What is transposition? Why is it necessary?

Do you want the short or long answer?

The Short Answer:

Wind instruments are built in different keys. Because of this, when two wind musicians perform on two differently pitched instruments and play the same written note, their tones do not match. Therefore, if the musicians wish to play from the same music, one player must modify the written notes that he or she reads so that both instruments SOUND in the same tonality.

You transpose when you modify the music that you READ so that the notes you play SOUND the tones of another instrument.

The Long Answer:

Because instruments are built in different keys, before you can play another person's music, you must answer four questions.

#1 "What key is my instrument built in?"

#2 "What key is the other player's instrument built in?"

#3 "What interval up or down separates our two instruments?"

#4 "How do I modify the notes that I READ so that I SOUND the same tones as the other player?"

Why do I need to ask those questions?

Instruments are classified as either transposing or non-transposing. When a musician plays a non-transposing instrument, the instrument SOUNDS the notes written on the page.

The following are common non-transposing instruments.

- When a violinist plays C, the violin sounds a C
- When a marimba player plays C, the marimba sounds a C
- When a pianist plays C, the piano sounds a C
- When a flutist, an oboist, and a C-trumpeter play C, they each sound C although each C may be in different octave
- When a trombonist plays a C, it sounds a C. (This is true of all bass clef instruments that read Bass clef even though trombones, baritones/euphoniums and tubas are generally pitched in B♭.)

Non-transposing instruments are also known as "concert-pitch" instruments. When a musician plays C on a non-transposing instrument, the instrument SOUNDS a C as written in the music.

That's pretty obvious isn't it?

It might seem obvious that an instrument SOUNDS the tones that a musician READS. But this is not the case with a transposing instrument. The notes that a musician PLAYS on a transposing instrument are not the tones that SOUND.

An instrument that SOUNDS a tone that is different from the note its player READS is a transposing instrument.

A transposing instrument does not SOUND a C when its player PLAYS a C. When a musician of a transposing instrument PLAYS C, the instrument SOUNDS the pitch in which it was built. This might be an A, B♭, D, E♭, F, or G depending on the instrument.

Both transposing and non-transposing instruments make up the standard musical ensemble. This might be a symphony orchestra, concert band, woodwind quintet, pit band for a musical, church worship band, or even an odd combination of instruments for Talent Night at band camp.

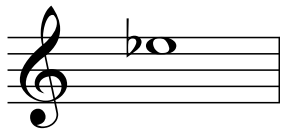
No matter what the ensemble is, unless you are playing an unorthodox composition, both transposing and non-transposing instruments must SOUND in the same tonality. For that reason, a composer or arranger will write parts for the transposing instruments

in different keys so that musicians of transposing instruments SOUND in the ensemble's concert-pitch key.

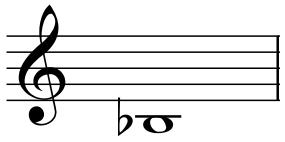
What are some common transposing instruments?

The following figures show common transposing instruments whose players read Treble clef music. When the musicians play third space C in Treble clef (c") their instruments sound as shown.

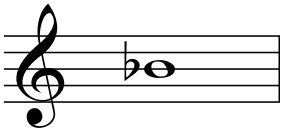
E♭ soprano clarinet sounds



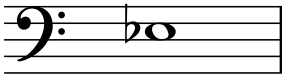
B♭ bass clarinet / B♭ tenor sax sounds



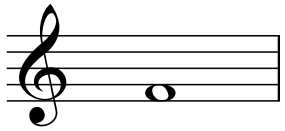
B♭ soprano clarinet / B♭ trumpet sounds



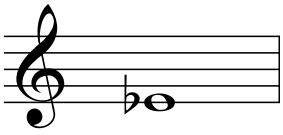
E♭ baritone saxophone sounds



F horn sounds



E♭ alto clarinet / E♭ alto sax sounds



Treble clef instruments are also pitched in D, G, and A. These, plus the Bass clef instruments, will be addressed in the Quick Reference Charts seen later in this guide.

But I still don't see why I should learn to transpose!

There are three good reasons to learn how to transpose.

1. **It is impractical and expensive to rewrite an individual part.**

Over the centuries, a tremendous amount of music has been composed and arranged with parts written for specific instruments. The sheer volume of all this music in the world's music libraries is enormous. Because of all this paper, when a certain instrument is not available or if a player needs to use a different instrument from that specified in the score, the player will either transpose the part or rewrite it at his or her expense.

2. **Transposing is a necessary technical skill.**

You must know how to transpose if you want to play or work professionally as an orchestral trumpet or horn player. It is a given that symphonic trumpet and horn players transpose.

Show or pit band musicians can also be required to play in a key other than the published arrangement. Often this occurs when time is critical. An example is when a pit band accommodates a new vocalist who can't sing in the key of the regular arrangement. In those circumstances, there is no time to write out parts. The music director simply says, "Everyone put it down a Major 3rd," and hopes for the best.

3. **You will be able to play any part put on your stand.**

This may be the most important reason for you to learn to transpose. It is frustrating to listen to others play and not join them because there is no part available for your instrument. But if you can transpose, you can join any musical ensemble and perform whatever music is put on the stand.

Transposition is not just a quaint musical specialty to make your musical life difficult. Transposing is simply quicker, easier, and cheaper than having someone rewrite a part. It is an important skill for any aspiring musician to develop.

Note:

> *This guide does not discuss why wind instruments are built in different keys. You may wish to explore this interesting topic on your own. You might begin your study by*

comparing the work of composers throughout music history with the musical technology that was available to them.

How does transposition affect my ensemble and me?

As stated earlier, when players of two differently pitched instruments play the same WRITTEN note, they do not SOUND the same tone. Instead, they sound tones that are a specific interval apart from each other. This interval is called the "Interval of Transposition."

The "Interval of Transposition" is the interval that SOUNDS when musicians playing differently pitched instruments READ and PLAY the same written note.

The Interval of Transposition is the primary factor that a composer or an arranger must know in order to write parts for an ensemble. And you must know it before you can transpose another instrument's music.

A common example of where you might encounter the Interval of Transposition is seen in daily rehearsal in school bands.

Example:

Band rehearsals usually start with the members matching a tuning note played by a tuning machine or the first chair clarinetist. The band members know that when the conductor says, "Concert B♭," that is a quick way of asking every player to SOUND the same pitch, that is, a B♭. The players do this by playing different notes as follows:

- The C flutists play B♭. So do the oboists and the Bass clef musicians (bassoon, trombone, tuba). These musicians play non-transposing instruments.

- The B♭ soprano and bass clarinetists play C. So do the B♭ trumpet players and the B♭ tenor saxophone players. Ignoring the octaves between instruments, B♭ players know their instruments sound a Major 2nd lower than concert pitch. Therefore, to sound Concert B♭, they play C, the note a Major 2nd higher than B♭.

- The E♭ alto and baritone saxophonists play G. So do the E♭ alto and contra alto clarinetists. Ignoring the octaves between instruments, E♭ players know their instruments sound a Major 6th lower than concert pitch. Therefore, to sound Concert B♭, they play G, the note a Major 6th higher than B♭.

- The F horn and the English horn players play F. These players know their F instruments sound a Perfect 5th lower than concert pitch. Therefore, to sound Concert B♭, they play F, a Perfect 5th higher than B♭.

As you can see, when the members of a band know how to apply the Interval of Transposition for their instruments, they can tune any note without the band director stopping to tell each musician what note to play.

Note:

> *This guide abbreviates the term "Interval of Transposition" throughout the rest of the guide as follows:*
>
> **Interval of Transposition = I_T**

This completes the "What and Why" section of the guide. In this section, you learned to do three things:

1. Describe what transposition is.

2. Describe why transposition is necessary.

3. Define the "Interval of Transposition" (I_T).

Summary:

Wind instruments are built in different keys. They are classified as either "non-transposing" or "transposing."

When musicians of two differently pitched instruments play the same written note the tones do not match. If the players wish to read from the same music, one player must modify the notes that he or she PLAYS so that the instrument SOUNDS in the same tonality as the other instrument.

You transpose when you modify the music written for another instrument so that the notes that you play on your instrument match the tones of the other instrument.

The Interval of Transposition (I_T) is the interval that occurs when players of differently pitched instruments READ and PLAY the same written note. You must know the I_T before you can transpose a piece of music.