# MIDI ARRANGING AUDIO 205 SYMPHONY ORCHESTRA AND DEFINITIONS



# Link to the Orchestral Family

http://cwx.prenhall.com/bookbind/pubbooks/masterworks/medialib/fundamentals/voices02.html

# Definitions

A typical modern day <u>symphony</u> orchestra consists of about 100 players, divided into families. A principal player leads each section. The principal first violinist is called the <u>concertmaster</u>.

**Concertmaster;** The concertmaster generally comes on stage after the rest of the orchestra and proceeds to supervise the tuning, calling for the oboe player to sound the A=440.

**Conductor;** The Conductor sets the tempo, molds the performance, and reassures and reminds the players of what's been planned to happen.

**Arrangement;** The adaptation of a piece of music so as to make it suitable for performance by media other than those for which it was originally; or, a simplified version of a work for the same medium of performance.

**Transcription;** An arrangement that strives to give the impression of the work in a new medium. Example: Transcribing an orchestra piece for band. A transcription can vary from trying to sound exactly like the original to a re-conception of the original in a new medium. In this case, the transcriber would use the resources of the new medium to come up with a new version of the piece.

**Composition;** New Music. Those who compose for band or orchestra are usually thinking about the orchestration from the beginning of the process.

#### **Orchestration/Instrumentation**

Some musicians use the terms Orchestration and Instrumentation interchangeably.

**Orchestration** is the study or practice of writing music for an orchestra (or, more loosely, for any musical ensemble) or of adapting for orchestra music composed for another medium. It only gradually over the course of music history came to be regarded as a compositional art in itself.

There are two general kinds of adaptation: transcription, which closely follows the original piece, and arrangement, which tends to change significant aspects of the original piece. In practice, however, the terms *transcription* and *arrangement* are often used interchangeably.

However, others say that **instrumentation** deals with individual instruments, while **orchestration** has to do with combining sections of the band or orchestra. Another view is that **instrumentation** is a science and **orchestration** is an art.

| symbol        | term                        | meaning                    |
|---------------|-----------------------------|----------------------------|
| ррр           | pianississimo               | extremely soft             |
| рр            | pianissimo                  | very soft                  |
| р             | piano                       | soft                       |
| тр            | mezzo piano                 | medium soft                |
| mf            | mezzo forte                 | medium loud                |
| f             | forte                       | loud                       |
| ff            | fortissimo                  | very loud                  |
| fff           | fortississimo               | extremely loud             |
| cresc.        | crescendo                   | gradually becoming louder  |
| decresc.      | decrescendo                 | gradually becoming softer  |
| dim.          | diminuendo                  | gradually becoming softer  |
| fp            | fortepiano                  | loud then immediately soft |
| fz            | forzato                     | forced                     |
| sf, sfz       | sforzato                    | forced                     |
| messa di voce | becoming louder then softer |                            |

### Dynamic markings and there meanings

# Description of Common Orchestral Instruments used in this project

#### Flute Family

Flutes are part of the **Woodwind family**. Which include double-reeds like Oboe, Bassoon, Contra-Bassoon, and English Horn. Also Single-reed instruments like the Clarinet, Alto Clarinet and Bass Clarinet, and the Saxophones, Soprano, Alto, Tenor, Baritone and Bass.

The instruments of the Flute family used in today's symphony orchestras and bands, include the Flute, Piccolo (in C and Db) and the Alto Flute in G. In all of these, the tone is produced by blowing a stream of air across a hole (mouthpiece) near one end of the instrument.



#### **Characteristics:**

Scale-wise passages (both diatonic and chromatic), arpeggios, grace notes, trills, rapid slurred or detached passages, doubled, triple and flutter tonguing are all GOOD.

#### **Dynamics:**

The lowest register cannot be played loudly. The highest register cannot be played softly.

#### Synthesized or sampled:

Even though it is one of the easiest sounds to emulate, there are many sound/quality and option variations when it comes to synthesized and sampled flutes sounds. Some have constant vibrato while others have a delayed vibrato, and others, none at all. Some have a velocity sensitive transient breath attack that make for a more realistic performance. Others have options for flutters effects.

#### String Family:

The String family, represented by the Violin, Viola, Cello, and Double-Bass, is by far the most valuable group of instruments available to the orchestrator. The richness of tone, rapidity of articulation, variety of intensity and purity of intonation, all contribute to the importance of this family.



String Family playing range:

# **Characteristics:**

• The Violin is the most agile of orchestral instruments. Use of harmonics extend its playing range considerably, but mostly used as an effect.

- The Cello has a deep, rich, warm sound
- The Double-Bass sounds and octave lower than written. It is the least agile of all the string instruments.

#### **Dynamics:**

Strings differ from most other instruments in that they are able to play ppp to fff throughout their entire range.

#### **Common Bowing and Effects:**

| Arco:       | Played with the bow.  |  |
|-------------|---|--|
| Pizzicato:  | Plucked strings with the fingers of the right hand instead of using                             |  |
|             | the bow.  |  |
| Tremolo:    | Shimmering effect   |  |
| Ponticello: | Shimmering effect, tone has slight edge because it is played tip of<br>the bow near the bridge. |  |
| Sordini:    | Muted, very veiled or filtered effect by placing mutes on the strings.                          |  |
| Legato:     | Played smoothly (usually indicated with a slur)   |  |
| Detache:    | Detached, each note played smoothly (with and individual bow)                                   |  |
| Spiccato:   | Separated, pointed sound with a "springy bow, usually used in fast passages.                    |  |
| Staccato:   | Detached, separated from each other, short.   |  |
| Saltando:   | Skipping or bouncing or bouncing castanet-like effect. (bow is                                  |  |
|             | thrown against strings)   |  |
| Col 'Lengo: | played with the wooden part of the bow. (percussive sound).                                     |  |

# Horn in F (French Horn)



The Range of the Horn



Figure 2: The modern horn is a transposing instrument; music for horn is in F, written a perfect fifth higher than it sounds.

The very earliest horns were hollowed-out animal horns, or other natural objects that would resonate at a particular pitch when the player buzzed the lips against a hole in one end.

The modern instrument is descended from earlier **brass** instruments that were used for centuries in Europe for military and hunting purposes. These horns came in various different sizes and shapes. The orchestral horn is particularly descended from the French **trompe de chasse**; hence the name "French horn". This hunting horn, in use in France in the seventeenth century, was a slender tube that was coiled into a large hoop that could easily be slung over a huntsman's shoulder. The tube was only about 7 feet long and was much more **cylindrical** than a modern horn. The eighteenth-century **cor de chasse**, the typical instrument in the orchestra of Bach's and Handel's time, was twice as long and coiled into a double hoop. This instrument had no **valves** and was originally played with the bell pointing up and out. It could therefore play only the notes of a single **harmonic series**. This severely limited the parts a single instrument could play; a horn that could play a harmonic series on an E flat fundamental, for example, could play some, but not all, of the notes in the key of E flat, could play even fewer notes in keys **closely related** to E flat, and could play no notes at all in keys not related to E flat.

This meant that a horn player who wanted to be able to play in more than one key would need several different horns, would need time to switch from one horn to another whenever the music changed keys, and would still not be able to play every note in the key. For centuries, the history of the horn was a history of the search for solutions to these limitations.

The invention that really freed the horn to play the full <u>chromatic scale</u> easily was the <u>valve</u>. A valve can open and close almost instantly, redirecting the air through an extra crook in the middle of the instrument. It's really not clear who first invented a valved horn and when, but n 1818 a valve horn with two piston valves was patented; in the 1830's a third piston was added. Although most other modern brass still use piston valves, the horn switched to rotary valves, apparently invented by Joseph Riedl of Vienna around 1832. The modern horn uses three rotary valves, which lower its natural (F) harmonic series by a half step, a whole step, and one and a half steps, giving the horn a quick and easy chromatic scale. (For more on why three valves is enough for a brass instrument, see <u>The Harmonic Series</u>.)

Most modern horns are also **double horns**, that is, two horns in one. When instrument makers and players were settling on which of the many instruments (Horn in D? In E flat?) to use for the modern valved horn, the F horn was originally chosen as having a particularly full, moderate, and pleasing sound. But it is difficult to play high notes accurately on the F horn, so a second set of crooks, for the smaller, higher B flat horn, was added. A fourth valve, or **trigger** opens the shorter set of crooks, switching the instrument from the F "side" to the B flat "side" to play high notes.