

Trombone Glissando

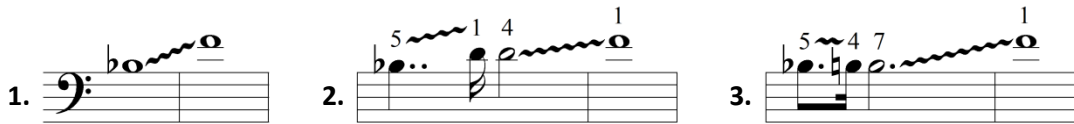
The trombone glissando (or gliss) is an idiomatic and frequently used technique that is often misunderstood by composers. Possible glisses are limited by the range encompassed by the 7 slide positions within a single partial of the harmonic series. If the start and end notes are in two different partials, there will be a break in the gliss. The chart below shows the partials of the harmonic series for each slide position, followed by the range limit for glisses that will be smooth and connected.

| | | | | | | | | |
|------------------|--|---|---|---|---|---|---|--|
| 9th partial | | | | | | | | |
| 8th partial | | | | | | | | |
| 7th partial | | | | | | | | |
| | * Note: This A ₂ is too flat in 1st position to be useable. | | | | | | | |
| 6th partial | | | | | | | | |
| 5th partial | | | | | | | | |
| 4th partial | | | | | | | | |
| 3rd partial | | | | | | | | |
| 2nd partial | | | | | | | | |
| 1st partial | | | | | | | | |
| (pedal tones) | | | | | | | | |
| Slide positions: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |

The following glisses would work:

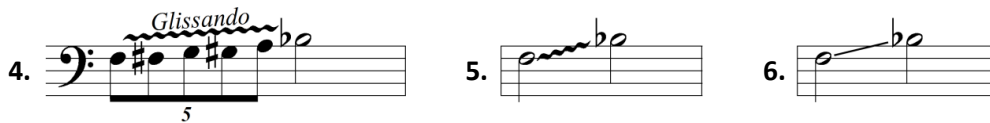
These would not:

If a gliss doesn't work (as in Example 1 below), the performer will play it by glissing up to a note partway, and then quickly moving the slide to the same note in an alternate position before continuing on to the final note (Examples 2 and 3). In these cases, the slide switch causes a break in the gliss.



Glissando notation

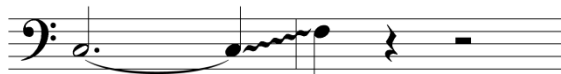
Although it is not uncommon to see a gliss written out chromatically (as in Example 4 below), it is really only necessary to notate the first and last notes (as in Examples 5 and 6). A gliss may be notated with a squiggly line or a straight line, with or without the word 'gliss' or 'glissando'. The following examples show three different ways of notating exactly the same thing:



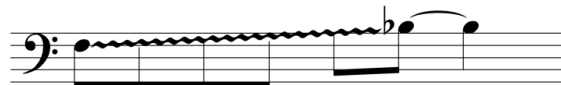
If you want a long, slow gliss, simply write the rhythmic value for the length you want. For example, if you want a gliss to extend over 4 beats, write a whole note with a gliss to the next note.



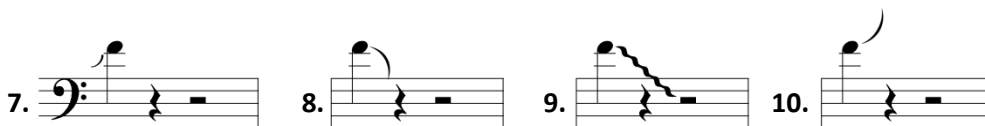
If you want a shorter gliss that begins only at the end of a long note, indicate which beat you want it to start on. For example, if you want the gliss to start on beat 4, notate it this way:



If the gliss is to begin or end on the subdivision of a beat, you can notate it this way:



Below are four types of glisses with non-specific beginning or ending pitches, and which are common in jazz music. Example 7 is a *scoop* (a short, fast gliss up to a specific note); Example 8 is a short *fall-off* (a gliss down from a specific note); Example 9 is a long *fall-off*; Example 10 is a *doit* (a gliss up from a specific note, usually played as a *rip*, or fast lip slur, through several higher partials).



Additional glissandos using the valve (F-attachment)

Most classical tenor trombonists use an instrument equipped with a valve (or F-attachment), which is operated by the left thumb. Valve notes follow the same pattern of overtones for each slide position. Eliminating those partials which provide no additional options, the following chart shows the additional range of possible glisses that can be obtained by using the valve:

The chart displays four rows of musical notation, each representing a different partial. The columns represent slide positions 1 through 6. The notes are written in bass clef. To the right of each row is a diagram showing the glissando range as a line connecting two notes. The 1st partial notes are labeled as 'pedal tones' and are shown with three lines below the staff. The notes for each partial and slide position are as follows:

| Partial | Slide 1 | Slide 2 | Slide 3 | Slide 4 | Slide 5 | Slide 6 |
|---------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 6th partial | F ₄ | F ₄ | F ₄ | F ₄ | F ₄ | F ₄ |
| 3rd partial | F ₃ | F ₃ | F ₃ | F ₃ | F ₃ | F ₃ |
| 2nd partial | F ₂ | F ₂ | F ₂ | F ₂ | F ₂ | F ₂ |
| 1st partial (pedal tones) | F ₁ | F ₁ | F ₁ | F ₁ | F ₁ | F ₁ |

Considerations:

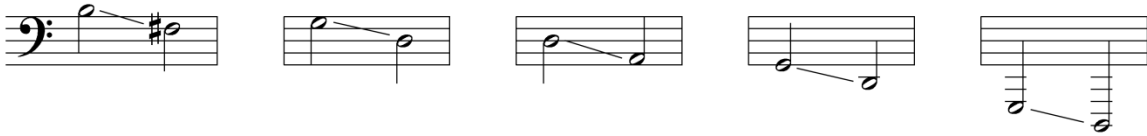
- There are only 6 slide positions available with the valve.
- The 1st partial (pedal) notes are extremely low for tenor trombonists, and could realistically only be expected to be performed by very advanced players (or bass trombonists).
- Not everyone uses an instrument with a valve (especially not jazz trombonists).
- Glisses with the valve cannot be used in combination with mutes that also require the left hand (e.g., plunger, wah-wah).

Bass trombone glissandos

Most modern bass trombones have two valves: the first is pitched in F (like the tenor, above); the second is usually pitched in either G-flat or G (but may also be found with alternate tunings). With an independent valve system (used by many, but not all players), the following glisses would be available in addition to all those above (Note: the examples below include only the partials which provide gliss ranges not already available on the open instrument or with the F valve):

Additional glissandos available with a G-flat valve:

The diagram shows six examples of glissandos using a G-flat valve. Each example is represented by a musical staff with a bass clef. The first two examples show glisses between notes on the same staff. The last two examples show glisses between notes on different staves, indicating a lower range.

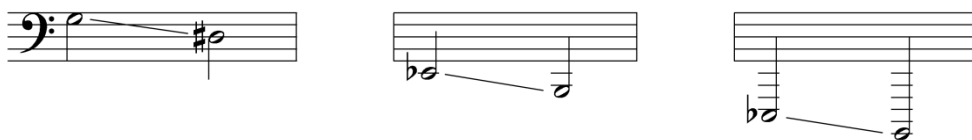
Additional glissandos available with a G valve:

Unless you are writing for a specific performer, and know which tuning they use for their second valve, it may be safest to use a more conservative range that would work for either G-flat or G valves, leaving only the following options:

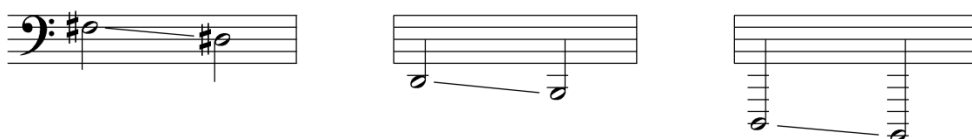
Additional glissandos available with either a G-flat or G valve:

However, as mentioned above, not all bass trombonists use an instrument with independent valves, which means they can't use the second valve on its own, but only in combination with the first valve. In this case, none of the second valve glisses shown above will work. Unless you have a specific performer/instrument in mind, it may be safest to avoid these glisses.

In any case (regardless of whether the trombonist uses a dependent or independent valve system), when both valves are used together the resulting pitch would be D or E-flat (depending on whether the second valve is pitched in G-flat or G, respectively), and includes only 5 slide positions.

Additional glissandos available with two valves together, pitched in D:**Additional glissandos available with two valves together, pitched in E-flat:**

Again, it may be safest to use a range that would work for either pitch:

Additional glissandos available with either a D or E-flat valve combination:

Alto trombone glissandos

As the alto trombone is being used more frequently by orchestral players for Classical and early Romantic repertoire, composers are encouraged to take advantage of its widespread availability and consider writing for this instrument. The alto trombone has a lighter quality than the tenor trombone – almost trumpet-like – with great agility, clarity and security in the high range. The alto trombone is pitched in E-flat (a fourth higher than the tenor trombone), with the following harmonic series and possible glissandos:

| | | | | | | | |
|------------------------------|--|---|---|---|---|---|---|
| 9th partial |  |  | | | | | |
| 8th partial |  |  | | | | | |
| 7th partial |  |  | | | | | |
| | * Note: This Db is too flat in 1st position to be useable. | | | | | | |
| 6th partial |  |  | | | | | |
| 5th partial |  |  | | | | | |
| 4th partial |  |  | | | | | |
| 3rd partial |  |  | | | | | |
| 2nd partial |  |  | | | | | |
| 1st partial (pedal tones) |  |  | | | | | |
| Slide positions: | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Considerations:

- The low range of the alto trombone is not particularly useful. Composers would be wise to avoid the 1st partial (pedal) notes, and perhaps even the 2nd partial notes as well.
- Alto trombone parts should be notated in alto clef.