

# GAME CHANGER!

More HOOK and More HIT = Higher Scores  
Watch it continue through the pins!

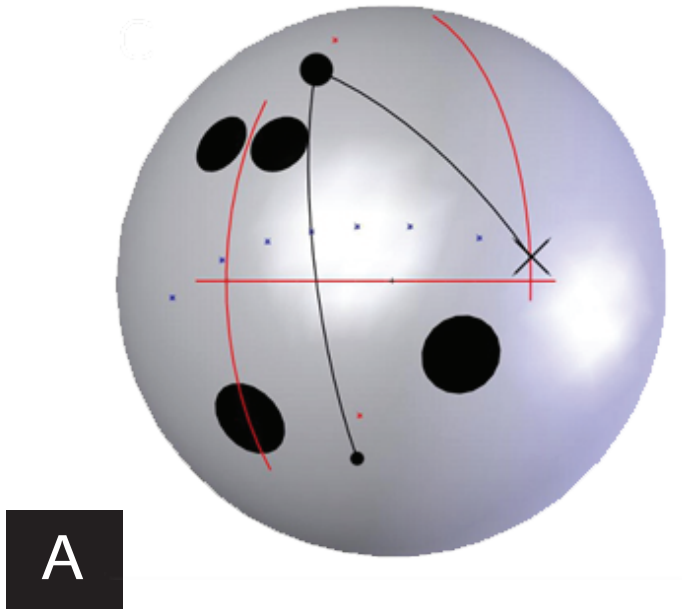
*Choose the layout for the desired ball motion and tune the surface.*

## Guru Drilling Suggestions

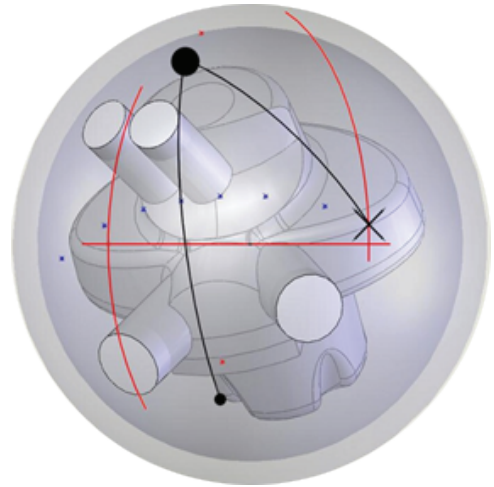
	Layout Specs		Low RG	Int Diff	Total Diff	Diff Ratio	RG PAP
	Undrilled		2.507	0.018	0.046	0.39	
A	Length with Maximum Hit	50° x 5 x 40° (P3 hole)		0.039	0.064	0.61	2.547
B	Length with Control	70° x 5" x 75°		0.023	0.030	0.74	2.529
C	Maximum Flare	65° x 4" x 30° (Double Thumb)		0.050	0.075	0.67	2.538
D	Less Hook with Big Hit	90° x 2 1/4" x 50° (P1 hole)		0.023	0.038	0.59	2.531

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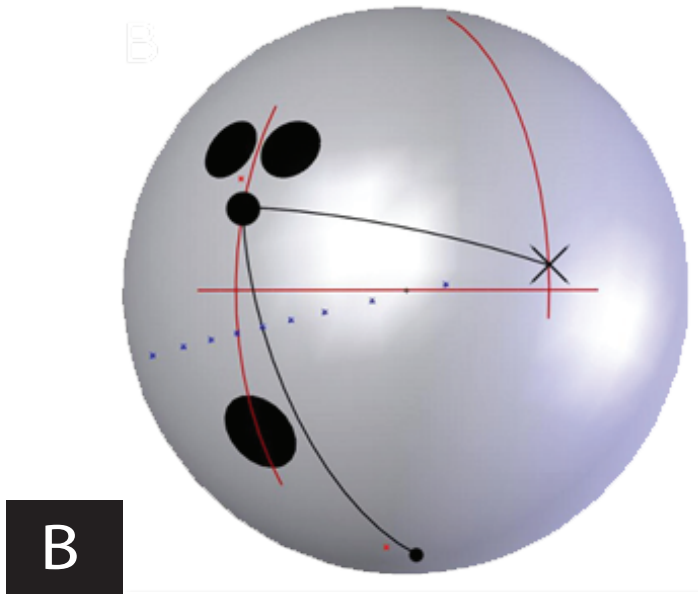
## Length with Maximum Hit



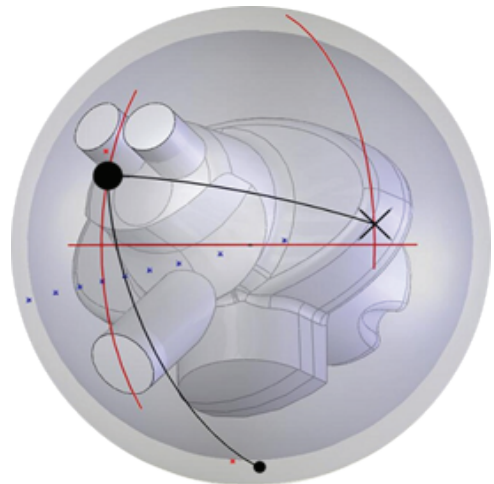
**Layout:**  
50 x 5" x 40  
with P3 Hole



## Length with Control



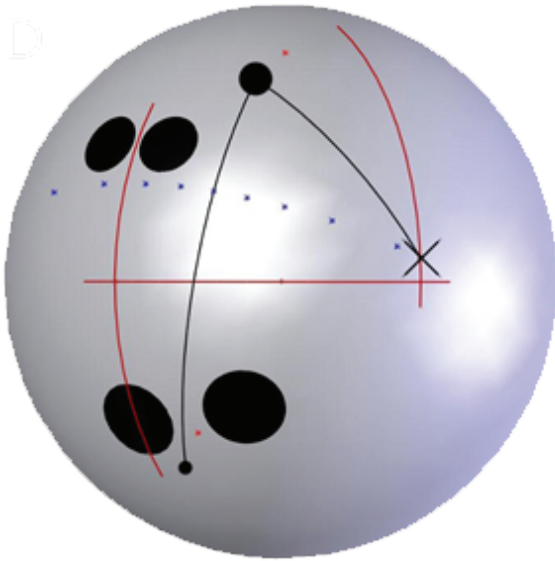
**Layout:**  
70 x 5" x 75



**Axis point used for these layouts is 5" over by 3/8" up.**  
The dotted line shows the axis migration path of the drilled ball.

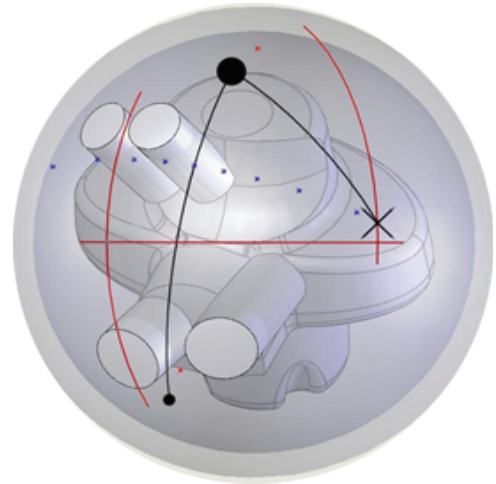
## ***Suggested Asymmetrical Layouts (Continued)***

### **Maximum Flare**



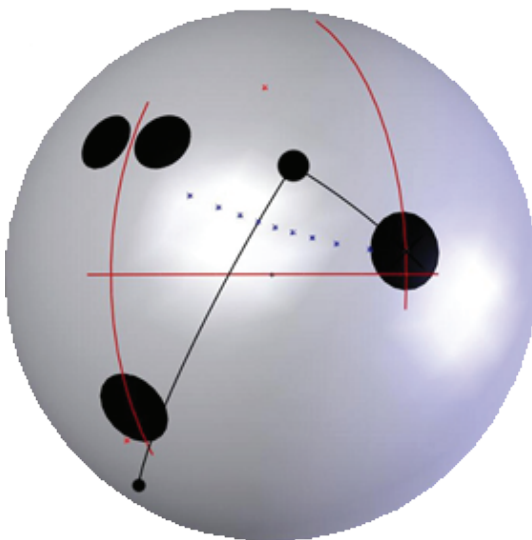
### ***Layout:***

***65 x 4" x 30  
with Double Thumb Hole***



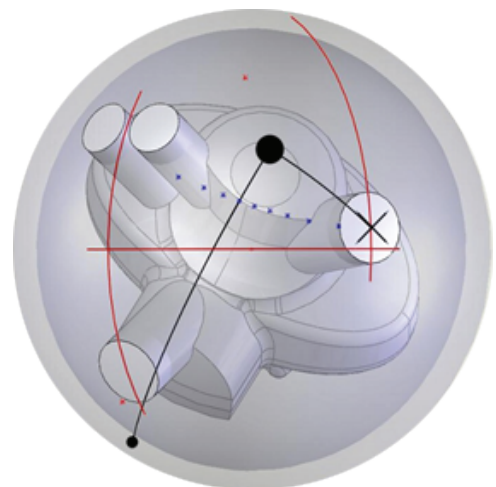
**C**

### **Less Hook with Big Hit**



### ***Layout:***

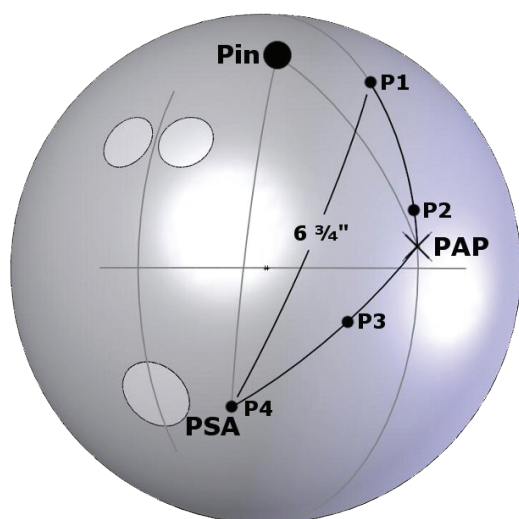
***90 x 2 1/4" x 50  
with P1 Hole***



**D**

**Axis point used for these layouts is 5" over by 3/8" up.**  
The dotted line shows the axis migration path of the drilled ball.

**Balance Holes for Asymmetrical Layouts:** *If, and when, a balance hole is needed, we recommend using the “Gradient Line Balance Hole System”. The Gradient Line extends from the PSA to P1 passing through the PAP.*



### **Balance Hole Locations on the Gradient Line**

Balance hole Position	Location	Change in Ball Reaction
<b>P1</b>	<b>6 ¾"</b> from the <b>PSA</b> on the <b>VAL</b>	Weakens ball reaction
<b>P2</b>	<b>1/3</b> of the distance from the <b>P1</b> to the <b>PSA</b>	Maintains ball reaction
<b>P3</b>	<b>2/3</b> of the distance from the <b>P1</b> to the <b>PSA</b>	Strengthens ball reaction
<b>P4</b>	<b>PSA</b>	Maximizes ball reaction

**Ball Surface & Cleaning:** **RADICAL** bowling balls are manufactured with a predetermined surface preparation. With the assistance of a qualified pro shop, sanding, scuffing, or smoothing the surface texture may be needed to optimize performance for different styles of players on different lane conditions. We cannot overemphasize the importance of regularly cleaning your **RADICAL** ball with a quality bowling ball cleaner **IMMEDIATELY AFTER** each use. Doing so will insure a more consistent reaction and maximize the life of your **RADICAL** bowling ball.

**Determining the Bowler's Initial Axis Tilt:** Initial Axis Tilt is best determined by measuring the distance across the bowler's initial ball track on the surface of the ball. A measurement of **> 11 ¼"** (< 12 degrees) indicates a high track bowler. A measurement of **10 ¼" to 11 ¼"** (12 to 18 degrees) indicates a medium track bowler. A measurement of **< 10 ¼"** (> 18 degrees) indicates a low track bowler.