

String Crossings

Crosmer Technique

Ellipse Patterns:

These are exercises I developed during my studies with Stephen Feldman in Arkansas, inspired by elements of Fritz Magg's technique. They are designed to develop a smooth continuity in right arm and finger movement. I play the exercises at quarter = 60, which is a relaxed tempo but still provides enough structure to accurately measure bow distances. I also recommend checking in with your breathing while playing.

Crossing strings involves both the big muscles in your right arm and the small muscles in the fingers:

<p>Frog</p> <p>Mostly fingers</p> <p>Extend fingers for lower string Contract fingers for upper string</p>	<p>-----</p> <p>(combination)</p>	<p>Tip</p> <p>Mostly Arm</p> <p>Close armpit for lower string* Open armpit for upper string</p>
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*for fast crossings, a case can be made for pivoting the elbow rather than closing the armpit. See "Bariolage" on the next page.

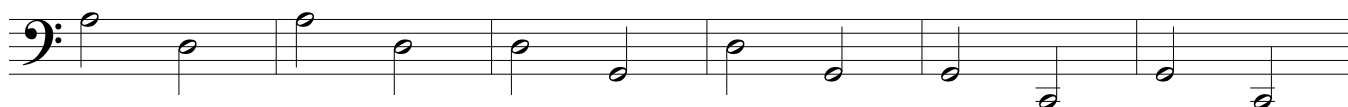
Focus on isolating and analyzing these movements. To make them smooth, begin the arm or finger movement before the note finishes, so that you rock to the next string rather than "pop" over. There can be moments where both strings sound at the same time before completing the string crossing.

Counterclockwise: Whole Bow

♩ = 60



Clockwise: Whole Bow



Try the following patterns in each part of the bow:

1. At the **frog** (mostly fingers)
2. At the **tip** (mostly arm)
3. **Middle** of the Bow (combination)

Counterclockwise: 1/3 Bow

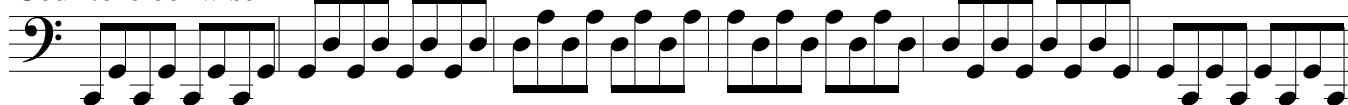


Clockwise: 1/3 Bow

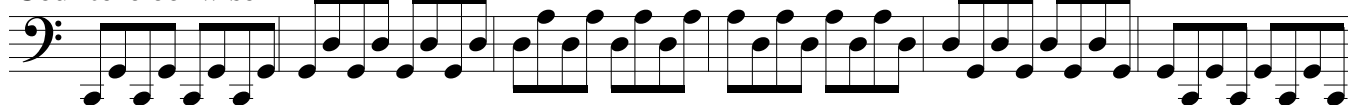


Small Ellipses

Counterclockwise



Clockwise



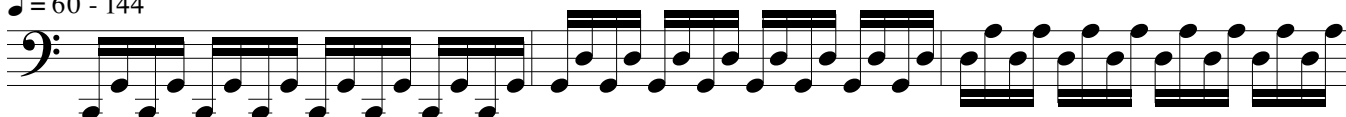
Bariolage:

The movement of the arm changes when doing fast string crossings. Often it is efficient to keep the elbow at the same height, the height it is at when playing the upper string. This new movement is called "pivoting" at the elbow, and is often used when playing bongo drums (notice how they keep their elbows at the same height).

"Bariolage" means "mixture of colors" in French. Play these exercises at different tempos, experimenting with different movements in your right arm, pivoting the elbow, and fingers. Again, focus on keeping the movement smooth rather than "popping" between strings.

Counterclockwise

♩ = 60 - 144



Clockwise



Try the above exercises at the **frog**, **middle**, and **tip** of the bow. Adjust your movement accordingly. Keep your body relaxed by checking different points: hand, arm, shoulder, back, neck, teeth. Try rolling your neck or opening your jaw while playing to loosen those areas.

Rocking Slurs:

Crossing strings while slurring creates a sine wave pattern with your right hand. Since you are crossing strings at different parts of the bow, the following exercises require combinations of arm movement, elbow pivot and finger movement.

To keep your movements smooth and continuous, first rock to the string as a doublestop, then rock completely over.

♩ = 60



Scooping Bows:

This exercise is for practicing smooth string crossings. Complete each bow in one continuous motion, rather than trying to stop on each string. Initially, there will be moments when two strings are sounding at once (shown by the 32nd notes). As you transition to only hearing one string, keep the motions continuous between strings, rather than snapping, popping, or locking the hand.

Continuous motion

♩ = 60

Repeat the exercise above starting on up bow. √

Bow Arcs:

Another useful string crossing exercise combines the different motions in yet another way. Here, focus on making the bow changes smooth. Especially when going fast, the right hand will want to yank or jolt when you switch bows. This creates an unwanted accent. If you can smooth out and disguise the bow changes, the end result will be one long, continuous wave of sound. This exercise should be done very slowly until you feel comfortable playing at higher speeds without yanking your hand.

♩ = 60 - 120

Supplementary Bowing Patterns:

The following bowing patterns will show up frequently in repertoire for cello. They combine all of the techniques practiced on the previous pages. As your mastery of string crossing technique improves, it will become more naturally ingrained into your playing. As a result, your focus on this page can be on the end result: sound quality.

Don't hesitate to slow these patterns down, or return to previous exercises to develop your technique further.

Pattern 1

Pattern 2

Pattern 3

Pattern 4

Pattern 5