

ALTER EGO



Columbia bowls the world over.
www.columbia300.com

Flip Block
*which creates differential
for more flare*

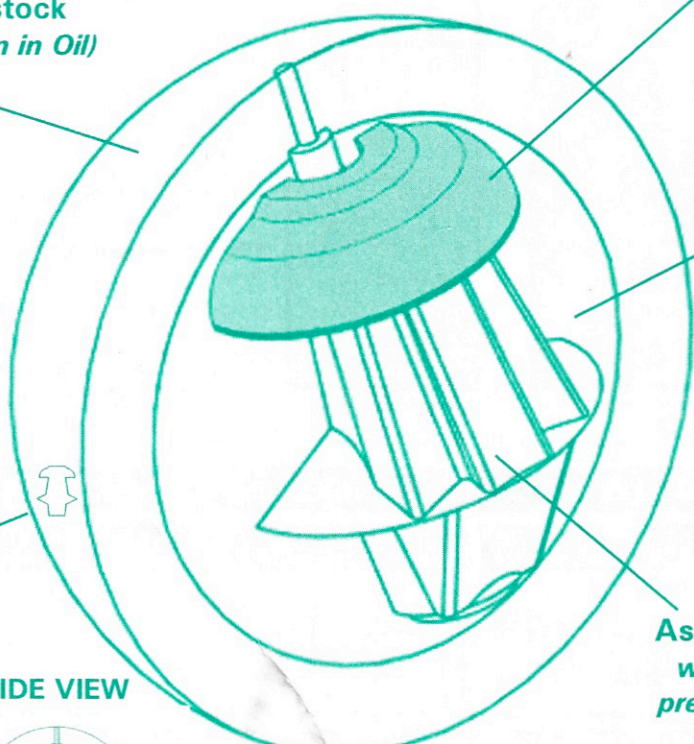
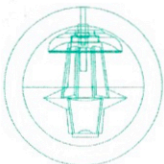
UFO™ Coverstock
(Ultimate Friction in Oil)

Stabilizer Core

Asymmetric Core
*which creates a
preferred spin axis*

**Preferred Spin
Axis Location**

FRONT VIEW SIDE VIEW



SUGGESTED DRILLING PATTERNS

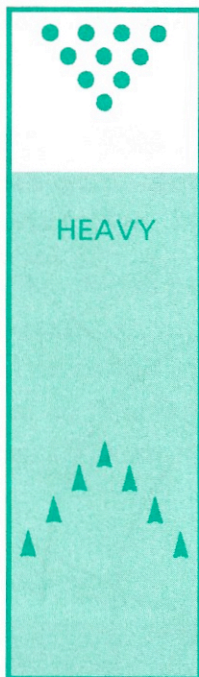
COMMON LANE CONDITIONS

WET/DRY
CONDITION



I

GUTTER TO GUTTER
CONDITION



II

MEDIUM LANE
CONDITION

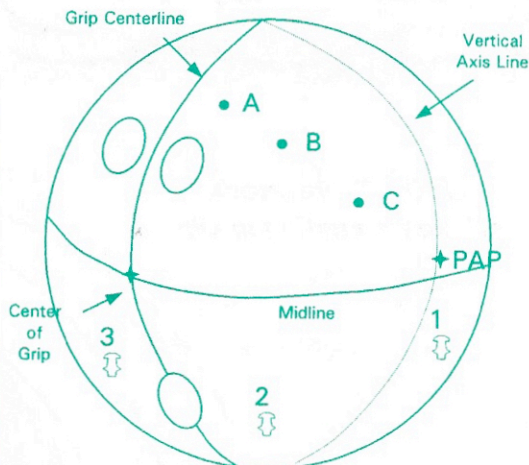


III

PAP-Positive Axis Point

Pin • Positions: A, B or C

Mass Bias Positions: 1, 2 or 3



Pin must be at least 1" towards grip center from VAL

This illustration is an example of a layout with a 5 1/2" PAP location from center of grip.

PIN & MASS BIAS PERFORMANCE LOCATOR

BALL REACTION - PIN LOCATOR	PIN POSITION	DISTANCE TO PAP
Length Drillings - reduced flare	A	5" - 6"
Max Ball Performance Drilling - max flare	B	3" - 4"
Roll Drilling - reduced flare	C	2"
BALL REACTION - MASS BIAS LOCATOR	POSITION	DISTANCE TO PAP
Early roll with even arcing backend	1	2" - 3"
Medium length with curving break point and continuous backend motion	2	4" - 5"
Length with hook and set motion	3	7" - 8"

is Mass Bias Indicator

Lane Condition	Pin Position	Position	Distance from Pin x to PAP	Front End Reaction	Back End Reaction	Flare 1 = Min 10 = Max	Suggested Pin Out
Medium - III	A	2	5" x 5"	Max Length	Smooth Curve	5	1" - 5"

Reduced flare will create less backend motion.

Lane Condition	Pin Position	Position	Distance from Pin x to PAP	Front End Reaction	Back End Reaction	Flare 1 = Min 10 = Max	Suggested Pin Out
Heavy - II	B	2	4" x 5"	Med Length	Strong Hook	10	1" - 5"
Heavy - II	B	1	4" x 3"	Med Length	Roll	7	2" - 4"

Maximum hook with continuous backend curve.

Lane Condition	Pin Position	Position	Distance from Pin x to PAP	Front End Reaction	Back End Reaction	Flare 1 = Min 10 = Max	Suggested Pin Out
Wet/Dry - I	C	2	2" x 5"	Roll	Small Arc	1	0" - 2"

Least hooking of all drillings.

The above recommended drillings have been found to work the best on these conditions. Please refer to the "Performance Locator" chart (on previous page) for more drilling options.

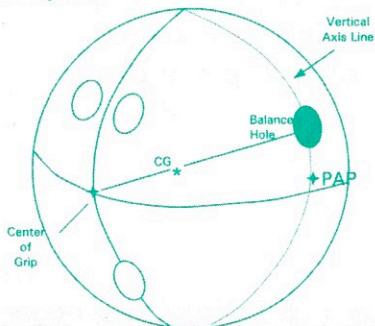
SURFACE

The Alter Ego™ comes out of the factory with a fine finish. This smooth sanded surface creates more hook in the front of the lane and promotes a curving break point. For more length and a stronger backend, the surface can be polished. A polished or compound surface can be adjusted with scotchbrite to increase the friction which will help control the ball reaction at the break point.

Remember to position pin on or above a line drawn from the PAP to the finger holes. If the pin is moved down (closer to the center of the grip), it might flare over the finger holes for high track players.

If a balance hole is required, it should be positioned on a line drawn from the center of the grip through the CG and located at the intersection with vertical axis line.

Example:



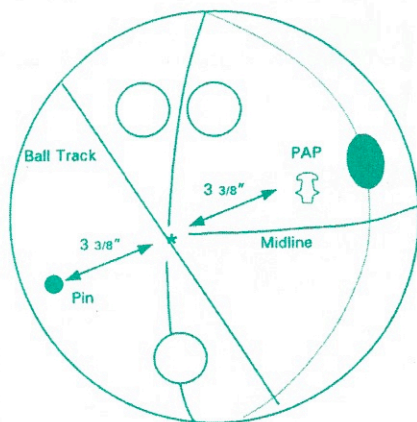
ALTER EGO

The Alter Ego™ is Columbia 300®'s first strong mass bias ball with a mass bias strength of .010". This ensures that the preferred spin location does not migrate when gripping holes are added to the ball.

THINGS TO REMEMBER

1. Any of the drillings can be drilled back to negative side-weight for earlier roll and less backend.
2. CG is defined as center of gravity.
3. PAP is defined as Positive Axis Point.
4. Recognize that all illustrations shown are for right-handers. Reverse for left-handers.

DRILLINGS FOR FULL ROLLERS



Maximum hook and flare to create strong backend. Put pin and  3 3/8" from center of grip and  2 1/2" above midline. Use 3 + " pin out balls.