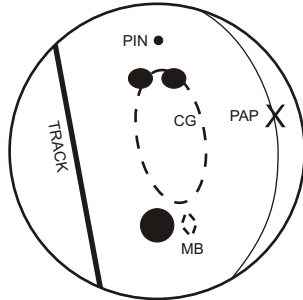


**LENGTH LAYOUT**
**TRADITIONAL METHOD:**

**PIN TO PAP:** 5" (13cm)  
**PAP TO MB:** 5.5" (14cm)  
**BUFFER:** 2.5" (6cm)

**ANGLE METHOD:**

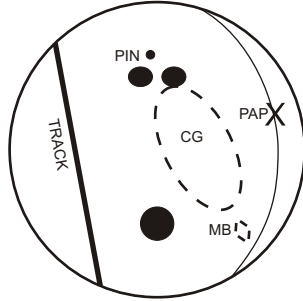
**DRILLING ANGLE:** 70°  
**PIN TO PAP:** 5" (13cm)  
**VAL ANGLE:** 30°

**MEDIUM TRACK EXAMPLE**

**LENGTH & BACKEND LAYOUT**
**TRADITIONAL METHOD:**

**PIN TO PAP:** 5" (13cm)  
**PAP TO MB:** 4" (10cm)  
**BUFFER:** 3" (8cm)

**ANGLE METHOD:**

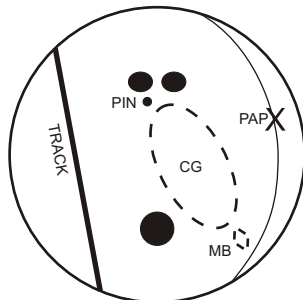
**DRILLING ANGLE:** 45°  
**PIN TO PAP:** 5" (13cm)  
**VAL ANGLE:** 45°

**MEDIUM TRACK EXAMPLE**

**MIDLANE HOOK & BACKEND**
**TRADITIONAL METHOD:**

**PIN TO PAP:** 5" (13cm)  
**PAP TO MB:** 5" (13cm)  
**BUFFER:** 4.5" (11cm)

**ANGLE METHOD:**

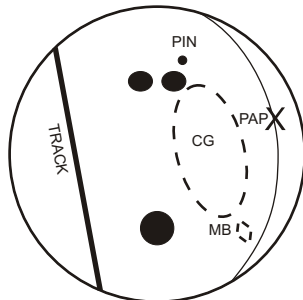
**DRILLING ANGLE:** 60°  
**PIN TO PAP:** 5" (13cm)  
**VAL ANGLE:** 70°

**MEDIUM TRACK EXAMPLE**

**STRONG LAYOUT**
**TRADITIONAL METHOD:**

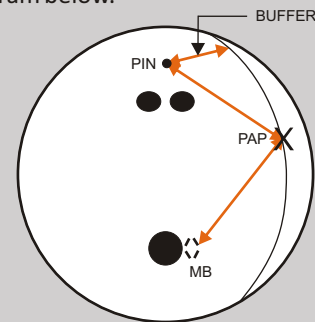
**PIN TO PAP:** 4" (10cm)  
**PAP TO MB:** 4" (10cm)  
**BUFFER:** 2.5" (6cm)

**ANGLE METHOD:**

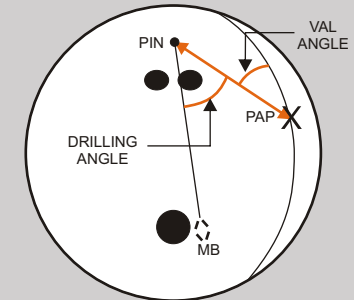
**DRILLING ANGLE:** 40°  
**PIN TO PAP:** 4" (10cm)  
**VAL ANGLE:** 40°

**MEDIUM TRACK EXAMPLE**

**TRADITIONAL LAYOUT METHOD**

The traditional method for laying out a ball for drilling utilizes the PIN to PAP distance, the PAP to MB (PSA) distance, and a Buffer, which is the perpendicular distance from the PIN to the VAL. See diagram below.


**ANGLE LAYOUT METHOD**

The angle method for laying out a ball for drilling utilizes a Drilling angle, the PIN to PAP distance, and a VAL angle. See diagram below.



**NOTE: THE LAYOUTS ON THIS PAGE ARE FOR MEDIUM TRACK RIGHT-HANDED BOWLERS. REVERSE FOR LEFT-HANDED BOWLERS AND ADJUST FOR LOW AND HIGH TRACK BOWLERS.**

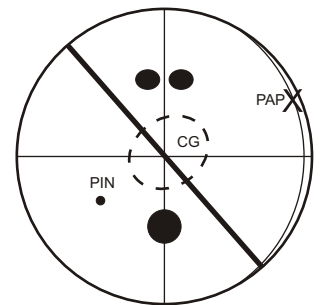
**FULL ROLLER**

**BALL MOTION:** Strong Arc

**PIN LOCATION:** Pin to Center of Span distance of 3-1/2" in 7:30 position.

**FLARE POTENTIAL:** Medium

**NOTE: THE LAYOUTS ON THIS PAGE ARE FOR RIGHT HANDED BOWLERS. REVERSE FOR LEFT HANDED BOWLERS.**


**LIMITED 1-YEAR BOWLING BALL WARRANTY**
**REGISTER YOUR BALL NOW TO ACTIVATE YOUR WARRANTY!<sup>1</sup>**

Visit [www.motivbowling.com](http://www.motivbowling.com) and search "Product Registration".

We take great pride in the quality and performance of MOTIV® bowling balls, and we offer a limited warranty on new MOTIV® bowling balls for a period of one (1) year from the date of original purchase. This limited warranty is valid and extends to the original purchaser only. In order to be eligible for this limited warranty, MOTIV® bowling balls must be registered with MOTIV®.<sup>1</sup> Failure by the original purchaser to properly register the ball within ninety (90) days from the date of purchase will cause the warranty to not be valid or effective, so please register the new ball online. Visit [www.motivbowling.com](http://www.motivbowling.com) and search "Product Registration". For those without internet access, call or write to activate the limited warranty. See the "How do you get service?" paragraph below for contact information.

**What will MOTIV® do for the Limited Warranty?**

During the one (1) year limited warranty period, MOTIV® will repair or replace, at its sole discretion, any bowling ball that is found by MOTIV® to be defective in material or workmanship, and this shall constitute the purchaser's sole and exclusive remedy and recovery under this limited warranty (or under any other possible means of remedy or recovery). MOTIV® does not authorize any person or entity to assume for it any obligation, duty, responsibility, or liability in connection with the repair or replacement of the product. Any ball the purchaser believes may be defective should be immediately returned to the retailer from which it was purchased for examination, and the retailer should then contact MOTIV®. If returning the ball to the place of purchase is not possible, then you may contact MOTIV® directly to receive information on evaluation and potential replacement or repair (as applicable) of the ball. See the "How do you get service?" paragraph below for details.

**What is covered by this Limited Warranty?**

This limited warranty applies to your new MOTIV® bowling ball. It covers all external defects appearing in your MOTIV® bowling ball cover stock, excluding those non-warranty instances listed in the "What Is Not Covered By this Limited Warranty" paragraph below. Defects that this limited warranty covers are: Bridge cracks where the bridge gap is greater than or equal to 1/4 inch; warping; cracking; delamination; and splitting; other select defects or situations may be included at MOTIV®'s sole discretion.

**What is not covered by this Limited Warranty?**

Limited warranty coverage terminates immediately without notice if the original purchaser sells or otherwise transfers the ball. All manufacturer labeling, specifications, claims, and statements regarding this ball are provided, made available, and sold "as is" at the moment of original consumer purchase.

MOTIV® Bowling (which includes, without limitation, any of its parent, subsidiary, and affiliate entities) shall in no case be responsible for any damage or injury related to the following: Improper drilling; ball plugging; installation of inserts for finger and/or thumb holes; a bridge less than 1/4-inch between finger holes; a bridge weakened by insufficient lateral pitches; sharp edges around any drilled hole that have not been properly beveled or sanded; riser pin placement less than 1/2-inch distance to any hole; damage caused by pinsetters, ball returns, gutters, polishing machines, or other equipment; exposure to extreme temperatures (above 125°F or below 40°F); use of chemical products not manufactured by MOTIV®; bowler abuse or misuse; or any other similar or related instances or occurrences.

MOTIV® Bowling shall not be responsible or liable in any way for any drilling fees; shipping fees; parts incorporated into the ball such as slugs, grips, interchangeable inserts; or any problem or instance that is in any way caused by or related to abuse,



## ASYMMETRIC BALL DRILLING GUIDE & LIMITED WARRANTY

**SURFACE TUNING:** Ball finish is the most important variable in ball reaction. MOTIV® covers can be tuned to adjust the reaction if the 'box finish' is not desired. Power Gel® Gloss can be used to add length to a ball. When less length is needed and more traction is desired, Power Gel® Scuff is recommended.

**BALL CLEANING:** We recommend cleaning your MOTIV® ball immediately after bowling to maintain full performance. We also recommend using a towel to removing lane oil from the ball surface during play. This reduces oil saturation and maximizes the life of the ball. Power Gel® Clean is a powerful bowling ball cleaner that is recommended for MOTIV® equipment.

**STORAGE:** Extreme temperatures may damage MOTIV® bowling balls. Do not store in an area where temperatures will drop below 40°F or rise above 125°F.

**DRILLING:** This MOTIV® Asymmetric Drilling Guide provides basic layout options. We expect that pro shop professionals have extensive knowledge of various drilling procedures and techniques for fine tuning ball layout. This includes selecting intermediate pin distances and adjusting CG and MB (PSA) placement. The exact layout selected may be a modified version of the layouts in this guide. Some of the variables to consider are ball specifications, bowler delivery, and lane conditions.

**IMPORTANT:** 1. All holes must be beveled after drilling. 2. Check side and top weights to ensure compliance with USBC specifications. If needed, drill a balance hole to make adjustments. 3. Make sure pin placements are in the pin-safe zone for high track layouts.

**GET MOTIVATED™**

### LIMITED 1-YEAR WARRANTY (CONTINUED)

misuse, intentional act, accident, or act of God that are not otherwise expressly covered elsewhere in this limited warranty. Travel expenses, league or competition eligibility, fees, and usage, loss of competition or tournament revenue or potential winnings are not recoverable, warranted, guaranteed, or covered under this limited warranty. Surface wear, minimal spider-web cracks around holes, lane damage, normal wear, excessive heating of the ball, and cover stock rejuvenation damage or any other similar or related damage are also not covered by this limited warranty. Ball performance, ball dynamics, and ball specifications, ruling body or organization approval, certification, compliance, or the like, and competition eligibility or legality are not guaranteed or warranted after drilling.

Bowling balls bearing the mark "DEMO" or a serial number ending with the character "D" are not guaranteed or covered by this warranty.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.

#### How do you get limited warranty service?

If you believe your ball may be defective and eligible for replacement or repair under this limited warranty, please return the ball to the place of original purchase with proper documentation to validate the original purchase and claim. (If the purchaser cannot clearly show that he or she is the original purchaser by such proper documentation, then such person shall not be eligible for the limited warranty coverage.) If it is not possible to return your ball to the place of purchase, you may also contact MOTIV® Bowling in writing at 18570 Trimble Court, Spring Lake, MI 49456, via email at [service@motivbowling.com](mailto:service@motivbowling.com), via the website at: [www.motivbowling.com](http://www.motivbowling.com), or directly by phone at (616) 850-9868 or 1-800-235-8324.

#### Additional Limitations on Warranty

No person or entity is authorized to make any other warranties, guarantees, representations, claims, statements, or the like of any kind or nature on behalf of MOTIV® Bowling. Except as expressly provided herein, there are no other warranties, expressed or implied, including (but not limited) to warranties of merchantability or fitness for a particular purpose, which extend beyond the explicit description of the limited warranty herein.

Any implied warranties of merchantability and fitness for a particular purpose arising under state law are expressly limited in duration to the period of coverage provided by this limited warranty, unless the period provided by state law is less. Some states do not allow limitations on how long an implied limited warranty lasts, so the above limitation may not apply to you.

MOTIV® Bowling shall not be responsible or liable for (and expressly disclaims all responsibility and liability for) any loss, liability, damage (whether direct, indirect, incidental, special, consequential, or other similar damages), personal injury, or expense of any kind or nature whatsoever that may arise or result from, or be attributable or related in any way (directly or indirectly) to your access to or use of this product, including (without limitation) lost profits, loss of use, inconvenience, or liability arising from improper use, misuse, or abuse. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Your access to and/or use of this Product shall constitute your understanding and acceptance of the terms, conditions, guidelines, notices, and the like described in this limited warranty document. Any questions, issues, claims, or inquiries shall be governed by and construed in accordance with the laws of the State of Michigan, USA.

<sup>1</sup>**NOTICE to California, USA and Quebec, Canada Residents, and residents of other jurisdictions that prohibit warranty coverages being conditioned on registration: Registration is not required to obtain your limited warranty and failure to register does not diminish your warranty rights. Please check your individual state laws, rules, and regulations or contact MOTIV® with any questions.**

**ACTIVATE YOUR WARRANTY.  
VISIT US ONLINE TO REGISTER YOUR BALL TODAY!**

[www.motivbowling.com](http://www.motivbowling.com)

