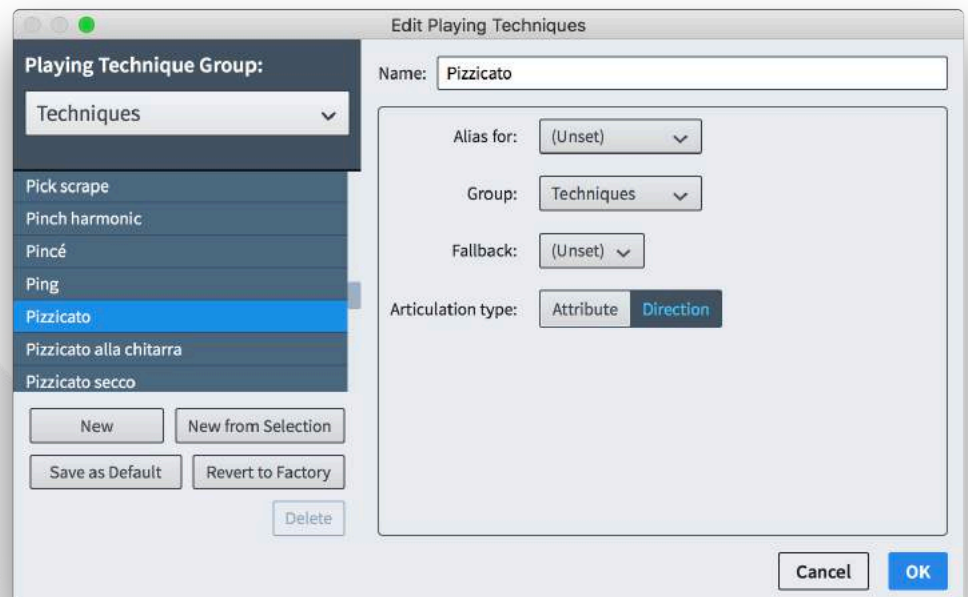
Once you have designed the playing technique to your satisfaction, click **OK** to close the secondary editor and return to the main dialog.

The other options below the main preview panel are as follows:

- **Category:** the choice of category determines which section of the Playing Techniques panel the playing technique appears in.
- **Default placement:** specifies whether the playing technique should appear **Above** or **Below** the staff by default.
- **Appearance** only applies to glyph-type playing techniques; **Same above and below** means that the same symbol will be used when the playing technique is shown above or below the staff, and **Different above and below** allows you to specify a different symbol for each side of the staff.
- **Popover text:** the text that can be typed into the **Shift+P** popover to create this playing technique; the editor will warn you if the text you specify is already assigned to another playing technique.
- **Playing technique:** the playing technique that will actually be produced in playback; see below.
- **Duration:** this currently has little effect, since Dorico does not yet provide all of the planned options for showing the continuation of a playing technique (which will eventually include solid and dashed lines and arrows of various kinds in addition to the current repeated glyph appearance), but for future development this allows you to specify whether this playing technique should show a continuation by default (**Has duration**) or should instead apply only to a single rhythmic position (**Has no duration**).
- **Shown in cues:** determines whether or not this playing technique will appear in a cue, assuming the cue is set to include playing techniques from the source instrument.

Playback playing techniques. The playing techniques whose appearance you edit in the **Engrave ► Playing Techniques** dialog are all bound to a playback playing technique, which can be chosen from the **Playing technique** menu when editing a

playing technique appearance. You can also edit existing playback playing techniques and define your own by clicking the **Edit** button to the right of the **Playing technique** menu, which shows the following dialog:



The **Playing Technique Group** menu at the top left-hand corner allows you to choose which group of playback playing techniques to edit. These groups are defined in the VST Expression Maps format and specify the type of behavior that will be produced during playback:

- **Techniques:** playing techniques that affect the overall quality of the sound.
- **Dynamics:** playing techniques that affect the volume or attack of the sound.
- **Lengths:** playing techniques that affect the played duration of notes, and qualities such as *legato* and *détaché*.
- **Ornaments:** playing techniques that include additional or different notes to the written pitch, or changes to the pitch or vibrato of the note.

The **Name** on the right-hand side determines how this playing technique will appear in the lists in the **Engrave ► Playing Techniques**, **Play ► Expression Maps** and **Play ► Percussion Maps** dialogs. The values that can be set for each playback playing technique are as follows:

- **Alias for:** specifies another playback playing technique, with which the present one is equivalent.
- **Group:** specifies which group this playback playing technique appears in.
- **Fallback:** specifies another playback playing technique that can be used if the present playing technique is not available.

- **Articulation type:** specifies the duration over which the playback playing technique takes effect; **Attribute** applies only to the note at the rhythmic position where the playing technique is found (for example, a staccato articulation), while **Direction** applies to all following notes until it is countermanded by another playing technique (for example, a *pizzicato* instruction).

Once you have made the necessary changes, click **OK**. The edited or new playback playing technique will now be available in this project.

Making edited playing techniques available to other projects. All of the edits made in **Engrave ► Playing Techniques** apply only to the current project by default. To make a new or edited playing technique available in all future projects, select the playing technique from the list on the left-hand side of the dialog and click **Save as Default**: this new or edited technique will then be reflected in every new project created subsequently.

To revert an edit made to one of the default playing techniques, select the playing technique from the list on the left-hand side of the dialog and click **Revert to Factory**.

Petaluma handwritten music font

A new handwritten music font family called Petaluma is included with Dorico 2. The family consists of three fonts: Petaluma, Petaluma Text, and Petaluma Script. Petaluma is the main font used for all of the musical symbols in the score; Petaluma Text is used for musical symbols drawn in text-like items like metronome marks, chord symbols, dynamics, and so on; Petaluma Script is a script font suitable for use for all other text in the score.



The Petaluma family is loosely based on the hand copying style of a popular series of books containing jazz standards, although it contains a repertoire of more than 1350 musical symbols and 500 letter forms, a far greater variety of symbols than are found in any single set of publications.

To use Petaluma in your project, choose **Engrave ► Music Fonts**, choose **Petaluma** from the list of available music fonts, and click **OK**. Doing so will also set Petaluma Script as the default text font for the project: if you want to use another

text font, edit **Default text font style** in **Engrave ► Font Styles** and **Default text** in **Engrave ► Paragraph Styles**.

Petaluma is a SMuFL-compatible music font, and is licensed under the SIL Open Font License, which means that it can be freely used, modified and distributed, provided any modifications are also released under the OFL. The Reserved Font Name for this family is “Petaluma”, and any derivative fonts may not use this name. Finally, neither the Petaluma font family nor any derivative fonts can be sold separately, though they can be distributed as part of a package that is sold commercially.

Support for NotePerformer 3

Dorico 2 also introduces support for NotePerformer 3 from Wallander Instruments. NotePerformer is a virtual instrument specifically designed to produce playback from music notation software.



NotePerformer 3 is not included with Dorico 2, but is available for separate purchase from www.noteperformer.com, from where you can also download a 30-day trial version.

After you have purchased and installed NotePerformer 3, to use it in Dorico, open the project you would like to play back using NotePerformer and choose **Play ► Playback Templates**. Choose **NotePerformer** from the list of playback templates, and click **OK**.

If you would like to use NotePerformer for every new project, set **Default playback template** to **NotePerformer** in the **Play** section of the **General** page of Preferences.

Improvements

Accidentals

Microtonal accidentals now play back correctly via HALion Sonic SE or other VST Note Expression-capable VST 3 instruments, both during playback and when auditioned when notes are selected in the music.

Audio export

A progress dialog now appears during audio export on both Windows and Mac, and more accurately depicts the actual progress of the operation. (STEAM-5293)

Barlines

Hymnal-style repeat barlines. In some hymnals, such as *The New English Hymnal*, repeat barlines are drawn in a particular way: the dots are shown in each space, and instead of showing some combination of thin and thick barlines, repeats are indicated by two thin barlines, except at the start of a system, where no barlines are shown, and only the four dots are shown. This convention can now be followed in Dorico by setting **Coincident repeat barline appearance** to **Double thin barlines**, and setting **Repeat dot frequency** to **All spaces in the staff**, on the Barlines page of Engraving Options. (STEAM-7668)

Bar numbers

Ranges of bar numbers on multi-bar rests. Dorico can now display the bar numbers included in a multi-bar rest directly as a range directly below the multi-bar rest. To enable this, activate **Show ranges of bar numbers under multi-bar rests** on the **Bar Numbers** page of Layout Options.

New options on the **Rests** page of Engraving Options allow you to change the default distance below the staff for the range of bar numbers, and specify the separator to use between the first and last bar numbers in the range. (STEAM-7791)

Appearance of bar numbers in different layouts. A new **Paragraph style** option has been added to the **Bar Numbers** page of Layout Options, allowing you to choose which paragraph style should be used for each layout in your project. In new projects, full and custom score layouts use the **Bar numbers (score)** paragraph style, while part layouts use the **Bar numbers (parts)** paragraph styles; in existing projects, both score and part layouts use the **Bar numbers (score)** paragraph style, which is updated to match the appearance of the bar numbers font style used in Dorico 1.x, to ensure that the appearance of bar numbers does not change when these projects are opened in Dorico 2.

By default, both the **Bar numbers (score)** and **Bar numbers (parts)** paragraph styles look the same, but having separate styles makes it easy to change the font,

size or style of bar numbers in, say, the part layouts without affecting the full score. (STEAM-7813)

Chord symbols

Color. Chord symbols now respect the **Color** property in the **Common** group in Properties. (STEAM-6493)

Clefs

Specifying the clef to be used in concert and transposing pitch. Several of Dorico's preset instrument types use a different clef when displaying the music in concert and transposed pitch, and it is now possible for you to specify this directly for each clef in the flow if necessary. In the **Edit** ► **Clef** submenu there are now two new submenus, **Concert Pitch** and **Transposed Pitch**, from which you can choose any of the clefs available from the **Clefs** panel in Write mode. (STEAM-7676)

Dynamics

Erasing the background behind dynamics. When an immediate dynamic with a prefix or suffix or a text-based gradual dynamic crosses a barline, or in rare circumstances when a dynamic must be positioned within the staff, allowing the dynamic to blank out part of the barline or staff lines can make the dynamic considerably easier to read.

A new **Erase background** property has been added to the **Dynamics** group of the Properties panel, which appears only in Engrave mode. When activated, a small area around the dynamic is erased. The default amount of padding around the dynamic is determined by the new **Padding around dynamic with erased background** value on the **Dynamics** page of Engraving Options, and can be overridden by activating the new **Erasure padding** properties, also found in the **Dynamics** group of the Properties panel.

When determining the shape of the area to be padded, Dorico considers the prefix and suffix separately from the bold italic characters that indicate the dynamic level, which means that, for example, when padding a dynamic such as ***f** risoluto*, the padding will be taller for ***f*** than for *risoluto*. The padding by default takes into account any ascenders and descenders in the text, so depending on the exact position at which the dynamic crosses the barline, it may appear that the area of erasure is larger than it need to be; for example, if a dynamic has the suffix *espressivo*, but it crosses the barline at “s” rather than “p”, the padding may appear too large below the dynamic. To resolve this, you can override the amount of padding on any of the four sides of the nominal bounding box that surrounds the dynamic, so you could reduce the bottom padding such that it no longer pads outside the descender, and thus make the area of erasure appear symmetrical both above and below the characters.

The padded area of erasure is considered part of the dynamic's bounding shape for the purposes of collision avoidance. (STEAM-7656)

Hairpins with flared ends. A hairpin with a flared open end is used by some composers to indicate a rapid increase or decrease in dynamic level, sometimes colloquially referred to as an “exponential hairpin.” To make a hairpin show a flared end, select it and activate the new **Flared end** property; this property is only available for gradual dynamics drawn as hairpins, and only for hairpins drawn with a solid line.

The default size of the flared end can be specified by changing the options in the new **Flared end design** group in the **Gradual Dynamics** section of the **Dynamics** page of Engraving Options. The size of the flared end for an individual hairpin can also be adjusted in Engrave mode by changing the new **Flare size W** (width) and **H** (height) properties. (STEAM-7778)

Filters

New filters for markers, bar repeat regions and rhythm slash regions have been added to the **Edit ▶ Filter** menu. The **Filter** menu is now also included in the right-click context menu for easier access.

Fingering

Custom scale factor. A new **Scale** property has been added to the **Fingering** group of the Properties panel, which appears only in Engrave mode, and which allows the scale factor of a fingering to be changed independently from the scale factor of the note to which it applies. (STEAM-7346)

Appearance of cautionary fingerings. It is now possible to override the appearance of individual cautionary fingerings via the new **Cautionary** property in the **Fingering** group of the Properties panel, which appears only when a note (and not a fingering) is selected, and only in Engrave mode. The property can only be activated for a note that has a cautionary fingering; it will otherwise be deactivated automatically. When the property is activated, you can choose between the following values: (STEAM-7345)

- **Default:** uses the appearance for cautionary fingerings defined in Engraving Options.
- **No parentheses:** show the fingering without parentheses.
- **With parentheses:** show the fingering enclosed in parentheses.
- **Suppress:** hide the cautionary fingering altogether.

Circled or underlined fingerings. It is now possible to specify that a fingering should either be enclosed in a circle, or underlined; these adornments are sometimes used for accordion fingering to indicate that a finger is playing in a help

row. To enable this, select a fingering number and activate the new **Decoration** property in the **Fingering** group of the Properties panel, which appears only in Engrave mode. A number of options for the size of the circular enclosure, the thickness of the line, and so on, can be found by disclosing the **Advanced Options** subsection of the **Design** section of the **Fingering** page of Engraving Options. (STEAM-7308)

Galley view

The size and position of the staff labels in the margin and the bar numbers above the top staff has been improved.

HALion Sonic SE (STEAM-7672)

Dorico 2 now includes HALion Sonic SE 3. For an updated Operation Manual for the new version, please visit:

<https://steinberg.help/vst-manuals/halion/halion-sonic-se-3/>

Mixer

You can now **Ctrl**+click (Windows) or **Command**-click (Mac) on a volume fader or pan control to reset the value back to its default. (STEAM-8046)

Notes

Stemless notes. A new **Hide stem** property has been added to the **Notes and Rests** group of the Properties panel, only appearing in Engrave mode. When activated, the stem of the selected note will not be drawn; any flag will also be hidden. If the selected note is part of a beamed group, then the stem will be hidden, but the beam will continue to be shown as normal, unless every note in the beamed group has the **Hide stem** property set, at which point the beam will also be hidden. (STEAM-7494)

Note input

Scale existing notes into a tuplet. It is now possible to scale a selection of existing notes into one or more tuplets: select the notes that should be made into tuplets, and type ; (semicolon). The tuplet popover opens, with a suggested ratio based on the number and durations of the selected notes already filled in; you can either accept the suggested ratio by hitting **Return**, or type the desired ratio, then hit **Return** to confirm the popover. If the selected notes fit into a single tuplet of the specified ratio, then only one tuplet will be created, but if the specified ratio is insufficient to scale all of the selected notes, further tuplets will be created until all of the selected notes are contained within a tuplet.

It is now possible to specify the beat unit of the tuplet directly into the tuplet popover by appending either the letter that corresponds to a note duration (**2h** = double whole, **w** = whole, **h** = half, **q** = quarter, **e** = eighth, etc.) or the number

that corresponds to the default key command for that duration in note input (**9** = double whole, **8** = whole, **7** = half, **6** = quarter, **5** = eighth, etc.), and then appending one or more full stop (period) characters to specify a dotted beat unit. When using a number to specify the duration, you must separate the beat unit from the number of beats either using a space or a hyphen. By way of example, **5:4q.** means “5 in the time of 4 dotted quarters”, while **3:2-2w** means “3 in the time of 2 double whole notes”. (STEAM-4129)

Note spacing

Opposing stems. Stem tips are now padded a little such that opposing stems on adjacent staves cannot abut: instead, the staves are forced further apart. (STEAM-7490)

Percussion

Percussion legends. Percussion legends are now positioned inside rehearsal marks and tempo text. (STEAM-7602)

Playback templates (STEAM-7760)

Playback templates describe the rules that Dorico uses to allocate sounds from VST instruments or MIDI devices to instruments in your project. Until now, there has been only a single default playback template, which uses instances of HALion Sonic SE and the included HALion Symphonic Orchestra and HALion Sonic SE library content to play back your projects. It has been possible to override the use of this default playback template by making your own assignment of sounds or VST instruments; thereafter, Dorico would no longer assign sounds on its own, until you instructed it to apply the default playback template.

Default playback templates. The new entry-level Dorico Elements product does not include the HALion Symphonic Orchestra sounds, and hence relies entirely on the HALion Sonic SE library content for default playback. As such, Dorico Pro now provides two default playback templates: **HSSE + HSO (Pro)** and **HSSE only (Elements)**. The former is equivalent to the default playback template in Dorico 1.x; the latter does not use any sounds from HALion Symphonic Orchestra, and is equivalent to the default playback template in Dorico Elements.

To specify which playback template Dorico should use for newly-created projects, a new **Default playback template** option has been added to the **Play** section of the **General** page of Preferences.

To choose a different playback template for the current project, or to apply one of the default playback templates, choose **Play ▶ Playback Template**, and choose the desired playback template from the list.

Adding further playback templates. Dorico will load data for further playback templates from subfolders within folders called **PluginPresetLibraries** and **PlaybackTemplateGenerators** in system-wide or user-specific application data folders, i.e.

- Windows: %PROGRAMDATA%\Steinberg\Dorico 2 (system-wide) or %APPDATA%\Steinberg\Dorico 2 (user-specific)
- macOS: /Library/Application Support/Steinberg/Dorico 2 (system-wide) or ~/Library/Application Support/Steinberg/Dorico 2 (user-specific)

The name of each subfolder within these folders determines the name of the playback template as it will appear in Dorico.

The two files loaded from the named subfolder within **PluginPresetLibraries** are:

- **presets.xml**: a list of all of the presets or patches in a virtual instrument's library, defining for each the name of its corresponding expression map or percussion map.
- **presets_for_instruments.xml**: a list of all of the default instrument types that can be created in Dorico and the preset that should be loaded by default for that instrument.

The named subfolder within **PlaybackTemplateGenerators** must contain a file called **playbacktemplategen.xml**, which specifies the UID of the VST instrument to load, the **PluginPresetLibraries** data to use, and some other parameters (such as the number of MIDI channels provided by the instrument, the number of audio outputs, and default send levels for the effects channel). The subfolder may also optionally contain a **.pluginstate** file that should be loaded into the VST instrument when it is instantiated.

It is not intended that end users should need to create their own playback templates using these data files: this information is provided for the benefit of third party VST instrument and sound library developers.

Playback

Note shortening. The **Play as % of written duration** option on the **Timing** page of Playback Options has been constrained so that longer notes, or music played at a slow tempo, are not excessively shortened. A note will be shortened to the specified amount if it is a quarter note (crotchet) or shorter in duration; if it is longer than a quarter note, then only the final quarter note portion of the note will be shortened. This quarter note portion also takes the prevailing tempo into account, so the maximum amount by which a note can be shortened is the defined percentage of a quarter note at 120 quarters per minute. (STEAM-7984)

Move playhead to selection. A new default key command, **Alt+P**, has been added to move the playhead to the position of the first selected item. This is very useful when working with attached video, as it allows you to see which frame corresponds to a specific rhythmic position. (STEAM-5811)

Playing techniques

Hiding playing techniques. It is sometimes desirable to hide playing techniques, for example to avoid unnecessary repetition. To hide a playing technique, select it and activate the new **Hidden** property in the **Playing Techniques** group in Properties. A signpost will appear, which can itself be hidden from view if desired by choosing **View ▶ Signposts ▶ Playing Techniques**. (STEAM-7646)

Erasing the background behind text-based playing techniques. When a playing technique crosses a barline, it can be useful to erase the background around the playing technique to make it easier to read. To allow this, a new **Erase background** property has been added to the **Playing Techniques** group in the Properties panel, which appears only in Engrave mode. The default amount of padding around the playing technique is determined by the new **Padding around playing technique with erased background** option on the **Playing Techniques** page of Engraving Options, and can be overridden for an individual playing technique by activating the **Erasure padding** properties. (STEAM-7669)

Horizontal offset for text-based techniques. A new option Horizontal offset for text playing techniques has been added to the **Playing Techniques** page of Engraving Options. This is set to zero spaces by default, but if for example you want text-based playing techniques to appear slightly to the left of the note or chord to which they apply, set this new option to a small negative value. (STEAM-7709)

Repeats

Repeats playback. Dorico now has limited support for playback of repeat structures: repeat endings and repeat barlines are now played back. The bar/beat and time display in the Transport reflects the current position in the repeat structure. Audio and MIDI export both also include repeats. (STEAM-3910)

Shift+R popover. A new popover has been added with the default key command **Shift+R** for the creation of repeat endings, single- and multi-stem tremolos, rhythmic slash regions and bar repeat regions. The terms that can be input into the popover are as follows: (STEAM-7636)

Single-stem tremolos

/	\	1	One stroke
//	\\	2	Two strokes
///	\\\	3	Three strokes
////	\\	4	Four strokes

z	zonstem	Z on stem
0	clear	Remove tremolo
<i>Multi-stem tremolos</i>		
/	\	1 One stroke
//	\\	2 Two strokes
///	\\\	3 Three strokes
////	\\\	4 Four strokes
0	clear	Remove tremolo
<i>Repeat endings</i>		
end	ending	New repeat ending
add		Add segment to existing repeat ending
<i>Rhythmic slash region</i>		
slash		New rhythmic slash region
<i>Bar repeat region</i>		
%	%1	Repeat last bar
%2		Repeat last two bars
%4		Repeat last four bars
%1,2		Repeat last bar, group in twos
%1,4		Repeat last bar, group in fours

Tempo

Editing the beat unit of existing tempos. A new **Beat unit** property has been added to the **Tempo** group of the Properties panel, allowing you to edit the beat unit of a selected tempo item: for example, to change the note value shown in a metronome mark from a quarter note (crotchet) to a dotted quarter note, simply select the tempo item, then activate the rhythm dot button shown in the row of buttons.

(STEAM-7462)

Tempo range separator. By default, Dorico uses an en dash to separate the lower and upper numbers shown for a tempo range. If you would prefer to use a different separator, you can set the new **Separator for tempo range** option on the **Tempo** page of Engraving Options to **Custom separator**, and then specify exactly which characters should be used. (STEAM-7708)

Metronome marks. The spacing of rhythm dots relative to notes in metronome marks has been improved. (STEAM-7473)

Text

Borders. A new **Border** property has been added to the **Text** group in the Properties panel. When activated, a border will be drawn around the text item, with the default thickness of the border determined by the new **Border thickness** option on the **Text** page of Engraving Options. The thickness of the border can also be overridden for an individual text item by activating the new **Border thickness** property, which appears only in Engrave mode. The default padding between the text and its border is determined by the **Padding around text with erased background** value on the **Text** page of Engraving Options, and can be

overridden by setting the **Erasure padding** properties in the Text group of the Properties panel. (STEAM-7658)

Collision avoidance. A new **Avoid collisions** property has been added to the **Text** group in the Properties panel, allowing you to override the default setting for collision avoidance as specified on the **Text** page of Engraving Options. When the property is unset, text is drawn at its default vertical position above or below the staff, and no other item will avoid colliding with it: you can tweak its position in Engrave mode in the usual manner. (STEAM-7670)

Furthermore, a new **Minimum distance from protruding items** option has been added to the **Text** page of Engraving Options, allowing you to specify how much padding should be left between a text item and another item (such as a note or slur) that protrudes from the staff; previously, the text item would have been allowed to touch the protruding item. (STEAM-7696)

Tokens for page numbers. The following new tokens have been added in Dorico 2, and can be entered in text frames:

- **{@pageCount@}** – the total number of pages in the layout
- **{@flowPage@}** – the number of this page within the current flow, counting from 1 for the first page of the flow (i.e. not the displayed page number)
- **{@flowPageCount@}** – the total number of pages in the current flow
- **{@flow n FirstPage@}** – the displayed page number of the page on which flow n begins; insert the number of the flow as shown in the Flows panel in Setup mode in place of n , e.g. **{@flow5FirstPage@}**.

The **{@flowPage@}** and **{@flowPageCount@}** tokens only consider the flow that is active at the beginning of the first system of the music frame closest to the top left-hand corner of the page on which the tokens are used. (STEAM-7755, STEAM-7766)

Paragraph Styles dialog. The default selection in the **Engrave ► Paragraph Styles** dialog is initialized from the first selected text item, if any. (STEAM-7972)

User interface

Visual refresh. The look and feel of the Dorico project window has been subtly updated, reducing the width and height of panels by a small amount where possible to ensure that the maximum amount of space is available for the music area. The Hub window has also been redesigned: more space is devoted to the list of recent projects, and the lists of blog posts and videos, of which only one was previously visible at once, are now both shown in order to make it easier to see when new content is available.

Multiple selections in the Players and Layouts panels. When you need to perform an operation on multiple selected players or layouts, for example to assign multiple players to a flow, when clicking on a checkbox to include or exclude the player or layout, you can then hold **Shift** and click on another checkbox, which will include or exclude all players or layouts in the range between the first and second click.

(STEAM-7287)

Multiple selections in the Edit Percussion Kit dialog. A number of operations in the **Edit Percussion Kit** dialog can now operate on multiple selected instruments in the dialog, including changing voice direction and index, setting the size of gaps between instruments on adjacent grid lines, removing or deleting instruments from the kit, and changing the order of instruments in the kit. (STEAM-7289)

Undo and redo. **Edit ▶ Undo** and **Redo** now bring the selection into view if necessary. A new preference, **Follow selection on undo and redo**, has been added to the **Editing** section of the **General** page of Preferences, which can be switched off to restore the behavior to that of Dorico 1.2.10. (STEAM-7564, STEAM-8026)

Updating from Dorico 1.x

When you first run Dorico Pro 2, your existing user data and preferences from Dorico 1.x are automatically migrated to the new update. This includes: key commands; preferences; the list of recent projects; saved default layout, notation, engraving, playback and note input options; and any saved default tonality systems, paragraph styles, and character styles. Furthermore, any VST 2.x plug-ins that you added to the **vst2whitelist.txt** file for Dorico 1.x will automatically be added to the whitelist for Dorico 2. (STEAM-7664)

Issues resolved

ID #	Component	Issue
STEAM-4241 STEAM-4294	<i>Accidentals</i>	Changing the pitch of a grace note before a barline no longer incorrectly considers the accidental state of the following bar.
STEAM-5539	<i>Accidentals</i>	When using the Second Viennese School accidental system, grace notes are now considered correctly when determining whether or not to repeat an accidental.
STEAM-7472	<i>Accidentals</i>	Under some rare circumstances, it was not possible to change the pitch of a note that had been respelled in a part layout; this problem has now been resolved.
STEAM-7910	<i>Accidentals</i>	The enharmonic spelling of rising chromatic passages in minor keys has been improved.
STEAM-7905	<i>Audio export</i>	A progress dialog now appears during audio export on both Windows and Mac, and accurately reflects the actual progress through the operation.
STEAM-7047	<i>Barlines</i>	Dashed barlines to show subdivisions in additive time signatures no longer fail to appear if the bar is split across a break.
STEAM-7077	<i>Barlines</i>	Creating a time signature change at a dashed subdivision no longer causes previous dashed subdivisions to appear in the wrong place.
STEAM-7134	<i>Barlines</i>	Repeat barlines no longer draw incorrectly at the end of a system if they coincide with a key change to a key with no accidentals.
STEAM-7301	<i>Barlines</i>	Inserting a barline at the same rhythmic position as an existing dashed subdivision in an aggregate time signature now works correctly.
STEAM-4846	<i>Beaming</i>	Dragging the end of a stemlet now works correctly when the stemlet belongs to an implicit rest.
STEAM-7562	<i>Chord symbols</i>	Toggling the Show as mode property on and back off again for a diminished half/whole scale chord symbol no longer results in the chord symbol showing as a different chord.
STEAM-7504	<i>Collision avoidance</i>	Mysterious problems where deleting an item can cause an item in another bar to move vertically in galley view have been resolved.
STEAM-7716	<i>Collision avoidance</i>	The extent of items is now always correctly considered for collision avoidance when editing an item that is graphically wider than its rhythmic position and duration.
STEAM-7018	<i>Cues</i>	If a cue abuts the end of a flow, a redundant restorative clef change is no longer created.
STEAM-7029	<i>Cues</i>	Cues are now automatically removed if they are invalid under more circumstances.
STEAM-7505	<i>Cues</i>	Edits that affect where instrument changes occur no longer sometimes cause system objects to disappear if a cue is located within the range affected by the edit.
STEAM-5064	<i>Dynamics</i>	Edit ▶ Reset Appearance and Reset Position now work correctly on dynamics.
STEAM-6385	<i>Dynamics</i>	If a dynamic has a color set via Properties, it now shows correctly in the blue linked color rather than the orange selection color when another dynamic in the group is selected.
STEAM-6651	<i>Dynamics</i>	A series of gradual dynamics interspersed with immediate dynamics and shown as a single hairpin no longer draws incorrectly in galley view.

ID #	Component	Issue
STEAM-7328	<i>Dynamics</i>	Under rare circumstances, edits that affect the vertical placement of gradual dynamics would not be propagated to all music frame chains; this has now been resolved.
STEAM-7742	<i>Dynamics</i>	Adding an immediate dynamic to the end of an existing group of dynamics now correctly extends the length of the flow if required.
STEAM-7782	<i>Dynamics</i>	Hairpins that extend precisely to the end of the flow now draw correctly in galley view.
STEAM-7257	<i>Fingering</i>	The Indicate shift to next note and Shift direction properties for string fingering shift indications are now correctly reset when pasting notes onto non-string instruments.
STEAM-7384	<i>Fingering</i>	Deferred fingering substitution now works correctly on notes and chords that are tied between different voices.
STEAM-7409	<i>Fingering</i>	Under some circumstances, fingering substitutions could fail to draw as slurs, despite the options or properties; this problem has been resolved.
STEAM-7217	<i>Flows</i>	Duplicate Flow and Split Flow now correctly copy the flow info for the original flow into the new one.
STEAM-7697	<i>Graphics export</i>	Imported graphics are now exported at a much higher resolution when exporting PDF files.
STEAM-7767	<i>Graphics export</i>	It is no longer possible to change focus to another project in the middle of a graphics export operation, which could cause graphics from the wrong project to be exported.
STEAM-7848	<i>Holds and pauses</i>	In some circumstances, a fermata on a bar rest could be incorrectly positioned at the start of the bar, rather than over the bar rest; this has now been resolved.
STEAM-4826	<i>Key signatures</i>	Adding a clef change at the same location as a key change now always correctly updates the cancellation naturals, if shown.
STEAM-7618	<i>Key signatures</i>	Changing the current tonality system in the Tonality System section of the Key Signatures panel now always takes effect correctly.
STEAM-7628	<i>Key signatures</i>	Creating a key signature from the Used in this flow section now always uses the tonality system selected in the Tonality System section of the Key Signatures panel.
STEAM-7796	<i>Key signatures</i>	The tonality system shown in the panel in Write mode is now always used when creating a key signature.
STEAM-7374	<i>Localization</i>	Changing the keyboard language on the Key Commands page of Preferences now works correctly when there are unsaved changes to the key commands in the current language.
STEAM-7563	<i>Localization</i>	The default key command for Write ► Respell ► Respell Using Note Above now works correctly in the German-language version (Windows only).
STEAM-7361	<i>Lyrics</i>	Using the left or right arrow key to navigate off the first or last lyric no longer incorrectly loses any edit made to that lyric.
STEAM-6243	<i>Multi-bar rests</i>	Multi-bar rests are now broken by both the starts and ends of repeat ending segments.
STEAM-7065	<i>Multi-bar rests</i>	The presence of a system break no longer sometimes causes the width of a multi-bar rest at the end of the previous system to change.

ID #	Component	Issue
STEAM-7423	<i>MusicXML export</i>	Exporting with Export layouts as separate files switched off now correctly finds and uses the most appropriate full score layout for the selected flow.
STEAM-6118	<i>MusicXML import</i>	Imported MusicXML and MIDI files now respect the Default text font family preference.
STEAM-7391	<i>MusicXML import</i>	A problem that could cause Dorico to crash when importing MusicXML files from PDFtoMusic Pro has been resolved.
STEAM-7957	<i>Navigation</i>	Moving the selection between non-note items with the arrow keys no longer sometimes causes the selection to jump unexpectedly to the start of the previous system in page view or backwards several bars in galley view.
STEAM-7487	<i>Notation options</i>	The Overlapping notes in the same voice in a kit or grid presentation option on the Percussion page of Notation Options now works correctly for chords split by a barline.
STEAM-5499	<i>Note input</i>	Inputting the first note in a new voice between rhythmic grid positions now works correctly.
STEAM-5555	<i>Note input</i>	Under some circumstances, extending the duration of a note that ends within a tuplet in Insert mode could cause other later notes in the same voice to be deleted; this problem has now been resolved.
STEAM-6546	<i>Note input</i>	Changing the voice of a selection of notes no longer sometimes causes the notes to be moved to a different rhythmic position if items already exist in the destination voice.
STEAM-7411	<i>Note input</i>	Pasting a selection beginning with implicit rests immediately followed by a tuplet no longer causes some non-note items to be offset incorrectly.
STEAM-7411	<i>Note input</i>	Pasting a selection that begins with implicit rests followed by a tuplet no longer results in non-note items being pasted into incorrect rhythmic positions.
STEAM-7425	<i>Note input</i>	Pasting a selection including tuplets into an existing passage with identical tuplets with chord mode active no longer sometimes results in some of the material being offset.
STEAM-7449	<i>Note input</i>	Pasting material of the same duration as an existing tuplet will now remove the tuplet, instead of pasting the material into the tuplet.
STEAM-7561	<i>Note input</i>	Undoing the creation of a tuplet no longer sometimes fails if a non-note item is located within the range of the added tuplet.
STEAM-7609	<i>Note input</i>	Making a selection on a percussion kit using the five-line staff presentation type now correctly uses the extent of the selection from all components, rather than only the first.
STEAM-7657	<i>Note input</i>	Copy and paste for instruments within a percussion kit using the single-line instruments presentation type now works more reliably.
STEAM-7748	<i>Note input</i>	Dorico no longer hangs when attempting to shorten with Shift+Alt+left arrow a note or rest of the minimum valid duration (1024th note).
STEAM-7880	<i>Note input</i>	Moving the caret after priming a new voice no longer causes a voice with the wrong direction to be created.
STEAM-7939	<i>Note input</i>	When multiple items are selected, hitting Return now starts note input, rather than attempting to edit the first selected item.
STEAM-7490	<i>Notes</i>	Stems in opposing directions on adjacent staves are padded by a small amount to prevent them from becoming so close they may appear to touch.

ID #	Component	Issue
STEAM-7508	<i>Notes</i>	Rhythm dots on stemless notes– i.e. a whole note (semibreve) or longer – in down-stem voices are no longer incorrectly snapped to spaces in the wrong direction.
STEAM-7436	<i>Ornaments</i>	Glissandos between invalid note positions (for example, two notes of the same pitch tied together) are now correctly automatically removed.
STEAM-7568	<i>Pedal lines</i>	Making a selection on the lower or left-hand staff of a piano instrument and then pasting the pedal line now works correctly.
STEAM-7684	<i>Pedal lines</i>	Pedal lines that span multiple systems no longer sometimes disappear when making unrelated edits.
STEAM-7487	<i>Percussion</i>	The notation option to remove overlaps for percussion kits did not always work correctly for a chord split across a barline; this problem has now been resolved.
STEAM-7568	<i>Piano pedaling</i>	Pasting piano pedal lines now works correctly when selecting something in the left-hand staff of the piano.
STEAM-7516	<i>Players</i>	It is no longer incorrectly possible to use the Shift+I key command to add an additional instrument to a section player.
STEAM-7290	<i>Print mode</i>	The chosen page range for printing is correctly preserved when leaving and re-entering Print mode.
STEAM-7323	<i>Print mode</i>	Choosing a page range that does not include the first page of the layout, then switching back to All pages now updates the print preview correctly.
STEAM-7764	<i>Print mode</i>	Cancelling a print or graphics export operation no longer sometimes causes a crash
STEAM-7199	<i>Repeat endings</i>	It is now possible to create a repeat ending when an explicit bar rest is selected.
STEAM-6760	<i>Rests</i>	Setting a property on an implicit rest no longer causes all other selected items to be removed from the selection.
STEAM-7012	<i>Rests</i>	The Bar rest design in long time signatures option on the Rests page of Notation Options now works correctly when adding bars to the end of the flow.
STEAM-7545	<i>Rests</i>	The presence of local time signatures on one staff no longer prevents multi-bar rests from appearing in the other staff if they line up with the bars of the global time signature.
STEAM-5501	<i>Setup mode</i>	Expanding a group in the Players panel will no longer cause the cards for the players within the group to be truncated incorrectly when the group is partially scrolled out of view.
STEAM-5817	<i>Tempo</i>	Tempo items with dx/dy offsets are no longer sometimes positioned inconsistently in relation to other items.
STEAM-7473	<i>Tempo</i>	The spacing of rhythm dots in metronome marks has been improved, particularly for durations shorter than a quarter note (crotchet).
STEAM-7706	<i>Tempo</i>	When the font style for gradual tempo items is set to absolute rather than staff-relative size, the dashed or dotted continuation line is now correctly drawn at absolute size too.
STEAM-7723	<i>Tempo</i>	Gradual tempo items with no drawn continuation line now draw a handle and attachment line at the right-hand end in Write mode.

ID #	Component	Issue
STEAM-6777	<i>Text</i>	System-attached text can now be edited correctly if the top staff of the system is hidden because it is empty.
STEAM-7536	<i>Text</i>	Right-aligned text is no longer sometimes slightly truncated within a text frame.
STEAM-7578	<i>Ties</i>	When considering ties for the purposes of collision avoidance, the inside of the tie was incorrectly being considered instead of the outside. This problem has now been resolved.
STEAM-7075	<i>Time signatures</i>	Under rare circumstances, notes and rests could be grouped incorrectly in irregular time signatures within an aggregate time signature; this problem has been resolved.
STEAM-7587	<i>Time signatures</i>	Undoing the addition of a local time signature to an individual instrument now always correctly reinstates the previous global time signature.
STEAM-7561	<i>Tuplets</i>	Undoing the creation of a triplet where a non-note item's position overlaps with the new triplet will no longer go wrong.
STEAM-3656	<i>User interface</i>	Drop-down menus in dialogs and panels no longer sometimes appear on the wrong display when running Dorico with multiple displays (Windows only).
STEAM-7510	<i>User interface</i>	Focus no longer gets lost after clicking the buttons in the note input toolbox, resulting in key commands not working until you click in the score (Windows only).
STEAM-7637	<i>User interface</i>	It is now possible to assign key commands to both File ▶ Import ▶ Flows and File ▶ Export ▶ Flows .
STEAM-7647	<i>User interface</i>	The various annotations that appear at the top and bottom of the caret are now correctly scaled relative to the current staff size.
STEAM-7663	<i>User interface</i>	Maximizing the document window while a modeless dialog was open could in rare circumstances lead to Dorico hanging; this has now been resolved (Mac only).

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](#).