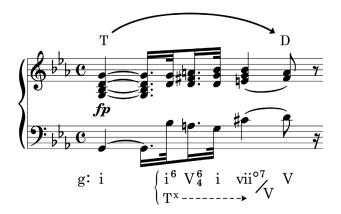# MusAnalysis

MusAnalysis is a text font that allows the user to type Roman numeral and functional analysis into a musical score or word processor:



MusAnalysis uses glyphs taken from Bravura and Academico, and adds new glyphs for analysis.

MusAnalysis works in Dorico, Sibelius, Finale (Mac-only at present), and Musescore. It also works in any word processor or other software that supports ligatures, kerning, and contextual alternates. Make sure these features are turned on for the glyphs to display correctly.

## Installation

To install these fonts for use on your computer, open the zip file that you downloaded.

Quit any applications that may be running on your computer. Then, install the font on your computer:

> Mac: http://support.apple.com/kb/HT2509
> Windows: Right-click on the font files and select **Install** or (**Install for all users**).

## Using MusAnalysis

Most symbols in MusAnalysis can simply be typed by entering the appropriate keystroke or series of keystrokes until the desired glyph appears. Alternatively, you can enter the characters in plain text using your favorite text font and then switch the desired sections to MusGlyphs afterwards.
In your music notation program, you may find it easiest to use either the text tool or lyric tool, depending on the situation.

# Characters and Key Combinations

---

### Standard Roman numerals
- any combination of **V**, **v**, **I**, and **i**
- **o** and **o\\** for dim and half-dim

```
VI I IV viio viio\
```

$$\text{VI I IV vii}^{\circ}\ \text{vii}^{\varnothing}$$

---

### Key signatures
- Roman upper- and lowercase letters A–H
- Add **b**, **n**, or **#** for flat, natural, or sharp
- **\*** suffix for underline

```
Dn  C#: eb:  A*
```

$$\text{D}\natural\ \ \text{C}\sharp\text{:}\ \ \text{e}\flat\text{:}\ \ \underline{\text{A}}$$

---

### Borrowed chords and bars
- Type **\*** for a borrowed chord
- Add backslash ( **\\** ) after capital V and I combinations for a serif bar

```
iv*  VI\
```

$$\underline{\text{iv}}\ \ \text{VI}$$

---

### Secondary dominant slashes
- **/** for a baseline slash
- **//** for an angled slash (can presently only be followed by Roman numerals)

```
V42/V  V42//V
```

$$\text{V}^{4}_{2}/\text{V}\ \ \text{V}^{4}_{2}\!\big/_{\!\text{V}}$$

---

### Secondary dominants (European variant)
- Follow an uppercase **I** though **VII** with **$**

```
II$  III$  VII$
```

$$\text{II}\!\!\!|\ \ \text{III}\!\!\!|\ \ \text{VII}\!\!\!|$$

---

### Inversion numbers
- Standard Roman numerals are superscript
- For subscript, use a grave ( **`** ) prefix (**`6**, **`4**, etc)
- Pairs of numbers stack automatically, except for 10–15

- Triple-stacks require a **%** prefix to initiate them
- Use an **s** ("space") within triple stacks to force specific positioning of numerals

```
V6  V`6  V64
```

$$V^6 \quad V_6 \quad V^6_4$$

```
V%753   V%652   V%6s3   V%s43
```

$$V^7_{5_3} \quad V^6_{5_2} \quad V^6_{\phantom{0}3} \quad V_{4_3}$$

## Single voice-leading lines

- Follow a superscript or subscript single number with a **hyphen (-)** or **period (.)**
- If you're entering these as lyrics and want to avoid lyric entry auto-advancing when the hyphen is used, you can use the **period (.)** in place of the hyphen
- The resolution will automatically align

```
V6...5   V`6...5
```

$$V^{6\text{—}5} \quad V_{6\text{—}5}$$

## Double voice-leading lines

- Follow a double-stack with a **comma (,)** for an upper line and **hyphen (–)** or **period (.)** for a lower line
- Use **=** for a double line

```
V64++5 V64--3 V64==53
```

$$V^{6\text{—}5}_4 \quad V^6_{4\text{—}3} \quad V^{6\text{—}5}_{4\text{—}3}$$

## Triple voice-leading lines

- Follow a triple-stack with **comma (,)**, **=**, or **–** (or **.** )
- Use **%** for a triple line

```
V%753,,,6 V%753===4
      V%753---2
```

$$V^{7\text{—}6}_{5_3} \quad V^7_{5\text{—}4_3} \quad V^7_{5_{3\text{—}2}}$$

```
V%753%%%642
```

$$V^{7\text{—}6}_{5\text{—}4_{3\text{—}2}}$$

### Independent double voice-leading lines

- Follow a double-stack with **l** (lowercase L), **=**, and numbers to indicate independent resolutions

```
V64==5l..3 V64==l3,,5
```

$$\mathrm{V}^{6-5}_{4\,\rule{1.5em}{0.4pt}\,3} \quad \mathrm{V}^{6\,\rule{1.5em}{0.4pt}\,5}_{4-3}$$

---

### Independent triple voice-leading lines

- Follow a triple-stack with **%** and a combination of **L** for line, **s** for space, and numerals

```
V%753%%L4L3sLLs26
```

$$\mathrm{V}\begin{matrix}7\,\rule{1.5em}{0.4pt}\,3\,\rule{1em}{0.4pt}\,6 \\ 5-4 \\ 3\,\rule{1.5em}{0.4pt}\,2\end{matrix}$$

---

### "Backtrack" voice-leading lines

- To ensure that voice-leading resolutions are aligned to their exact rhythmic position, you can enter the resolution numbers at the desired position, preceded by "backtrack" voice-leading lines that extend to the *left* of the resolution numbers, overlapping the previous lines as needed to create the appearance of one solid line.
- Since these backtrack lines are "zero-width", they don't move the cursor. The resolution numbers will remain left-aligned, and the resulting overlap allows you to adjust either figures left or right as needed.
- To add a backtrack, begin with **!** (as in, "Wow!")
- Add the indicated characters
  - **=** for two lines resolving to a double stack
  - **%** for three lines resolving to a triple stack
  - For a resolution to a double stack, type **2**, then **a** or **b**
  - For a resolution to a triple stack, type **3**, then **a, b, c, ab, ac,** or **bc**
- To *extend* the line, repeat the *last character*, up to four times (for example, **!3acccc**)

```
!==64  !3bcccc753
```

$$\begin{matrix}\rule{1.5em}{0.4pt}\,6 \\ \rule{1.5em}{0.4pt}\,4\end{matrix} \qquad \begin{matrix}\rule{2.5em}{0.4pt}\,7 \\ \rule{2.5em}{0.4pt}\,5 \\ \rule{2.5em}{0.4pt}\,3\end{matrix}$$

## Accidentals, Double-stacked

- Accidentals (**b**, **n**, **#**) are superscript by default
- Accidentals can be written as subscript using a grave ( ` ) prefix
- Accidentals can be stacked in pairs

```
V7b9      V64---`n3
```

$$V^{7\flat9} \quad V^{6}_{4}\!\!-\!\!\natural3$$

```
n#75===b63
```

$$\natural7\!\!-\!\!\flat6$$
$$\sharp5\!\!-\!\!\phantom{\flat}3$$

## Chromatic Chords

- **b** preceding Roman numerals is automatically converted to baseline
- **Ger, Fr, It6** with or without **+**
- For a large, centered minus, use **?**

```
bII7    Ger+6 III?
```

$$^{\flat}II^{7} \quad Ger^{+6} \quad III\text{-}$$

## Accidentals, Triple-stacked

- **%** prefix
- any combination of b, n, and #
- **s** for space

```
%bsn942
```

$$\flat9$$
$$4$$
$$\natural2$$

## Other modifiers

- **^^** for major triangle
- **>** or **<** for alternate flat or sharp signs (can also be subscript or stacked)
- **%** prefix with **<** or **>** for triple stacks
- **((** and **))** for superscript parentheses
- **=** for regular baseline equals sign; for superscript, use **^=** or **&=**
- **+** for superscript + and **`+** for subscript + (or **+.** for stacked)

```
C^^7((b9))   V`+6
```

$$C^{\triangle7(\flat9)} \quad V_{+6}$$

```
V63`> V64> V%<s<753
```

$$V^{6}_{3>} \quad V^{6>}_{4} \quad V^{<7}_{\phantom{<}5}_{<3}$$

## Numbers

- Full-size baseline numerals use an **&** prefix
- **^** prefix for full-size scale degrees (1–8), or **&s1**, **&s2**, etc.
- Smaller scale degrees add an **s** suffix
- **O** and **B** suffixes for circle and box enclosures (1–15)
- **\** suffix for slash numbers (2–9)
- **2, 4,** and **5** can add tick mark suffix ( **'** ) to display "plus" variant
- time-signature-style numerals **&t1**, **&t2**, etc... or with caret: **&ts1**, **&ts2**, etc.
- numbers 1–100 and letters A–Z with black/white enclosures: **&[3], &[3]b, &(3), &(3)b**

```
&1 ^2 ^2s &s5 &t4 &ts8
```

```
2\ 6\ 2' 4' 5'
```

```
&[3] &[3]b &(3) &(3)b
```

## Roman letters

- All upper- and lowercase letters are baseline
- b, n, and o require at **@** prefix (without it, they return flat, natural, and diminished)
- **^** prefix for superscript and grave ( **`** ) for subscript

```
T`@n D^x @bb
```

## Schoenberg analysis symbols

- **&** prefix
- Theme is **&**, followed by:
  - **T** or **Th** – theme
  - **Ti** or **Thi** – theme inversion
  - **Thr** – theme retrograde
  - **Thri** or **Thir** – theme inversion and retrograde

```
&CH   &N   &[   &]
```

```
&T &Th &Thr &Thi &Thir
```

**Riemann, de la Motte, and other European analysis symbols**
- **&** prefix
- **T**, **D**, **DD**, **DD/, DDv, Dv**, **S , t, d,** and **s** can be stacked with numerals **1–8**
- **T, D, S, t, d,** and **s** can alsp be combined with **P, p, G, g** and numbers **1–8** centered underneath
- **&SS/** variant
- All **&D** variants can include **9>** or **5>** underneath them
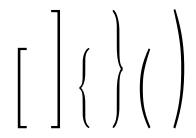
&DD &DD/ &D/ &D// &SS &S/

&8Dv &3T &5DD/ &4Sg &9>DDv

&T< &D< &S< &T> &D> &S>

---

**Parentheses, curly brackets, square brackets**
- Default position for ( ), [ ], and { } are baseline, single-line height
- For slightly larger ( ) and [ ], at an **@** prefix
- **[[ ]]** and **(( ))** for superscript square brackets and parentheses
- **[[[ ]]]**, **{{{ }}},** and **((( )))** for brackets to enclose triple-stack numerals
- **@** prefix, open or close symbol, then 2 or 3 for a double- or triple-line height

@[2 @]3 @{2 @}3 @(2 @)3

V[[7]]    [[[ %753 ]]]

# LINES, ARCS, ARROWS, AND BRACKETS

MusAnalysis has several options for adding lines, arcs, arrows and brackets. These added characters are typed into the same line of text. The only exception to this is "curved corner lines" (explained below), which may be best added as text objects and dragged into place.

## STRAIGHT LINES

### Underlines (for polytonality)
- **!L** before the first Roman numeral in a sequence gives a long underline, left-aligned
- For a longer underline, use **!LL, !LLL,** or **!LLL**
- **!R, !RR, !RRR** or **!RRRR** after the final Roman numeral in a sequence give an underline, *right*-aligned and extending back to the left
- If you want to join a longer underline, at any point in the middle of the sequence you can type in **!C, !CC, !CCC,** or **!CCCC**

```
    !Li ii iii iv!R
```

i ii iii iv

```
  !Li  ii  iii !CC iv  v  vi!R
```

i ii iii iv v vi

### Brackets below and above
- **![** before the first Roman numeral in a sequence gives a left-aligned underline with a left-bracket, offset slightly outside the Roman numeral.
- For a longer horizontal extension, use **![[, ![[[,** or **![[[[**
- **!], !]], !]]]** or **!]]]]** after the final Roman numeral in a sequence give an underline right bracket, *right*-aligned and extending back to the left
- If you want to join a longer underline, at any point in the middle of the sequence you can type in **!C, !CC, !CCC,** or **!CCCC**
- For brackets *above*, use **![a, ![aa**, etc.
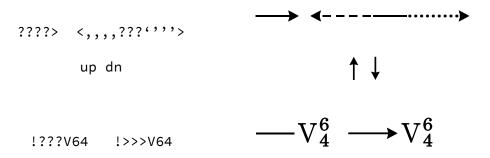- For extenders above, use **!Ca, !Caa**, etc.

```
    ![i ii iii iv!]
```

i ii iii iv

```
  ![aai  ii  iii !Caa iv  v
         vi!]aa
```

I ii iii iv v vi

## Pivot chord corners

- **!{** creates a starting pivot chord line
- **!}** creates an ending pivot chord line
- Then enter the lower line of chords as the next line of lyrics
- As before, extend the line using **!{{{**, etc, or **!C, !CC**, etc

```
!{{V    ii7     iii!}}
```

$$V \quad ii^7 \quad iii$$

## Straight lines and arrows

- **<** and **>** are left and right arrow caps
- **?** is a solid line
- **,** (comma) is a dashed line
- **'** (single quote) is a dotted line
- **up** and **dn** are small up and down arrows
- If you want to exactly align the resolution of a line, you can add a backtrack solid line at the resolution location using **!?, !??, !???**, or **!????** followed by the resolving symbol. This line will overlap with the previous line and allow you to adjust it left or right.
- You can also add a backtrack arrow in the same way using **!>, !>>, !>>>**, or **!>>>>**
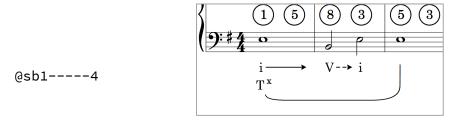
```
????>  <,,,,???''''>

        up  dn


!???V64    !>>>V64
```

$$\longrightarrow \quad \blacktriangleleft\text{-- -- -- --}\cdots\cdots\blacktriangleright$$

$$\uparrow \downarrow$$

$$\longrightarrow V^6_4 \quad \longrightarrow V^6_4$$

# CURVED LINES

## Curved-corner lines

- **@** prefix, followed by
  - **d** for dashed, **s** for solid
  - **a** for above (pointing downward), **b** for below (pointing upward)
  - **1–4** to determine the length of the hook
  - hyphen ( **-** ) extends the line
  - **1–4** to finish the line

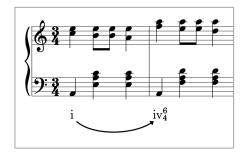o   For an arrow cap, use < and >



`@sb1-----4`

---

## Arrow arcs

- **$** prefix, followed by
  - o   **d** for dashed, **s** for solid
  - o   **a** for above (pointing downward), **b** for below (pointing upward)
  - o   press **a** or **b** repeatedly to extend the line

`T $daaaaaaaaaaaaaa PD`



`i $sbbbbbb iv64`

## Credits

Bravura and Academico were designed by Daniel Spreadbury of Steinberg Media Technologies.

## Troubleshooting

### Ligatures or other characters don't appear correctly

MusGlyphs relies on ligatures — combinations of characters that combine to trigger another glyph in the font— and contextual alternates. Be sure to activate these features in your software of choice, if they aren't on already.

### Autocorrect / Autoformat

Some programs like Microsoft Word have an autocorrecting feature that will automatically capitalize the first letter of a sentence and change other strings of characters, like from **3/4** to **¾**. This will cause your MusAnalysis symbols to be incorrect. Please be aware of this and correct or override it, if necessary, within your software. MusAnalysis is case-sensitive.
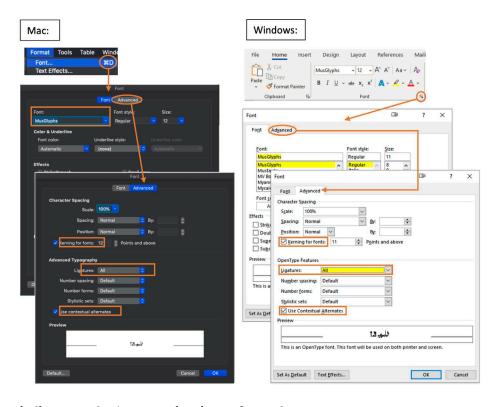
### Line spacing

To use MusAnalysis in long stretches of text within paragraphs, you will likely need to adjust your vertical line spacing. Certain programs may automatically account for the extra vertical space needed by MusAnalysis but then revert to ordinary line spacing when MusAnalysis characters do not appear, causing the line spacing to appear inconsistent. To keep line spacing consistent, try setting the line spacing to a consistent value.

In Microsoft Word, this is done in the **Paragraph** dialog, **Indents and Spacing > Spacing**. Try setting **Line Spacing** to **Exactly**.

Several glyphs in MusAnalysis extend far above or below the normal line spacing, which may cause them to be cut off in a word processor. There's no good solution for this: if font spacing is adjusted to account for these protruding elements, the font would require an inordinate amount of vertical space. If needed, you can increase the line spacing above or below in those cases. Music notation programs should display them correctly regardless.

**Turning on kerning, ligatures, and contextual alternates in Microsoft Word**

- Enter the **Font** dialog.
  - ○ Mac: ⌘**D** or in the menu under **Format > Font**.
  - ○ Windows: **Ctrl+D**, or the arrow on the Ribbon under **Home > Font**.
- Select **MusAnalysis** in the dropdown list, then select the **Advanced** tab.
- On the **Advanced** tab, check the boxes for **Kerning for fonts** and **Use contextual alternates.**
- In the **Ligatures** dropdown menu, select **All**.



**Certain ligatures don't appear in Microsoft Word**

Be certain that you are saving your document in the latest **.docx** format, and not using Compatibility Mode.

**MusAnalysis doesn't appear in the font list in Pages or other Apple programs**

If MusAnalysis doesn't appear in your font list, please follow these instructions:

- With Pages open, press ⌘**T** or, from the menu bar, choose **Format > Font > Show Fonts**
- Choose **MusAnalysis** from the **Family** column
- You'll find that MusAnalysis will now be accessible in the dropdown menu in the right panel, even when you close the Fonts window

MusAnalysis will appear in the document where you used it. When you save the document and reopen it, it will still be there. But you may have to repeat the process to find this font in other documents. Unfortunately this is a limitation with certain fonts and Apple Pages and other Apple programs.

## License

MusAnalysis is made available under the SIL Open Font License (https://scripts.sil.org/ofl), which means that the fonts are free to download, use, embed, redistribute with other software (including commercial software) or to create derivative versions. The only restrictions on their use are that they cannot be sold on their own, any derivative versions cannot use the reserved font name "MusAnalysis", "Bravura", or "Academico", and any derivative versions must likewise also be licensed under the SIL Open Font License. For more information, read the answers to these FAQs: https://scripts.sil.org/OFL-FAQ_web

If you make any improvements or additions to these fonts, you are invited to submit those improvements to Dan Kreider at https://www.dankreider.com/ for consideration for inclusion in the fonts. Please consider allowing others in the community to benefit from any improvements you make by allowing Dan Kreider to improve the core fonts, rather than choosing to create a derivative font.

By downloading the fonts from Notation Central at musanalysis.com and registering, you will be automatically notified of any updates to MusAnalysis, unless you choose to opt out of e-mail notifications.

When you pay the suggested donation, or any amount upon obtaining MusAnalysis, you help make it better by supporting its ongoing development. Thank you!

## Latest updates and more information

https://www.notationcentral.com/product/musanalysis/ or musanalysis.com