

String Instruments : General Comments

Performance Directions

"Sul" - To designate which string the player should perform a musical gesture, the composer may use the term "sul" followed by the letter name of the string. This means to play the passage on the G string. For instance, if a dark quality of sound is needed, and the range of the passage allows, the composer may include the direction "sul G."

"pizz." and "arco" - The string instruments are normally played with the bow. Therefore, if no direction is indicated, the player will use the bow to play the strings. However, the strings may also be plucked by the index finger of the left hand. This produces a percussive sound called *pizzicato* (abbreviated "pizz."). When pizzicato is required the composer must write "pizz." over the score. The player will then pluck the strings until the direction "arco" appears, which means to return to playing with the bow. One thing to keep in mind is that rapid changes from pizz. to arco can be difficult, tiresome, and clumsy if there are no breaks. Consider placing rests between pizz. and arco moments so the player has a chance to get the bow back in position to play. When using pizz. in a string ensemble, keep the rhythm simple. The percussiveness of the pizz. technique requires exact synchronization which may be difficult with an inexperienced large group. On longer note values, vibrato may accompany a note played pizz. If this is so desired, write vib. over the score. For shorter note values, one may include the term "secco" for a short, dry pizz. On the violin and viola, Pizz. is very effective on the lower notes (roughly, the first two and a half octaves). Pizz. on upper notes produces a very thin sound. A "snap pizz." or "Bartok pizz." may also be used. In performing the snap pizz. the player plucks the string outwards, away from the body of the instrument so that it slaps back against the fingerboard producing a very sharp articulation.

Vibrato (vib.) and Non-Vibrato (non-vib.) - String players will normally avoid the open strings. This allows them to play with vibrato. Vibrato on a string instrument is achieved by the back and forth motion of a finger on a string. When the finger moves towards the bridge, the pitch gets higher. When the finger moves towards the tuning pegs, the pitch gets lower. When this technique is accelerated, the resonances of the string and body of the instrument combine to create a very thick, expressive tone. String players will normally play using vibrato. In certain situations, however, the composer may wish not to use vibrato by placing the direction "non-vib." over the score. Indicate where the player should go back to using vibrato by the direction "vib." an opposite effect would be to include the direction "molto vib." which directs the player to use wide, excessive vibrato. This direction should not be used for means other than effect. In other words, do not use this direction when, for example, the musical gesture is a romantic melody. If the desired result is one of great emotional expression, use the term *molto espressivo*.

Divisi, tutti, div. a 3, etc. - A string part may be divided into two or more parts. This is necessary when a string part consists of two or more lines of music. To divide a part into two separate parts, use the direction "div." and notate the music so that there are stems going up for the upper part and stems going down for the lower part. Keep this design even if the lower part "drifts" above the upper part for a moment. If the notation loses its clarity, it's best to place the two parts on separate staves. When the two parts rejoin use the term "tutti." In the case where three different lines of music are necessary in one part, use the direction "div. a 3" which means to divide into three parts. Divisi is not recommended for inexperienced groups, as there is strength in numbers. Some highly experienced string players and orchestral composers actually avoid divisi because it weakens the overall sound and cohesiveness in the orchestra. If only a couple of players are needed, the term "one desk" should be used, or "two desks" for four players. If a solo string is needed write "solo."

Mutes - A mute may be applied to the strings which softens the timbre as well as the dynamic. The mute, when not in use, sits on the strings between the bridge and the tailpiece. When

needed, it is moved from that position to the other side of the bridge. This requires a brief amount of time, which should be represented by a rest, that the composer must consider when engaging and disengaging a mute.

Glissandi - Glissandi may be described as a sliding of pitch which connects two notes seamlessly. A string player performs a glissando by playing a note, and without picking the left hand finger up or stopping the bow motion, slides to the next note.

Harmonics - Harmonics fall into two categories: Natural and Artificial. Natural harmonics are those that occur on the open string by lightly touching a "node" (a position on the string where a harmonic sounds) with a left hand finger. The available harmonics are those taken from the harmonic series. However, some harmonics speak more easily than others, and it is advised not to write a natural harmonic past the fifth partial. Artificial harmonics are those formed by shorting the string length. This would involve the stopping of a pitch on the fingerboard with a left hand finger, then lightly touching above that stopped note (either a major third or a perfect fourth) to sound a harmonic. Artificial harmonics may be used as a means to create octave displacement, which can add an element of timbral coloration to a melody, or be used to make a melody in the extreme upper register a little more manageable by taking it down two octaves. Harmonics should be notated so that the sounding pitch is written on the score with a small circle above it.

Scordatura - The re-tuning of the open strings to pitches other than the conventional ones. Scordatura only rarely appears in the upper strings. It often appears, however, in the bass where the E string is tuned down to D or even C.

Special Effects (a few) -

"Sul Ponticello" - Bowing near the bridge. Produces a bright thin tone.

"Sul Tasto" - Bowing near the fingerboard. Produces a dark tone.

The above two directions may be further defined by adding the terms "poco" (a little) and "molto" (a lot)

"*Col Lengo*" - Bowing the string with the wood of the bow. Most players have a special bow for performing this technique as the string will scratch up a good bow.

Bow Behind the Bridge - Produces noise.

"Ordinary" (ord.) - Cancels the above effects and the player returns to normal playing position.

Double, Triple and Quadruple Stops

Double Stops - The violin, viola, cello, and to some degree, double bass are capable of playing more than one note at a time. This means that the bow must be able to make contact with two strings simultaneously. On each of the string instruments, the strings appear in an arch shape over the bridge to allow the bow to access one string at a time. (If the strings were flat all the way across, like a guitar, the bow would not be able to touch the inner strings without touching the outer strings.) Because the bow is flat, it is only possible to play double stops on adjacent strings. The composer must then take care to write double stops that are playable on adjacent strings. When writing double stops for less experienced groups, make sure one of the notes in the double stop appears on an open string. An open string must be used when writing double stops for the bass. Imperfect consonances work best as double stops. They are rich, and in tune. Perfect consonances, such as the octave, perfect fourth, perfect fifth, can be noticeable out of tune. The perfect fifth double stop on the violin especially, but also on the viola and cello, is very difficult and will be out of tune. Avoid it! The composer should be aware of the timbral differences between an open string and a stopped string (due to the resonance).

Triple and Quadruple Stops - Avoid these when writing for less experienced groups. In the more experienced groups, triple and quadruple stops may be used in the violin, viola, and cello parts, but not the bass. It is best to find a triple stop that includes an open string. This will make

the fingering easier. Triple stops may be played as a simultaneity, that is, all notes sounding at the same time. This requires a heavy bow stroke which will produce a loud dynamic. The heavy bow stroke is needed in order for the bow hair to touch all three strings. Quadruple stops will be arpeggiated and will not sound as a simultaneity. Again, if a quadruple stop is necessary, find one that includes at least one open string. In most cases in writing for string ensemble, it is probably better to use divisi than to write triple and quadruple stops.

Techniques to Avoid

- (1) Sudden and repeated jumps across the strings. Most string music, especially in the upper strings, involves conjunct melody.
- (2) Going beyond third position in an inexperienced group. (Violin I and cello may go up to fifth position.)
- (3) Divisi passages in inexperienced and high school groups. The sections are, many times, already too small.
- (4) Triple and Quadruple stops.
- (5) Highly chromatic music for high school groups.
- (6) Leaps to the upper positions. It is better to "lead" a player's fingers up to the upper positions. In other words, move to the upper position gradually.