

# **The Chris Neiner Horn Packet**

“The sound of the horn is the soul of the orchestra.”

— Robert Schumann

## **Quick Facts:**

### *Basic History*

- The United States is the only place in which the horn is called the French horn.
- Modern horns are tuned in F, they sound a 5<sup>th</sup> lower than written.
- Before the invention of valves, horns were tuned by using crooks, slides of different lengths that tuned the horn to a certain key. The most common transpositions were (in order from most to less frequent) E, Eb, D, F, G, A, C basso, Bb basso, C alto. Basso refers to transpositions below F and alto refers to transpositions above F.
- Each transposition is associated with a different timbral identity. The higher transpositions, like A and G, are brighter, and the lower basso transpositions are darker.
- I surmise that the modern horn is tuned in F because it's exactly a fifth above the lowest common transposition (Bb basso), and a fifth below the highest transposition (C alto).
- Some composers use certain transpositions very often. Mozart was fond of Eb horn, Brahms was fond of basso horns, and Dvořák was fond of E and D horns.
- Often in minor-key classical symphonies (Mozart No. 25 or Schubert No. 4) composers used two pairs of horns tuned a minor third apart (G-Bb, and C-Eb respectively)..
- Before the invention of valves, eighteenth century hornists created a technique known as hand stopping to access pitches outside of the harmonic series. By putting their hand in the bell fully or partially, they could manipulate the length of the tubing to change the pitch. This valve-less horn is now known as a natural horn.
- Since the days of hand stopping, the use of the right hand in the bell has continued to be an important part of controlling intonation and timbre. To compensate for the hand's expected position in the bell, horns are manufactured a quarter tone higher.
- The first system of valves for the horn was patented in 1818, and by the 1890s the valve horn in F had replaced the natural horn. The process was gradual at first, with many composers, like Cerny, expressing a preference for the natural horn. Some composers wrote orchestra pieces with a pair of natural horns and a pair of valve horns (e.g. Saint-Saëns's third symphony). There was also experimentation with using crooks and valves in combination.

## *The Horns of Today*

- The most common type of horn used today is the double horn (bottom right). It has two main sets of tubing: one pitched in F (lower) and the other in Bb (higher). The shorter tube length of the Bb side helps hornists play high notes securely and low notes clearly.
- Other horns that exist include the single F horn, used in grade school music education; the single Bb or “descant” horn, used by principal players on very high, taxing repertoire; the triple horn (very heavy) with an A set of tubing; the piccolo horn (bottom middle) which has no serious use or repertoire; and the Vienna horn (bottom left). The Vienna horn uses piston valves instead of rotary valves and is used selectively in Europe.

## *The Horn in the Orchestra*

- There are five horns in an orchestra, principal (first), associate/assistant principal, second, third, and fourth. The first horn part is divided between the principal and associate for lengthy, taxing compositions (Mahler, Strauss, Bruckner, etc.) Often the associate plays louder, tutti passages so the principal is not fatigued when it comes time to play solos.
- It’s standard to see four for horn parts in modern orchestra compositions, but composers don’t mind having more. Horns play in pairs such that odd-numbered parts are high and even-numbered are low.

High:	1	3	5	7
Low	2	4	6	8

7 Horns = Mahler’s Symphony No. 1 and Britten’s War Requiem, Op. 66

8 Horns = Stravinsky’s Rite of Spring and Strauss’s An Alpine Symphony, Op. 64



# Horn in F Ranges

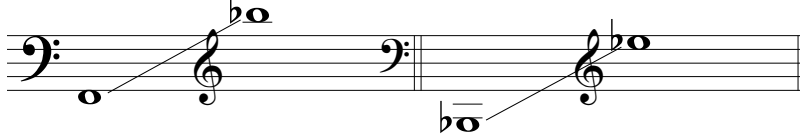
## Typical High School Student

Written  
(What hornists see)

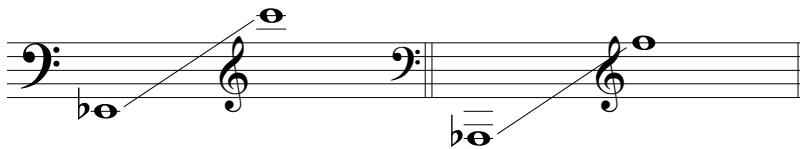
Sounding  
(the concert pitch that is actually heard.)



## Advanced High School Student/ Typical College Student



## Advanced College



**Possible Notes in Extreme Registers. To be reserved for professionals and students who can clearly play these notes. Never use these, UNLESS you know your performer can play them.**



# Horn Range Areas and Overtone Series

## Range Areas: Written

Very Low      Low      Low-Middle      Middle      Middle-High (Cinema Spot)      High

## Range Areas: Sounding

## Overtone Series: Partials 1-16

\*Pedal notes below written E1 are not acceptable and may be used only after directly contacting the performer.

## Possible Overtone Series: Written Second Partial

## Possible Overtone Series: Sounding Second Partial

## Overtone Writing Example: Written

E<sub>b</sub> (1) -

## Overtone Writing Example: Sounding

# Sample Orchestral Excerpts

Richard Strauss: *Der Rosenkavalier*, Op. 59 (1911) - Act I Overture, Horn I

*Einleitung.*  
*Stürmisch bewegt.*  
*Con moto agitato.*  
*(in E.)*

**Corno I.**

*f* **1** *agitato.* *ff* **2** *a tempo* *f cresc.* *ff* *1*

*(in Es.)* *(in E.)* **3** *sempre accelerando.* *f*

**4** *f* *cresc.* *ff* *fff*

Richard Strauss: *Till Eulenspiegels lustige Streiche*, Op.28 (1895) - #35, Horn I

**Horn I in F.**

*cresc.* **35** *ffp* *cresc.* *f* *1* *f* *fffp*

*cresc.* *f* *ff* *mf* *cresc.*

**36** *ff* *fff* *ff* *f*

*cresc.* *ff* *immer* **3**

**37** *ausgelassener und lebhafter* *ff*

**Richard Strauss: *Don Quixote*, Op. 35 (1898) - Var. 8: "The Ride through the Air", Horn IV**

*Hornist reads the bass clef pitches as if they were written an octave higher (Old Notation).*

57 Var VII. Ein wenig ruhiger als vorher

58

ff

**Dmitri Shostakovich: *Symphony No. 5 in D minor*, Op. 47 (1937) - I. Moderato; #17, Horn I**

*Hornist reads the bass clef pitches as if they were written an octave higher (Old Notation).*

16 6 17 2

f

18 poco animando

19 mp

20 1

21 6

f ff

**J. S. Bach:** *Brandenburg Concerto No. 1 in F major, BWV 1046* (1721?) - mm. 12-25, Horn I

Musical score for Horn I, measures 12-25. The score is in treble clef with a common time signature (C). It features a series of eighth and sixteenth notes, including triplets and a trill. Measure numbers 14, 18, and 25 are indicated in boxes at the start of their respective lines.

**Igor Stravinsky:** *The Firebird; Suite No. 2* (1910/1919) - Infernal Dance, Horn I

Musical score for Horn I, measures 1-16. The score is in treble clef with a 3/4 time signature. It includes dynamic markings such as *fff*, *mf*, and *f*. There are also tempo markings like *♩ = 168*. Measure numbers 5, 11, 12, and 13 are indicated in boxes. The score features complex rhythmic patterns and accidentals.

**Mussorgsky/Ravel:** *Pictures at an Exhibition* (1922) - No. 7 Limoges-Le Marché; #71, Horn I

Musical score for Horn I, measures 71-72. The score is in treble clef with a common time signature (C). It features a fast, rhythmic melody with dynamic markings *ff* and *poco accel.*. The tempo is marked *meno mosso*. Measure numbers 71 and 72 are indicated in boxes. The score ends with the marking *attaca*.



Pyotr Tchaikovsky: *Symphony No. 5, Op. 64* (1888) - II. Andante cantabile, Horn I

**Andante cantabile, con alcuna licenza.**

*SOLO.*  
*dolce con molto espress.*

*animando* *riten. A Sostenuto*  
*mf* *p*

*animando* *Sostenuto*  
*mf > p*

*Con moto dolce* *anim.*  
*p*

*Sostenuto* *4*  
*mp*

John Williams: *Star Wars - Suite for Orchestra* (1977) - II. Princess Leia's Theme, Horn I

**F HORN I** **Princess Leia's Theme** **JOHN WILLIAMS**

**Andante** **Solo** **5**  
*mp dolce* *poco*

**8**

**12**

**Maurice Ravel:** *Pavane pour une Infante Défunte* (1899/orch.1910) - Horn I

Originally written for a natural horn in G (Cors simples en Sol).

1<sup>er</sup> Cor. *Lent* ♩ = 54  
SOLO  
*pp*  
Cors simples en Sol  
Cédez  
*p* *pp expressif*

**Gustav Mahler:** *Symphony No. 1* (1888) - III. “Solemnly and measured”, #13, Horn II

Hornist reads the bass clef pitches as if they were written an octave higher (Old Notation).

sempre pp  
2  
sempre pp  
15 1

Not an excerpt, BUT a very common orchestration trope in the canon.

**Jean Sibelius:** *Symphony No. 2, Op. 43* (1902) - IV. Finale: Allegro moderato; #Q - Horn I

310 *poco f* Q 1 2 3 4  
317 5 6 7 8 9 10 11

# Playtime

(2015/2018)

## I. Toy Chest

Allegro con fuoco e animato (♩ = c. 104)

Chris Neiner

Musical staff 1: Treble clef, 2/4 time signature. Measures 1-5. Dynamics: *fp*, *f*, *mf*, *fp*, *f*.

Musical staff 2: Treble clef, 2/4 time signature. Measures 6-9. Dynamics: *mf*, *fp*, *f*.

Musical staff 3: Treble clef, 2/4 time signature. Measures 10-16. Includes a triplet of eighth notes. Dynamics: *p*, *f*. Markings: *secco con sord.*

Musical staff 4: Treble clef, 2/4 time signature. Measures 17-22. Includes a triplet of eighth notes. Dynamics: *mf*, *f*, *p sub.* Markings: *senza sord.*, *sfz*.

Musical staff 5: Treble clef, 3/8 time signature. Measures 23-24. Measure 25 is a whole note. Dynamics: *f*, *fpp*.

Musical staff 6: Treble clef, 2/4 time signature. Measures 29-35. Includes a triplet of eighth notes. Dynamics: *f*, *fp*, *f*. Markings: *flz.*

Musical staff 7: Treble clef, 2/4 time signature. Measures 36-40. Measure 38 is a whole note. Dynamics: *f*, *p*, *mf*, *f*. Markings: *flz.*

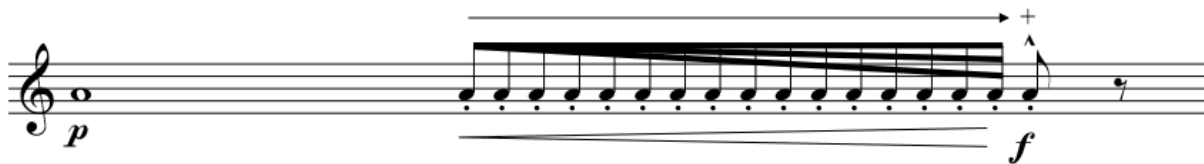
Musical staff 8: Bass clef, 2/4 time signature. Measures 41-43. Measure 42 is a whole note. Dynamics: *sfzp*.

## Mutes:

The straight mute is the standard default mute for horn players. You can simply write “mute” to indicate this. When you want the mute removed, write “open” or “no mute.” There are horn cup mutes, but I’ve never met someone who had one. If you ever wanted to use one, you would need to supply it or have the player rent it from a specified supplier. (You’ll also need a good reason for wanting it.) What is more “common” is using the bass trombone harmon mute. These can be easily purchased or rented. British composer Dai Fujikura makes great use of this in combination with timbre trills (same-note tremolo) in his unaccompanied horn piece *Poyo Poyo*.

## Stopping/“Gestopft”:

Stopping is where the right hand goes completely in the bell and creates a tight seal. This produces a very nasally sound. It appears in everything from Mussorgsky, to Mahler, to Eric Whitacre, etc. When it’s loud, it can be bitter and crunchy. When it’s soft, it tends to sound muffled. I’ve seen it called for in every register, BUT it is tough to make convincing in the low register. (It’s the horn pet peeve of new music) Covering the bell adds a great deal of resistance to fight with. Tchaikovsky did it away. Notate by placing a small plus sign above the stopped note(s). It is possible to gradually transfer to stopped playing in an accelerando of articulations (below) but this is something that has to be practiced.



## Bells Up:

This is more of a theatrical effect than a musical one in my opinion. Any good horn section can sound giant without putting their bells in the air. It typically happens when all the horns in the orchestra are playing some melodic or motivic idea in unison or in octaves at a forte or fortissimo dynamic. (e.g. Stravinsky’s *Rite of Spring*).



## Flutter Tongue:

A great effect, but not everyone can do it (e.g. Chris). They might growl with the throat instead to produce a similar sound. Flutter tongue pairs very well with stopped notes and/or trills in the middle register.

## Trills:

Trills come in two varieties: 1.) lip trills, which are done by quickly oscillating between two partials that sound a major second apart, or a minor third if trilling between the 6<sup>th</sup> and 7<sup>th</sup> partial, and 2.) valve trills which are used for half-step trills. The lip trill takes months, years to adequately master.

## Timbre Trill/Same-note Tremolo:

Trilling between two fingerings of the same pitch. I would recommend this is done no lower than written D4 and no higher than written A5. It easiest on the written notes Ab4-C4 because these notes share the same fingering on both the F and Bb sets of tubing. I like to use this technique when the horn is muted. Dai Fujikura has explored this quite a bit in his horn piece *Poyo Poyo*.

**PoyoPoyo** (2012, 26th Oct 2012)

**Horn in F**  
**Dai Fujikura**

\*Accidentals (including grace notes) only affect the pitch to which they directly refer, not other octaves, for the duration of the bar in which the accidental is written.  
If a note is tied, a closed (or open) instruction applies throughout its duration.  
This piece has an exact rhythmic structure. It is not possible to interrupt the rhythmic flow in order to breathe.  
V = breath, if absolutely necessary.

**with wah-wah mute throughout the piece (wah-wah mute for "bass trombone" can be used on horn also).**

**System 1:**  $\text{♩} = 100$ . Speed of tremolo: +O+O slow. Dynamics: *p*, *mp*, *pp*. Includes markings: *fast*, *slow*, *accel.*, *slow*, *fast*, *slow*, *fast*, *slow*, *fast*, *slow*, *fast*. Includes *no trem.* and *sim.*

**System 2:**  $\text{♩} = 120$ . Speed of tremolo: +O+O (fast). Dynamics: *mp*, *pppp*. Includes marking: *Più mosso*. **Meno mosso**  $\text{♩} = 100$ . Dynamics: *pp*, *mp*, *pp*. Includes marking: *Molto espress.*

**System 3:**  $\text{♩} = 110$ . Speed of tremolo: +O+O fast. Dynamics: *pp*, *p*, *pp*. Includes marking: *Meno mosso*. Dynamics: *pp*, *mp*, *p*. Includes marking: *(exaggerated)*

### **Quarter Tones:**

Take note that quarter tones are not a part of the harmonic series. They will likely be created by manipulating the sound with the right hand, embouchure, or both, but not by alternate fingerings. If you want alternate fingerings, you want partials from the harmonic series. Probably good in any register, but no higher than written A5.

### **Pitch Bend:**

Very doable. Pitch bends up to a minor second are easier in the middle/low register. The lower the note, the more you can bend it, and vice versa. In the higher register you can't go much more than quarter tone without accidentally jumping into a different partial. If the bend is bigger in the high register, the hornist has to practice smearing the tone between two fingerings.

### **Half-Valve:**

Moving between two pitches by moving the valves a tad too slowly, such that they're halfway down, can create a messy slide between notes.

By putting all valves at halfway, the horn becomes one long, weird tube that doesn't vibrate normally. It creates a flexible sound that you can "gliss." up and down through. Some call this a whale sound. (They're not far off.) Usually its notated graphicly, with a solid line indicating the general shape of the sound. It appears in the *Appel Interstellaire* (Interstellar Call), a horn solo from Messiaen's orchestral work *Des canyons aux étoiles...* (From the Canyons to the Stars...)

### **Multiphonics:**

A specialty effect that most people can practice but not all can execute convincingly. Created by playing a pitch and singing another pitch. It's significantly easier when the sung pitch is above the played pitch and is most commonly used to create chords. Singing a melody while sustaining a note (like a flute) is possible but very, very rare. Multiphonics were first used by Carl Maria von Weber in the Horn Concertino, Op. 45, an extremely difficult piece for natural horn.



## Harmonic Series/Just Intonation

Notate by indicating the harmonic series that should be used *in concert pitch* and draw a line over the applicable beats, measures, etc. (e.g. Thomas Adès's *Living Toys*)



When using partials of a specific harmonic series, note that the timbre of the horn (not just the pitch) is going to be a little wonky. It may take a rehearsal or two to find the right blend for that sound in an ensemble. It's not entirely necessary to use microtonal accidentals, but it helps specify how the pitch should contrast from the usual fingering selected. Make sure what you are asking for is not already a standard default fingering (e.g. written Bb4 as an 8<sup>th</sup> partial.)

## Glissando

A glissando is a motion from one note to another on the same harmonic series. There are two ways to mark this: 1.) Spell out all the notes in the glissando (e.g. Poulenc *Sextet* excerpt below) or 2.) have a straight line connecting the initial and final note with the marking *gliss.* above the staff.

**I. Allegro vivace** Francis Poulenc  
(1899-1963)

**Très Vite et emporté** ♩ = 188

The image shows a musical staff with a treble clef and a 4/4 time signature. The music consists of several measures. The first measure contains a quarter note with a flat (Bb) and a quarter note with a flat (Bb). The second measure contains a quarter note with a flat (Bb) and a quarter note with a flat (Bb). The third measure contains a quarter note with a flat (Bb) and a quarter note with a flat (Bb). The fourth measure contains a quarter note with a flat (Bb) and a quarter note with a flat (Bb). The fifth measure contains a quarter note with a flat (Bb) and a quarter note with a flat (Bb). The sixth measure contains a quarter note with a flat (Bb) and a quarter note with a flat (Bb). The seventh measure contains a quarter note with a flat (Bb) and a quarter note with a flat (Bb). The eighth measure contains a quarter note with a flat (Bb) and a quarter note with a flat (Bb). The dynamic markings "ff" and "mf très sec" are written below the staff. The word "glisser" is written above the staff. A circled number "1" is written above the staff.

## Rip:

A rip is like a glissando, but messier. Instead of staying on a harmonic series, the hornist arbitrarily moves the values fast to make the sound rougher. I like to use the wavy/trill line for rips and a straight line for glissandi. In band music, rips tend to be notated enthusiastically notated, "RIP!"

**Bell Tone:**

A very specific kind of articulation best explained by its ADSR envelope. The start of the note is attacked very strongly and immediately, the decay happens just as fast, and the sustain is very long at a low dynamic level. The release is not a determining factor. A dynamic marking here could be sfzpp with the articulations of a tenuto (-) and marcato accent (^).

**Vibrato:**

Vibrato is used, lightly, but not explicitly taught in American horn pedagogy. It's only used in soloistic legato moments when it happens, and it is a performer's decision, not a musical indication. If a brass musician sees "non vibr," you're going to get some interesting eye contact. Vibrato is most common in other national styles of playing, notably Czech and Russian.

**Noise Effects:**

- 1.) Air noise – blowing air through instrument.
- 2.) Valve rattling – moving the valves very quickly and arbitrarily for a quiet clattering
- 3.) Air Noise + Valve rattling – helps get sound across in bigger ensembles
- 4.) Finger nails on bell – a nice quiet effect, like a snare drum, for chamber ensembles
- 5.) Hand "Pop" – striking the open end of the inserted mouthpiece with the palm of the right hand.
- 6.) Tongue stop – abruptly cutting off the air stream with the tongue. There is no standardized notation, but the most common I see is an x-notehead with a staccatissimo. It's most effective when the hornist is already blowing unpitched air through the instrument.

**Further Reading:**

Doug Hill's *Extended Techniques for the Horn: A Practical Handbook*