Essentials of Orchestration

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About This Book

Essentials of Orchestration has been organized in an easy-to-use format that includes cross referencing. At the top of each page, headers show which instrument is being discussed. Bold treatments of text highlight important points for clarity and quick reference. Text is accompanied by examples directly related to each topic. These examples are as simple and complete as possible.

Details specific to an instrument family are discussed thoroughly in the primary instrument of that family and are cross-referenced in other family members.

The focus of this book has been narrowed in scope, in order to present as much information as possible related to the instruments themselves. The serious musician is encouraged to seek out other sources that more thoroughly address the subjects of arranging, music theory and notation.

Ranges

The range of most instruments is subjective and will depend on the ability level of a given individual.

Written ranges presented for each instrument are based on professional levels of ability. These ranges are often extended by exceptional/virtuosic players and thus, are not included in this discussion.

Practical ranges are considered a "safe" limit for each instrument. In circumstances that involve an unknown group of musicians or intermediate-level musicians, these ranges may help to ensure a more successful performance. Actual sounding ranges for transposing instruments are provided for quick reference.

Where applicable, dynamic contours are indicated to show the natural increase in volume and intensity inherent in many of the instruments' registers. This symbol [+], included in some instrument ranges, reflects a possible extension of the range (higher or lower) for more advanced musicians. Notes in parenthesis indicate possible, but not often used, notes.

ISBN-10: 0-7390-6084-8
ISBN-13: 978-0-7390-6084-1

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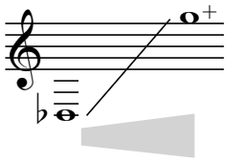
SCORING TIPS

- The flugelhorn is frequently used in a **jazz and/ or pop** context and is seldom used in orchestras or concert bands.
- It is **best suited as a solo instrument,** in unison with other flugelhorns or as an upper voice in low brass combinations.

(See *Trumpets in B♭ and in C)*

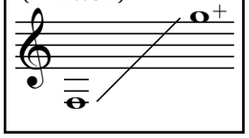
Piccolo Trumpets in A and in B♭

WRITTEN RANGE



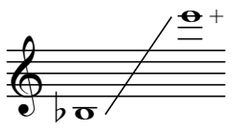
dynamic contour

Practical
(Written)

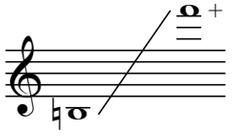


SOUNDING RANGE

Piccolo Trumpet in A
sounds
a major 6th higher



Piccolo Trumpet in B♭
sounds
a minor 7th higher



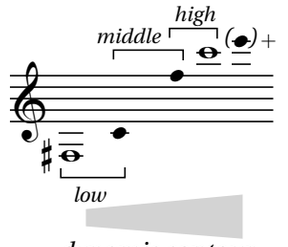
CHARACTERISTICS

- The piccolo trumpet is the smallest trumpet and has a **lighter and more delicate** sound than the trumpets in D or in E♭.
- Like the trumpets in D or in E♭, piccolo trumpets are useful when playing in the high registers of **Baroque music.** They can technically facilitate **extremely high passages** although they are **technically more difficult to control** and require more endurance than the larger instruments.
- Both instruments possess a **bright and flute-like** sound at soft to moderate dynamics. At loud dynamics, the sound becomes shrill and piercing.
- The number of **sharps or flats in the key** may help determine which piccolo trumpet to use.

(See *Trumpets in B♭ and in C)*

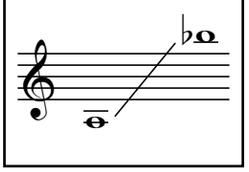
Trumpets in B♭ and in C

WRITTEN RANGE



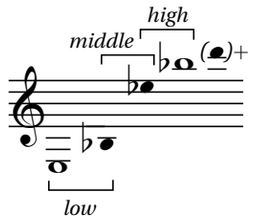
dynamic contour

Practical
(Written)

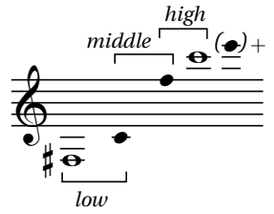


SOUNDING RANGE

Trumpet in B♭ sounds
a major 2nd lower



Trumpet in C sounds
as written



ABOUT THE INSTRUMENT

The trumpet uses the **overtone series** to produce pitch through the changing of **three valves.**

GENERAL CHARACTERISTICS

The trumpets in B♭ and in C are essentially identical with a few exceptions:

- The trumpet in C is generally **brighter** and **more brilliant** than the trumpet in B♭.
- Each trumpet differs in its **solutions to fingering problems** as well as a differing **response to certain pitches.**
- A definite benefit of using the **trumpet in C** is that it is a **non-transposing instrument.**
- The trumpet in B♭ is the standard instrument in the **concert band** and **jazz band** yet the brighter trumpet in C is more frequently used in **orchestras.**
- The **choice to use** either trumpet in B♭ or in C is generally made by the performer.

TONAL QUALITIES

Low Register

- In this register the tone is **darker** than the middle register, yet remains full. These notes tend to **project poorly** and are prone to **intonation problems.**

Middle Register

- This is the most widely used register. Here the tone quality is **brighter** and the instrument has **better projection** than in the lower register. **Dynamic control** and **intonation** are excellent**.**

High Register

- Here the tone is **brilliant** and **penetrating** but is more difficult to produce softly. Notes in this register are best approached from below.
- An **extended upper register** is available to very strong players, with **difficulties in control.** The difficulty in producing such notes is often at the expense of good tone quality and the result is a very **loud, pinched** and **shrill tone:**

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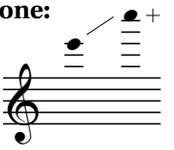


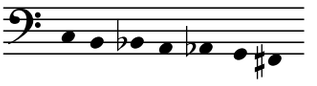
DYNAMIC RESPONSE

- All trumpets command a **strong presence** in any range. **Projection increases** relative to the amount of effort required ascending from the middle through the high ranges.
- The usable dynamic range extends from extremely **powerful and brilliant** to quite **soft and delicate.** Yet, in most circumstances, the trumpet will have an **exposed and dominant presence** not easily hidden in any range.
- Awareness of **register-produced power and intensity** is necessary when **balance** is required with instruments outside the brass family.

TECHNICAL CONSIDERATIONS

- **Pedal tones** are possible, although not commonly used on all trumpets:

Pedal tones (written):



- Trumpets are the **most agile** instruments of the brass family, yet lack the technical proficiency of the woodwinds and strings.
- Although the trumpet is quite agile and quick-speaking, extremely fast, frequent or prolonged **runs, arpeggios and skips** should be avoided.
- **Attacks** can **vary widely** from quite pronounced to subtle and very legato.
- Rapidly repeated notes and double, triple and flutter **tonguings** are well-suited to the instrument and are a characteristic trait of the trumpet.
- The trumpet is most successful when using **stepwise motion** and intervals that are predominantly found in the **harmonic series.**
- Avoid **long, sustained passages.** Sustained (and fast) passages in the lowest register are particularly awkward.
- Avoid **wide leaps** over the interval of an octave.
- **Upward slurs are more difficult** than downward slurs.
- **Tremolos** of intervals larger than a minor 3rd are difficult to execute quickly. Of particular concern are *cross fingerings* (one finger is depressed while another is released).
- Three types of **vibrato** are possible: diaphragmatic, jaw and mechanical. They are usually left to the **discretion of the performer** and may depend on the style of music.
- **Lip trills** are produced by the lips on adjacent harmonics.
- **Trills** of major and minor 2nds are possible except for the following:

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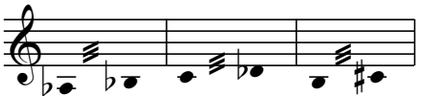

- In the low and high registers, the following notes may be **difficult to play in tune:**

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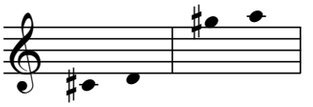

- Fast or prolonged passages in the following range are especially **problematic:**

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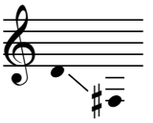

SPECIAL EFFECTS

- Like the horn and trombone, an **arpeggiated glissando** over the **entire harmonic series** in a single position is possible.
- **Bells up** directs the performer to lift the bell of the trumpet up and towards the audience. The projection and tone become incisive and direct.