

Brass Fingerings & Slide Positions

There is only one valve pattern to learn. The same seven combinations, in the same order, walk down a chromatic scale on the trumpet, the horn, the euphonium and the tuba alike — because on every one of them the second valve lowers the pitch a semitone, the first a tone, and the third a tone and a half. The trombone does the same thing with seven slide positions instead of seven combinations.

The seven combinations Each step down the row lowers the note by one semitone · filled circle = valve pressed

○ ○ ○ open NO VALVES	○ ● ○ 2 -1 SEMITONE	● ○ ○ I -2 SEMITONES	● ● ○ I · 2 -3 SEMITONES	○ ● ● 2 · 3 -4 SEMITONES	● ○ ● I · 3 -5 SEMITONES	● ● ● I · 2 · 3 -6 SEMITONES
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After seven steps you have descended a tritone and run out of valves, so you drop to the next note of the harmonic series and start the row again. That is why one fingering appears many times on an instrument: open alone gives the whole bugle call, and your lip decides which note sounds.

Written out, instrument by instrument All pitches as written on the player's part, not as they sound

TRUMPET · CORNET · FLUGEL IN B♭

WRITTEN	VALVES	WRITTEN	VALVES
F♯ ₃	1 · 2 · 3	C♯ ₄	1 · 2 · 3
G ₃	1 · 3	D ₄	1 · 3
A♭ ₃	2 · 3	E♭ ₄	2 · 3
A ₃	1 · 2	E ₄	1 · 2
B♭ ₃	1	F ₄	1
B ₃	2	F♯ ₄	2
C ₄	open	G ₄	open

Treble clef. Sounds a major second lower than written, so written C is concert B♭.

TROMBONE · SEVEN SLIDE POSITIONS

SOUNDING	POSITION	SOUNDING	POSITION
B♭ ₂	1 st	F ₃	1 st
A ₂	2 nd	E ₃	2 nd
A♭ ₂	3 rd	E♭ ₃	3 rd
G ₂	4 th	D ₃	4 th
F♯ ₂	5 th	D♭ ₃	5 th
F ₂	6 th	C ₃	6 th
E ₂	7 th	B ₂	7 th

Bass clef, at concert pitch. First position is the slide almost closed; seventh is near full stretch. Positions get further apart as you go out, so they are never evenly spaced marks — you find them by ear.

EUPHONIUM · TUBA · BARITONE

Exactly the trumpet's valve pattern, played an octave or two lower. Read the seven-combination row above and apply it to whichever note the lip is sitting on.

Most add a fourth valve, lowering the pitch a perfect fourth. It fills the gap at the bottom of the range and tunes better than 1:3 and 1:2:3 — use 4 for 1:3, and 2:4 for 1:2:3.

The horn is the exception Two instruments in one wrap of tubing

WHAT THE THUMB DOES

A double horn is an F horn and a B♭ horn sharing one mouthpiece and one set of valves, with the left thumb working a fourth valve that switches between them. The seven combinations above apply to *each* side; the two sides simply start from different harmonic series. Low notes and singing lines live on the F side, while anything from written G₄ upward is safer on the B♭ side, where the partials are further apart.

WHY PLAYERS WRITE FINGERINGS IN

High in the range the harmonic series is so crowded that one fingering can produce five or six notes, and several fingerings the same note. Horn players choose for security and tuning in the passage at hand and pencil it into the part — which is why no printed horn chart is the last word.

THE RIGHT HAND

The right hand sits inside the bell, and its position is part of the fingering: further in flattens and darkens the note, opening out brightens and raises it. Fully stopping the bell — the + sign in scores — shifts the pitch about a semitone, so stopped passages are fingered differently again.

Reading a brass part What the page tells you before you play a note

INSTRUMENT	CLEF	SOUNDS
Trumpet in B♭	Treble	A major second lower than written
Cornet in B♭	Treble	A major second lower than written
Horn in F	Treble	A perfect fifth lower than written
Trombone	Bass · tenor	As written
Euphonium (bass clef)	Bass	As written
Euphonium (treble clef)	Treble	A major ninth lower than written
Tuba	Bass	As written

Same fingering, many notes	Fingering picks the tube length; your lip picks which note of its harmonic series sounds.
Third valve runs sharp	1:3 and 1:2:3 are sharp by design — pull the third-valve slide, or use the fourth valve.
Brass band reads in treble	All but the bass trombone are written in treble clef as transposing parts, so a player can move between instruments.
Practise the row, not the notes	Say <i>open, two, one, one-two, two-three, one-three, all three</i> until it is automatic. Every valved brass instrument you pick up is then half learnt.