Keys to Transposition
A Method for the Teaching & Learning of Transposition on the Horn

A Sampler

Pete Nowlen
with Brian O’Donnell & Heidi Oros
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The goal of *Keys to Transposition* is to allow the student to develop transposition skills without the friction that can accompany that process. By using a step-by-step approach, building on scale and arpeggio studies, the mind is gradually trained to transpose groups of notes and patterns, rather than single notes. Once patterns are learned, musical excerpts are presented to give the student the opportunity to practice on carefully selected literature for training. The student can then go on to explore the vast repertoire that requires transposition with strategies and tools to succeed.

**What is transposition and why do horn players have to do it?**

Transposition by Key is the concept that a written note does not indicate a specific pitch, but rather represents a scale degree in a given key. A written middle C, for instance, does not indicate a frequency of 261.6 Hertz, but rather indicates the first step (tonic, “Do”) of a named key.

Hence, when we indicate “Horn in F,” a written C sounds a perfect fifth below the written note—the first degree of an F major scale. In “Horn in D,” the same written C sounds a perfect fifth above the written note—the first degree of a D major scale. In both cases, as always, the written note C represents the first degree of the scale.

*Concert pitch is that of a piano or other non-transposing instrument. See Appendix III (Intervals).*

The need to transpose on horn stems from the time in the horn’s history before valves were invented. Natural horns, having a single unchangeable length, produce only the notes of the harmonic series—16+ notes over about four octaves. The “natural” intonation of this harmonic series is such that some harmonics (also called overtones) are not usable due to their intonation. With hand horn technique, developed in the 1700s, the notes between the harmonics are obtained, and out-of-tune harmonics adjusted, by changing the right hand’s position in the bell.

The intervals in the harmonic series are always the same regardless of tubing length. To play in different keys, horns are lengthened or shortened by adding or removing tubing (crooks) to produce the series of intervals above a named pitch, called the fundamental. Parts intended to be played on natural horn are usually notated in the key of C. The key of the horn to be used is indicated, identifying for the player which crook(s) to insert. This system allows the player the valuable consistency of using the same hand position for each printed note. A written C in any key, for instance, is always an open note while an E is always closed.
Unit 1
Horn in C (basso) (Do, Ut)

Transposition
A horn in C sounds a perfect fourth lower than a horn in F. To transpose to Horn in C, play all notes down a perfect fourth.*

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Scales
When seeing a written C major scale, one plays a G major scale (a perfect fourth below what is written).

Now play the G major scale while looking at this C major scale.

Arpeggios
Thoroughly learn this arpeggio study. The use of the tonic arpeggio is idiomatic in Classical and early Romantic horn parts as all of the notes are open harmonics. When seeing a written C major arpeggio, one plays a G major arpeggio.

Now play the G major arpeggio while looking at this C major arpeggio.

* For an explanation of intervals, see Appendix III.
The Lowest Octave

In Classical and early Romantic era horn music, the lowest octave most often has only written C’s and G’s—the notes that are available open on the natural horn. In Horn in D, that means that most often, only A’s and E’s are played.

Written (Horn in D) New Notation (same notes)* Old Notation (still the same)

Played (in F) New Notation (same notes)* Old Notation (same notes)*

Patterns

The following patterns are common in Classical and early Romantic horn music. Learn each line thoroughly, and then turn to Appendix I on page 83 and play it as it appears in the key of C. You are transposing Horn in D.

Horn in F

*(See explanation of bass clef for horn in Introduction.)
Excerpts for Study

1. Symphony No. 1 in C minor, Op. 68 (1876) — II. Andante Sostenuto

Look for patterns. The first two measures are repeated. This is followed by a G major arpeggio (resulting in an F♯ major arpeggio) and then a scale down to the written C major arpeggios (play B major). In measure 11, the same sequence as the opening is repeated a fourth higher ending with another C major arpeggio.

Johannes Brahms (1833-1897)

This unison duet with the concertmaster must be played expressively and with a warm tone opening up to a nice, rich forte in the 6th measure. The dotted rhythms must be precise and the tempo generally steady. The tempo is about q=64.


The written F♯ turns the E♭ into an E♯ (F). The written C♯ turns the B♭ into a B♯ (C). Notice the repetitions and the slight variations Mendelssohn uses—sometimes the ending is different, sometimes an upper neighbor tone is used, sometimes a suspension and change of motion.

Felix Mendelssohn (1809-1847)

This famous solo is often requested on principal horn auditions. It must have a calm, placid feel with a consistent, warm tone, good intonation and beautiful line. Play exact dotted rhythms and feel the subdivisions of the eighth-notes to maintain a steady tempo. The tempo is about q=76.
Appendix III

Intervals

The term “interval” refers to the distance between two pitches. Knowing intervals is important for transposing, but also will help your sight-reading skills and improve your intonation. In addition to being able to recognize written intervals, it is important to know what they sound like both melodically (sequentially) and harmonically (played at the same time). Start by learning how to spell them so that you can recognize them.

The name of each interval includes a letter and a numeral. The letter portion represents the quality of the interval (major, minor, perfect, diminished) which is determined by the number of half-steps between the notes. The numeral portion refers to the distance between two notes by the number of notes, with the starting note counting as “one.” For example, the distance from F to A is a third because it spans three note names, F-G-A. The distance from B down to F is a fourth, because it spans four note names, B-A-G-F. To see these concepts illustrated, refer to the chart below based on the note C.

P1 - A Perfect Unison is also called a “prime” and consists of two notes that are on the same pitch in the same octave and are spelled the same:

A1 - An Augmented Prime or Augmented Unison is one ½-step apart and spelled with the same note letter name.

m2 - A minor second is one ½-step apart and spelled with adjacent note names.

M2 - A Major Second is two ½-steps (one whole step) and spelled with adjacent note names.

m3 - A minor third is three ½-steps comprising a span of three note names.

M3 - A Major Third is four ½-steps comprising a span of three note names.

P4 - A Perfect fourth is five ½-steps comprising a span of four note names.

A4 - An Augmented Fourth (or “tritone”) is a span of six ½-steps over four note names.

D5 - A diminished Fifth (also a “tritone”) is a span of six ½-steps over five note names.

P5 - A Perfect Fifth is seven ½-steps over five note names.

m6 - A minor sixth is eight ½-steps over six note names.

M6 - A Major Sixth is nine ½-steps over six note names.

m7 - A minor seventh is ten ½-steps over seven note names.

M7 - A Major Seventh is eleven ½-steps over seven note names.

P8 - A Perfect Octave is twelve ½-steps over eight note names.
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†† Appendix III
‡ Not standard horn repertoire. Used to demonstrate a transposition technique.

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Horn players need to transpose.  

*Keys to Transposition* is a complete method devoted to teaching this essential skill. This method provides a concrete strategy to master transposition by building skills through exercises and excerpts from the horn literature with helpful transposition tips, musical advice and practice techniques.

UC Davis Horn Instructor and Director of Concert Bands, **Pete Nowlen**, was previously a member of the Sacramento Symphony Horn Section and the CSU, Sacramento Faculty. Pete has performed frequently with the San Francisco Symphony, Opera and Ballet Orchestras and, for several years, as principal hornist of the International Orchestra of Italy. A prize-winning horn soloist, Pete has been featured with numerous Italian and American orchestras and festivals. More recently, he has an active career as a conductor and artistic director of orchestras, concert bands and choruses.

**Brian O’Donnell** is a commissioned officer-conductor with The United States Air Force Bands. Raised in California, he was an active freelancer and educator both on horn and with the baton from 2009 until 2018. Although his focus is primarily on conducting now, he keeps his chops up by occasionally sitting in with the horn sections of the bands in which he works and continues to freelance wherever he is stationed. An advocate for music education, Brian hopes you find this book helpful for yourself and/or your students. Keep on blowin’ that horn!

**Heidi Oros** is a freelance hornist in the Finger Lakes area of New York and is a former second hornist with La Orquesta Sinfónica del Estado de México. Heidi is a founding member (2006) of the woodwind ensemble, “i venti dementi,” and has been the hornist with the Swamp College Brass Quintet since 2007. Heidi also plays horn in Kuro Winds, a woodwind quintet situated in Ithaca, NY. Heidi earned her BM and MM at Ithaca College. She teaches private horn lessons in Trumansburg, NY.

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