Easy Axis Rotation Changes with the 4-Point Release System
Joe Slowinski

I have read dozens of instructional books as well as hundreds of articles discussing the importance of being able to manipulate ball reaction by changing the axis rotation at the release point. Unfortunately, these respected authors fail to present readers with a concrete system that would allow a bowler to systematically alter his or her release leading to a consistent ball reaction. The truth is that it can be difficult to change the release consistently. And, rather than providing a practical and workable system, the authors offer statements such as “try to keep your hand behind the bowling ball” or “make an effort to rotate more around the ball.” With such vague statements, I have been very disappointed throughout my career, as bowler and coach, each time I read such advice. Considering this, it is my belief that the bowling community desires and needs a user-friendly release system that is easy to implement on the lanes, first in practice and then in competition. Accordingly, I present the 4-point release system as an easy-to-use reference system that allows any bowler to achieve several releases proficiently, easily and cleanly.

The first full implementation of the 4-point system was in December 2005 in Budapest, Hungary when I was working with the Hungarian national teams. Initially skeptical, the bowlers soon found the system easy to use and most importantly an effective process to alter the reaction of the bowling ball in a systematic way. In a few hours, bowlers who previously were not able to obtain adequate ball reaction were empowered by the 4-point system.

Before we arrive at the details of the system, let’s begin with a brief review of axis rotation and ball reaction. As you can imagine, the ability of the bowler to consistently and systematically change the release would be a great asset to dealing competently with various lane conditions and as lanes transition. Most importantly, from a bowler’s perspective, the axis rotation at the release will allow you to control the amount of skid and the strength of the backend reaction. The higher the axis rotation is at the release point, the longer the ball will skid down the lane and the stronger the reaction will be on the backend.

Technically, the axis rotation is the angle in which the ball is rotated around as it is released by the bowler. In simple terms, the more you rotate your hand around the ball, the higher the axis of rotation. Conversely, the more you are up the back of the ball, the more roll or lower axis of rotation you will achieve. If you imagine rolling a ball, with your hand directly behind the ball, the motion of the ball is directly in the same direction of the intended path to the pins. This would approximate a release with 0 degrees of axis rotation. The ball would enter into a roll immediately. Specifically, the lower the axis rotation, the earlier a ball will enter into a roll. On the other hand, if you rotated your hand around the ball with a release near 90 degrees, the motion of the rotation
relative to the path to the pins would be perpendicular. Thus, since the motion of the rotation is in the opposite direction, the ball would skid further down the lane before rolling. Once ball ended the skid phase, it would enter into a roll quickly, thus, the ball would react with a stronger and more abrupt backend reaction.

[Insert Illustration of Axis Rotation Here]  
Is it possible that the artist render something here?

How well you release the ball is critical to an appropriate ball reaction. I have seen too many bowlers release the ball with a very high axis rotation, near 90 degrees. They have never learned any other release. Far too often, these bowlers continue to overplay the lanes with a high axis rotation. Consequently, these bowlers excel on the easier house patterns but fail to adjust adequately to be successful on longer, heavier and flatter patterns. The 4-point release system will offer any bowler the possibility of becoming a better bowler after a commitment of some practice time to be comfortable with changing the release and watching the subsequent reaction. Give the system one month of practice and you will see results in your game. Here is an explanation of how to use the system. Please begin each release with your fingers in the 6 o’clock starting position (i.e., fingers directly under the ball).

First Things First
In essence, with the 4-point system, we want the bowler to reach a point in the release without rotating further and continuing on at the same angle to a reference point in the follow-through. By focusing on a reference point, we are setting the stage about how much hand rotation we want, cognitively as well as subconsciously. The four reference points are the pinky, ring finger, thumb to 1 o’clock in the follow-through, and thumb to 12 o’clock in the follow-through.

0 Degrees – Straight Roll
A 0 degree axis rotation release is perfect for spare shooting allowing a bowler to throw nearly straight on any lane condition. Specifically, in regard to reaction, this provides the straightest rolling trajectory with the weakest backend. With a 0 degree release, the fingers should be at 6 o’clock, at the release, with the hand directly up the back of the bowling ball creating the end-over-end roll. To achieve this release, spread your pinky wide with the index finger tight against your middle finger (see photo 1). If you spread your index finger, away from the middle finger, you are likely to rotate around the ball increasing the axis rotation. Ideally, break your wrist downward slightly as well. As you throw the ball, make an effort to lead the pinky toward the target. This will aid you in not rotating your wrist and achieving 0 degrees of axis rotation.
15 – 30 Degrees: Early Roll with a Weak Backend
With a release in the 15 to 30 degree range, you will obtain an earlier roll with a very mild backend reaction. This is ideal for a heavier or longer oil pattern which demands a straighter trajectory to the pocket.

To realize a consistent release, between 15-30 degrees of axis rotation, simply follow-through toward the target with your ring finger. Imagine the ring finger leading the way to the target with more pressure on it as you execute the shot. Notice how open the hand is in the follow-through in Photo 2. By keying-in mentally on the ring finger toward the target, you will keep your hand more up the back of the ball, reducing rotation and achieving a lower axis rotation.
45 Degrees - Arcing Trajectory with Medium Backend
A 45 degree axis rotation is a release which provides medium to early roll, an arcing trajectory and a medium backend reaction. For many more challenging patterns, this is a great starting release due to the clean backends. This release requires the fingers at release to be in approximately at the 4 (Middle) & 5 (Ring) o’clock for the right-hander or 7 (Ring) & 8 (Middle) o’clock position for the left-hander.

To achieve this release, you want to imagine your thumb, after exiting the ball, continuing to a reference point, 1 o’clock, in the follow-through. Specifically, the bowler will imagine their thumb traveling to 1 o’clock (right-handed) or 11
o'clock (left-hander) after releasing the ball and following-through. The goal is to create a system in which you can rotate to the 45 degree position and maintain it without rotating more inadvertently. The 1 and 11 clock imprints a mental reference point to allow a bowler to release at 45 degrees while only thinking about the finish position of the thumb in the follow-through. This allows a small rotation to the 4/5 or 7/8 points stopping from going any further and allowing the bowler, as the thumb exists, to continue to send the thumb to the 1 o'clock position. Below, Marcus Lee continues to follow-through to 1 o'clock with the thumb. Notice the hand remaining open at approximately 45 degrees.

90 Degrees – Long Skid & Strong Backend
A 90 degree axis rotation is the longest and strongest of the releases. With this release, the bowler throws the ball with the fingers at 3 o'clock (RH) or 9 o'clock (LH). When achieving this, the bowler will see the ball skid the farthest while creating the most backend reaction of all four releases. For reference, many readers will be familiar with Pete Weber’s mastery of this release.
Focus on getting the thumb to 12 o'clock at you release the ball.

Photo 4.  90 Degree Release - Thumb to 12 o'clock
Additional-Thoughts
The goal of the 4-point system is to allow a bowler to achieve a consistent release through an easy-to-use reference system. With such a reference system, for the bowler, they find it much easier to alter ball reaction while consistently repeating shots. When making decisions about the release, just remember that as axis rotation increases, the ball skids further down the lane while lower the axis rotation will get the ball rolling earlier and weaken the backend reaction.

Be patient as you begin to implement this into your bowling. One practice process that will help you improve your releases with the 4-point system is to make an effort to hit the pocket from any angle on the lane. As you make your way from the extreme outside to deep inside, experiment with the various releases and watch the ball reaction. Mark the PAP on the bowling ball, with a piece of tape, to verify that you are achieving the desired release with consistency. Take notes to help you understand the corresponding release change and ball reaction.

In addition to the main 4-points, you can also use your index and pinky to add further amounts of variation to your game. For example, if you focus on the 45 degree release, thumb to 1 o'clock, but spread your index finger wide with the pinky in, then you can achieve higher than 45 degrees providing a consistent reaction with a release around 60 degrees. In addition, try following-through with the middle finger toward the target. Watch how this alters the ball trajectory and reaction. Remember to pay attention to the length of the skid, ball movement and backend strength.

Conclusion
As a coach, I am constantly making an effort to develop systems that can be implemented by coaches for instruction and used by bowlers as a bowling tool. The four-point release is one such system that will help you achieve a more complete game. Just imagine with the 4-point system you will have the ability to conquer lane conditions with a minimum of four releases and corresponding ball reactions. If you are comfortable with two speed changes and have 4 bowling balls, then you now have a minimum of 24 variations in your game. But, you will need to practice this system to master it.

When trying these release changes for the first time, start with your fingers at 6 o'clock in the ball (i.e., hand directly under the bowling ball). This will allow you to have a constant starting position to judge the reaction of the bowling ball. Pay close attention to how far the ball travels before making a move (skid), the shape of the roll (trajectory) and how strong (angle) the backend reaction is into the pins. Take ten shots each and note the reaction and the feeling you have when you release the ball in this manner. I strongly encourage you also to videotape your experiment for further review in the comfort of your home. Feel free to contact me with questions about the system or problems in
implementing all four releases as well as successes. I am very confident the system can work for you if applied correctly. The 4-Point System will make you a more diverse bowler who can deal with adverse lane conditions and transitions.

[Insert Table 1 at the end of the article]

<table>
<thead>
<tr>
<th>RELEASE</th>
<th>DESIRED REACTION</th>
<th>FOCUS POINT</th>
<th>RIGHT-HANDED FINGER PLACEMENT @ RELEASE</th>
<th>LEFT-HANDED FINGER PLACEMENT @ RELEASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Straight Rolling</td>
<td>Spread Pinky with index finger in. Lead with pinky to the target</td>
<td><img src="image1" alt="Image" /></td>
<td><img src="image2" alt="Image" /></td>
</tr>
<tr>
<td>15-30</td>
<td>Early roll with weak backend</td>
<td>Lead with ring finger to the target</td>
<td><img src="image3" alt="Image" /></td>
<td><img src="image4" alt="Image" /></td>
</tr>
<tr>
<td>45</td>
<td>Medium to Early Roll with an arcing trajectory</td>
<td>Thumb to 1 o’clock in the follow-through</td>
<td><img src="image5" alt="Image" /></td>
<td><img src="image6" alt="Image" /></td>
</tr>
<tr>
<td>90</td>
<td>Skid-Snap Longer skid and strong backend</td>
<td>Thumb to 12 o’clock in the follow-through</td>
<td><img src="image7" alt="Image" /></td>
<td><img src="image8" alt="Image" /></td>
</tr>
</tbody>
</table>

Special thanks to Marcus Lee, roving coach for the National Sports Council, for volunteering to be the release “model” for this article.

**About the Author**
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