

## Pin Center of Grip

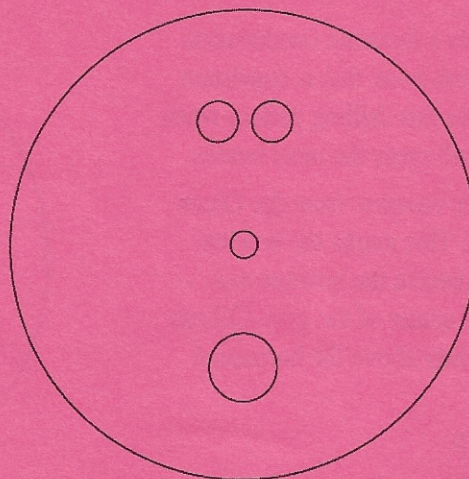
This drill pattern produces a somewhat early roll pattern with a smooth backend reaction. Use this when trying to get a predictable “down and in” reaction or when trying to control the backend reaction.

To layout this drilling pattern simply place the Green Pin in the center of the grip and turn the ball so the CG is in the positive side / finger quadrant of the ball.

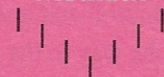
Ratings: length 6 backend 6

Top Weight: 1 1/2 to 4 ounces

Pin Location: pin in — to pin 2 1/2 inches out



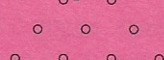
**Heavy to Medium**



**Heavy to Medium**



**Light to no Carrydown**



## Axis Leverage

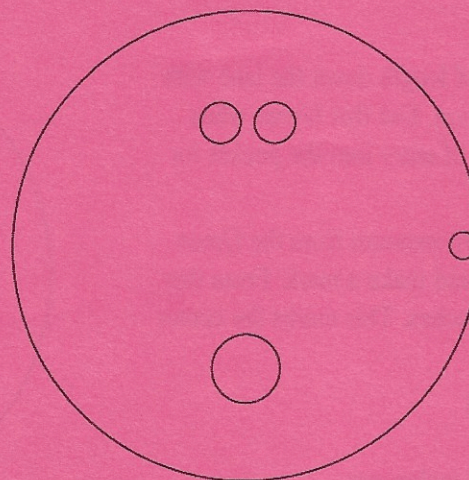
This drilling pattern produces a very early roll with a mild backend reaction. Use this drilling pattern when trying to mellow out the backends or when faced with very oily lane conditions.

To layout this drilling pattern put CG in the bowlers axis point and the Green Pin back towards the center of grip on or above the horizontal axis line. From CG reverse the bowlers axis point coordinates to find the center of grip.

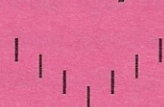
Ratings: length 2 backend 4

Top Weight: 1 1/2 to 3 ounces

Pin Location: pin out 2 to 3 1/2 inches



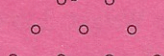
**Heavy**



**Heavy**



**Heavy or no Carrydown**



# Robby's Axle Core

**Reaction Patterns — Recommended Lane Conditions**

**Length & Backend Ratings 1-10\* — Top Weight Preference**

**Drilling Patterns — Pin Preference (In or Out)**

\* Rating 1 indicates least hook, rating 10 indicates most hook

Note: Reverse layouts for left handed drillings; top weight and pin locations indicate optimum values only



## Full Leverage

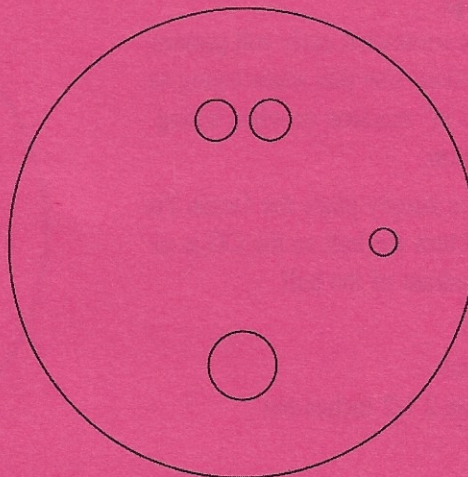
This drilling pattern produces a dynamic combination of midroll and a strong smooth hook that is consistent all the way to the pocket. Use this drilling pattern when trying to layout a ball that will cross the most boards.

To layout this drilling pattern measure from the Green Pin  $3 \frac{3}{8}$  inches to the right. This marks the bowlers axis point. From that point reverse the bowlers axis point coordinates to find the center of the grip. CG can lay anywhere on or just slightly above the horizontal axis line.

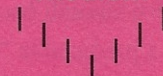
Ratings: length 6 backend 10

Top Weight:  $2 \frac{1}{2}$  to 4 ounces

Pin Location: pin in to 3 inches out



**Heavy to Medium**



**Heavy to Medium**



**Moderate Carrydown**



## Pin Up Leverage

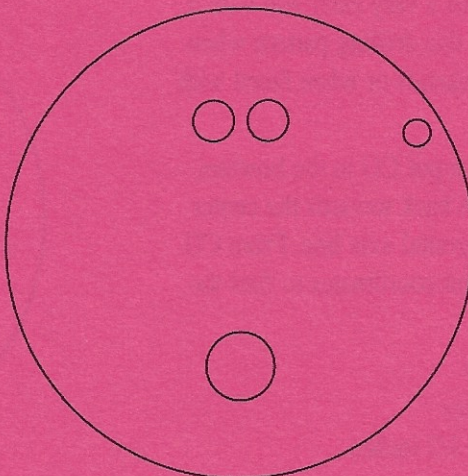
This layout produces a lot of length down the lane with a very strong backend reaction. Use this layout when trying to increase the angle of entry into the pocket for better carry.

To layout this drilling pattern measure from the Green Pin to the left  $3 \frac{3}{8}$  inches and make a mark. From this mark measure down  $3 \frac{3}{8}$  inches. This marks the center of the grip.

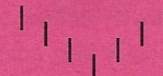
Ratings: length 7 backend 8

Top Weight: 3 to 4 ounces

Pin Location:  $1 \frac{1}{2}$  to  $3 \frac{1}{2}$  inches out



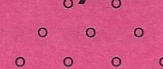
**Heavy to Medium**



**Heavy to Medium**



**Moderate Carrydown**



## Pin Up Label

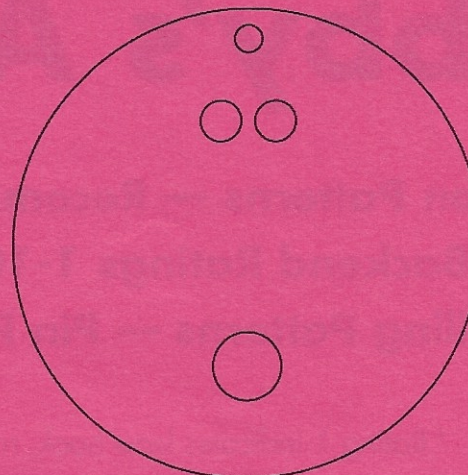
This drilling pattern produces an intermediate to long skid with a dynamic backend snap to give a steep angle of entry into the pocket.

To layout this drilling pattern, first turn the ball so the Green Pin is directly above the center of gravity (CG). Measure down from the Green Pin  $2 \frac{1}{2}$  inches thru the CG to locate the center of the finger bridge.

Ratings: length 8 backend 7

Top Weight:  $2 \frac{1}{2}$  to  $3 \frac{1}{2}$  ounces

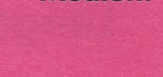
Pin Location: pin out 3 to 4 inches



**Medium to Dry**



**Heavy to Medium**



**Moderate Carrydown**

