The Wheel To Win.

Drilling Instructions

EBONITE™

BOWL TO WIN™

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The Matrix III

Trimax III

Coverstock Big Wheel Reactive Resin™, 800 grit sanded then factory polished

Core Medium RG, BOMB's AWAY asymmetric core design with large volume, torque enhancing flip block. All weights use the same core shape.

TPS III

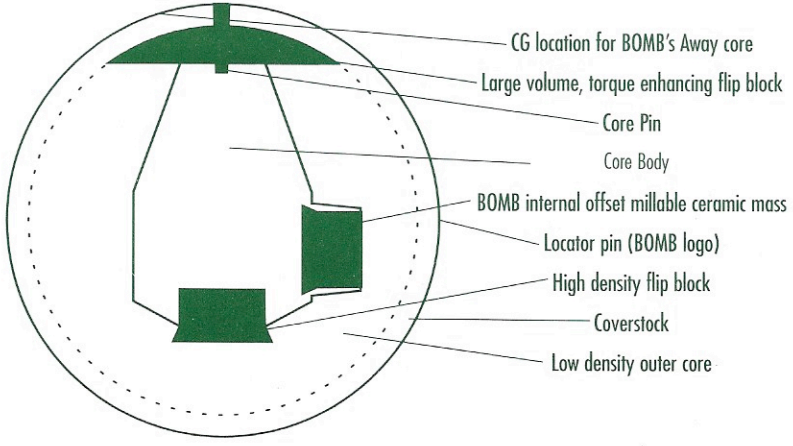
Coverstock Medium loading of silica particles in Big Wheel Reactive Resin™, factory polished then sanded with 15 micron sandpaper.

Core Medium-low RG, BOMB's AWAY asymmetric core design with large volume, torque enhancing flip block. All weights use the same core shape.

		16#	15#	14#	13#	12#
Radius of Gyration	Trimax III - New	2.55	2.55	2.53	2.55	2.63
	Trimax II	2.53	2.53	2.53	2.55	2.63
	Trimax I	2.51	2.51	2.50	2.59	2.62
	TPSIII - New	2.50	2.50	2.52	2.56	2.64
	TPS II	2.53	2.53	2.53	2.56	2.64
	TPS I	2.51	2.51	2.50	2.59	2.62
Differential	Trimax III - New	.048	.055	.066	.066	.059
	Trimax II	.055	.056	.066	.066	.059
	Trimax I	.046	.050	.054	.043	.046
	TPS III - New	.045	.048	.054	.066	.059
	TPS II	.060	.062	.068	.066	.059
	TPS I	.047	.051	.055	.044	.047

	Trimax III	Trimax II	Trimax I	TPS III	TPS II	TPS I
Length (scale 1 to 10)	6.1	5.7	6.8	2.8	5.2	5.0
Backend (scale 1 to 12)	12.0	11.5	10.0	11.6	11.5	11.0
Overall Hook (scale 1 to 25)						
Scotch brite sanded	23.0	22.5	20.0	23.5	23.0	23.0
Factory polished	14.5	13.4	12.6	14.2	14.0	15.0

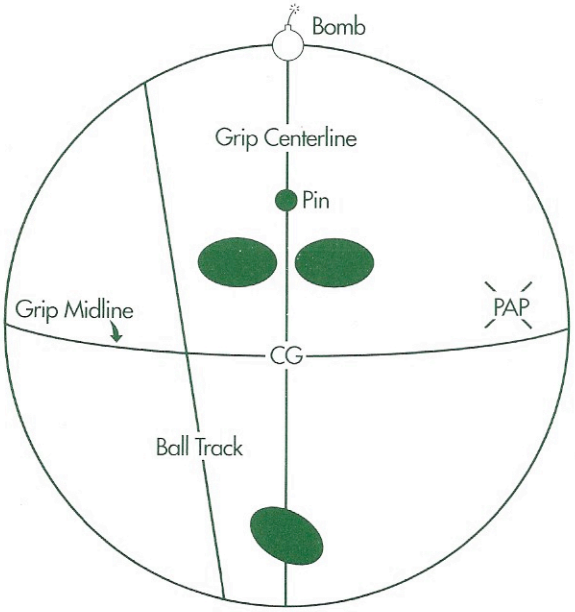
Trimax III & TPS III



Drilling Instructions

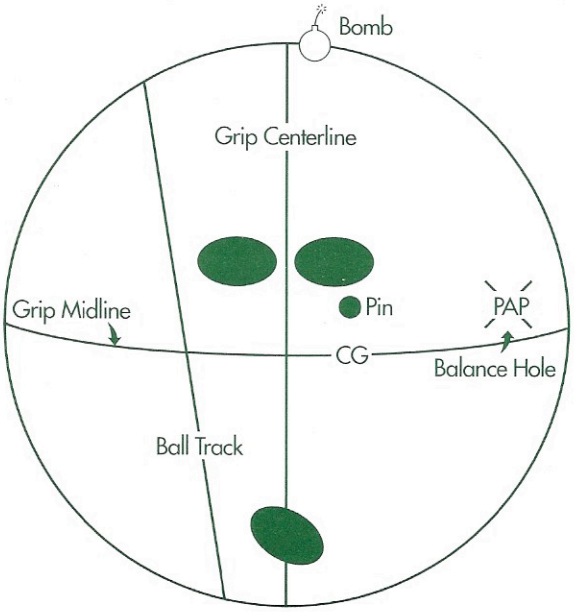
The following drilling instructions are 4 basic layouts for different bowler's styles. These are by no means the only drilling layouts. You may combine any desired pin position (distance from PAP) with any BOMB location. Consult the BOMB placements below.

Placing the pin further from the PAP (up to 6½ inches away) will result in a higher RG plane, delaying



Drilling #1 5½" Pin Above / 12:00 BOMB

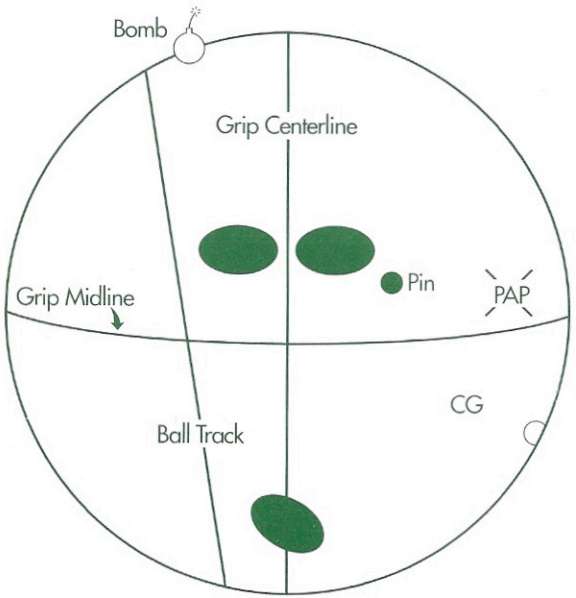
Ball Choice: Pin out 2 to 5", all top weights
Reaction: Delayed breakpoint with strong backend
Suitable for: Slower ball speeds, power players, or drier heads and pines
Flare potential: Medium
Pin Placement: 5½" from bowler's PAP, located above the fingers. If PAP is not known, place pin above the fingers on the grip centerline.
BOMB placement: 12:00 direction from the pin (above the fingers)
Balance Hole: None needed



Drilling #2 4½" Pin / 12:00 BOMB

Ball Choice: Pin out 1 to 3", all top weights
Reaction: Medium length with strong backend
Suitable for: Medium ball speeds, medium RPM players
Flare potential: Medium-high
Pin Placement: 4½" from bowler's PAP, located below the fingers. If PAP is not known, place pin below the ring finger.
BOMB placement: 12:00 direction from the pin (above the fingers)
Balance Hole: If needed, place balance hole on PAP to remove excess side weight. If an earlier breakpoint is needed, drill back to ½ oz. negative side weight.

the breakpoint. Placing the pin closer to the PAP (lower RG plane) will result in an earlier breakpoint. Maximum flare potential occurs with the pin in a leverage position, 3⅜ inches from the PAP. Maximum flare is desired in heavier oil, heavier carrydown environments and for those with faster ball speeds and lower tracks. Adjust surface texture to fine-tune breakpoint.



Drilling #3 3⅜" Pin / 10:30 BOMB

Ball Choice: Pin out 2 to 5", top weights up to 3¼ oz.

Reaction: Earliest breakpoint, maximum hook potential in oil

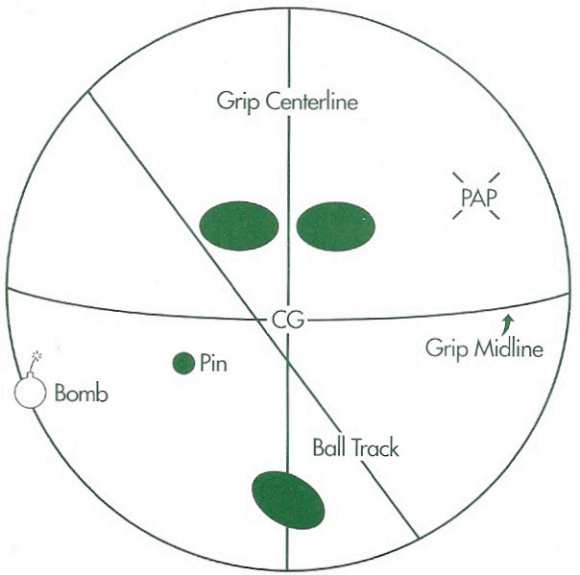
Suitable for: Low ball tracks, lower RPM players, faster ball speeds

Flare potential: High

Pin Placement: 3⅜" from bowler's PAP, located below the fingers. If PAP is not known, place pin next to the ring finger.

BOMB placement: 10:30 direction from the pin (in the negative/finger quadrant). For lefthanders, BOMB will be in a 1:30 direction from the center of span.

Balance Hole: Place 6 inches from center of grip on a line drawn through the center of gravity. Drill balance hole to a depth of 2½" to 3". Ending side weight between zero and ½ oz. negative side weight. (The bowtie of the track flare on the 10:30 BOMB placement will be lower than that of BOMB placements of 12:00. Placing the balance hole below the PAP on the vertical axis line is essential to raise the bowtie into a flare safe area.)



Drilling #4 Full Roller Leverage

Ball Choice: Pin out 2 to 4", all top weights

Reaction: Earliest breakpoint, maximum hook potential in oil

Suitable for: Full rollers.

Flare potential: High

Pin Placement: 3" from bowler's center of span, located in an 8:00 direction from the center of span (placing the pin closer to the center of span will delay the breakpoint).

BOMB placement: 8:00 direction from the center of span on the bottom half of the ball

Balance Hole: If needed, place 6" from center of span in a 2:00 direction.

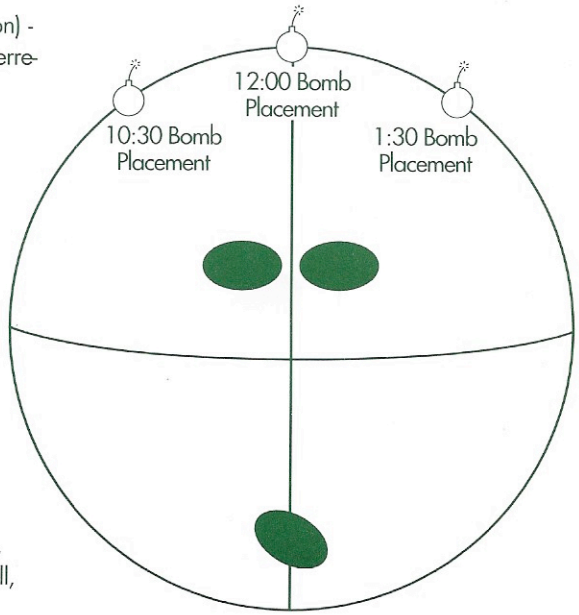
Bombs Away Placements

BOMB placements are referenced from the pin; Stacking the BOMB straight above the pin will result in a 12:00 BOMB placement. Turning the BOMB 45 degrees to the left will result in a 10:30 placement. Turning the BOMB 45 degrees to the right will result in a 1:30 BOMB placement. BOMB locations are the secondary influence in determining ball reaction. The pin position (distance from PAP) is the most important. The following are the influences of the BOMB placements:

12:00 BOMB strong move at breakpoint. Best for medium ball speeds, 35 to 75 degrees of axis rotation, inside angles. This is the best all-around placement.

10:30 BOMB (lefthanders will have the BOMB in a 1:30 direction to the pin) - early rev and strong forward roll at the breakpoint. The 10:30 BOMB placement is suggested for lower track players and faster ball speeds. NOTE: the bowtie position for the 10:30 BOMB placement is lower than that of 12:00 and 1:30 placements. Use bigger pin outs so that the Center of Gravity (CG) and the balance hole is in the thumb/positive quadrant (to the right of the thumb for righthanders, to the left of the thumb for lefthanders). This will realign the bowtie position into a flare safe position.

1:30 position (lefthanders will have the BOMB in a 10:30 direction) - smooth, continuous arc at the breakpoint. Best for slow ball speeds, overreacting lane conditions.



Surface Preparation

The TPS I, II and III particle resin coverstocks and the Trimax I, II and III reactive resin™ coverstocks are formulated to fine-tune the breakpoint easily with scuff pads and polishes. We recommended Powerhouse Quick Sand, Extender, Factory Finish, and Particle polishes as well as burgundy, grey, and white scuff pads to maximize energy retention and release. Please consult the Powerhouse brochure for product applications. Having the proper surface texture is the most important factor for optimum ball reaction.

CG Placements

The CG (center of gravity) will be on the opposite side of the pin from the BOMB. It will generally fall in line with the pin and the BOMB, but may be slightly to the left or to the right. The CG is denoted by small, three-ringed bullseye logo.

Cleaning and Maintenance

To promote a longer lifespan, a regular schedule of cleaning is recommended to reduce the amount of oil and dirt that is absorbed into the coverstock. We suggest a strong degreasing formula such as Powerhouse Energizer Cleaner or Powerhouse Ball Scrubs to break down lane oil and agitate dirt loose from within the ball's pore structure. Wiping your ball with the Ebonite Oil-Free towel in between shots will improve upon the consistency of your ball's reaction. Powerhouse Energizer Cleaner, Ball Scrubs, and the Oil-Free towel are legal for use during ABC/WBC competition, when it matters most.

Resurfacing

Matrix Trimax - To restore original factory finish reaction, remove track scratches with sandpaper. Use 800 grit sandpaper or grey scuff pad as the final sanding step. Polish on a ball spinner with Powerhouse Factory Finish polish 2 to 4 minutes each side of the ball.

Matrix TPS - To restore original factory finish reaction, resurface track scratches with sandpaper. Use 800 grit or grey scuff pad as the final sanding step. Polish on a ball spinner with Powerhouse Factory Finish polish 2 to 4 minutes each side. After polishing, sand ball with 15 micron or 1200 grit sandpaper to the create original finish.

Matrix I's and II's have set the standard for high performance balls with a balanced combination of predictability, control and power. Countless emails and letters have poured in as testimonials for the incredible hitting power and high scoring that Matrix has achieved worldwide. Ebonite has evolved this new generation, Matrix Trimax III and TPS III, from the same three components. But cranked up the power!

The new Trimax III™

"Big Wheel" is a term used to describe covering a lot of boards, playing from inside to out, turning the corner, getting it back from downtown. Big Wheel Reactive Resin™ is our newest coverstock, designed to allow you to play further inside, provide smoothness through the fronts, and unleash its power down the lane. The rigid surface texture allows for oil displacement, more resistance to oil carrydown. It clears the heads and pines easily and generates 16 to 25% more hook potential from breakpoint to pocket and increases angle of entry by 8 to 11% than the I's and II's, reducing deflection when playing inside angles. When the heads start to go, go to the Big Wheel.

The new TPS III™

Using silica particles suspended in the new Big Wheel Reactive Resin™ has increased the hook power potential of the TPS III by 6 to 8% and entry angle by 4 to 6% over the TPS I and II. The core/coverstock combination creates an earlier rev, similar to the TPS I, with the strong, continuous backend hook of the TPS II. And the ease of which the TPS III coverstock polishes and sands allows it to conform to a wide variety of lane conditions.

Matrix III™. The Big Wheel.

Matrix I and II delivered the controllability and predictability aspects. Matrix III focuses on excitement, power. A matrix is, by definition, "something within which something else originates." And you will see the "genes" of the original versions in the Matrix III's, an extension of the thoroughbred bloodlines responsible for tournament titles and honor scores the world over. But through chemical "gene" enhancement, the Matrix has evolved into a power animal.

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Matrix™ TPS **Matrix™ Trimax** **Matrix™ TPS II** **Matrix™ Trimax™II**
Matrix™ TPS III **Matrix™ Trimax™III**