

**Any bowler.
Any style.
Any lane condition.
Any questions?**



**Drilling
Instructions**

EBONITE 
BOWL TO WIN™
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The Matrix System

Coverstock

Matrix Trimax II - New	Trimax II - aggressive MG 26 additive in Trimax I formula.
Matrix TPS II - New	TPS II - medium loading of particles in Trimax II reactive.
Matrix Trimax I	Trimax I
Matrix TPS I	TPS I, with high loading of particles in Super Tack Plus reactive.

Factory Finish

Matrix Trimax II - New	800 grit sand, polished with 600 and 900 grit RCS polishes.
Matrix TPS II - New	15 micron sanded.
Matrix Trimax I	800 grit sand, polished with 600 and 900 grit RCS polishes.
Matrix TPS I	800 grit sand, polished with 600, 900, 1500 grit RCS polishes.

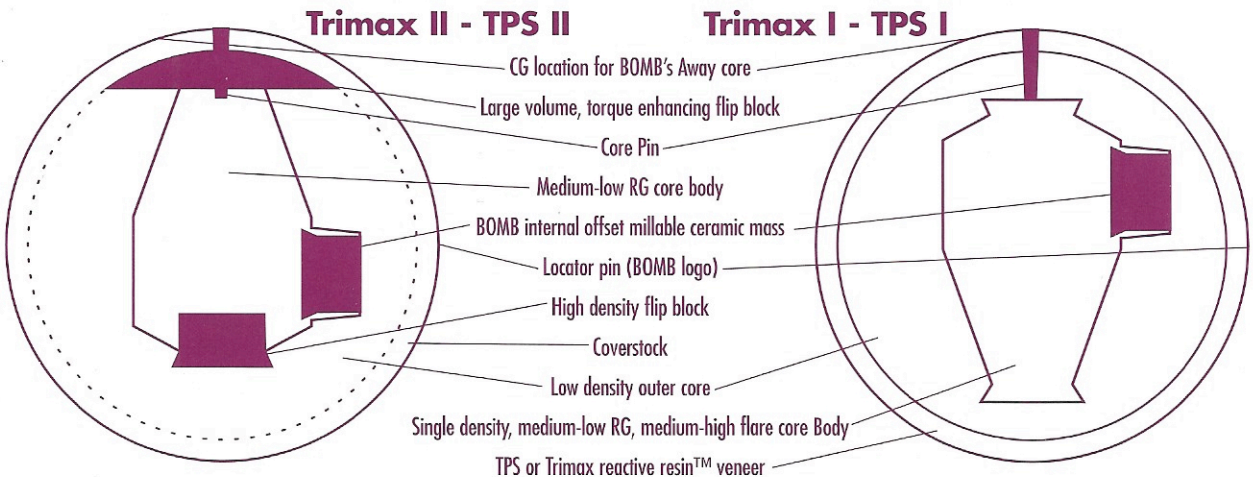
RG (actual measurement)

	16#	15#	14#	13#	12#
New - Matrix Trimax II	2.53	2.53	2.53	2.55	2.63
New - Matrix TPS II	2.53	2.53	2.53	2.56	2.64
Matrix Trimax I	2.51	2.51	2.50	2.59	2.62
Matrix TPS I	2.51	2.51	2.50	2.59	2.62

Differential (actual measurement)

New - Matrix Trimax II	0.055	0.056	0.066	0.066	0.059
New - Matrix TPS II	0.060	0.062	0.068	0.066	0.059
Matrix Trimax I	0.046	0.050	0.054	0.043	0.046
Matrix TPS I	0.047	0.051	0.055	0.044	0.047

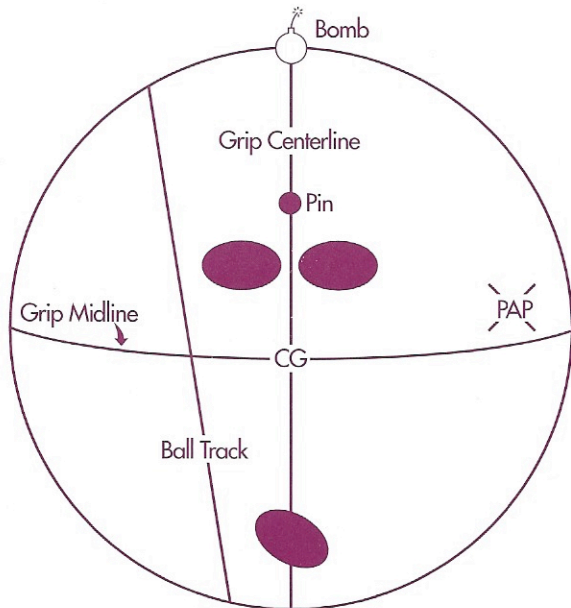
	Trimax II	TPS II	Trimax I	TPS I
Mass Bias Strength	0.016	0.014	0.018	0.018
Length (scale of 1 to 10)	5.7	5.2	6.8	5.0
Backend (scale of 1 to 12)	11.5	11.5	10.0	11.0
Overall Hook (scale of 1 to 23)				
scotch brite sanded	22.5	23.0	20.0	23.0
factory polished	13.4	14.0	12.6	15.0



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

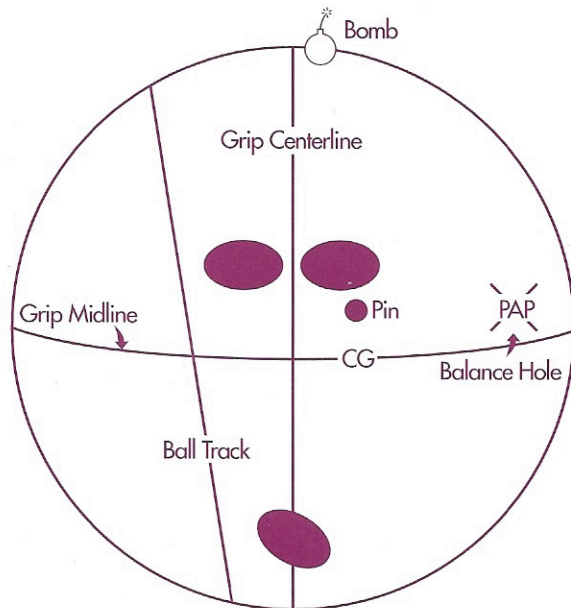
Suitable for: Slower ball speeds, power players, or drier heads and pines

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

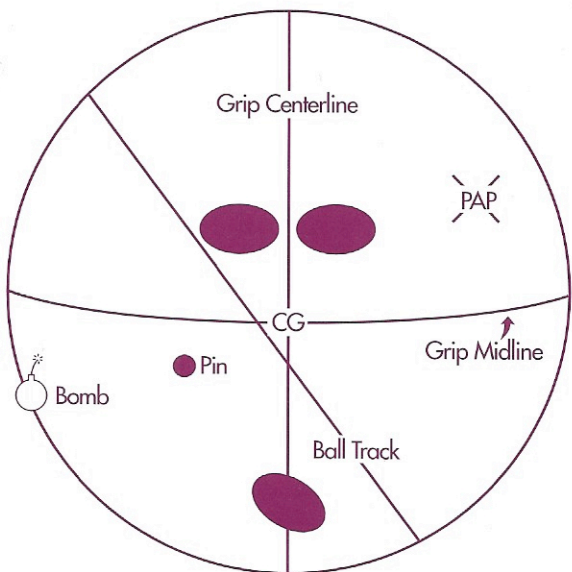
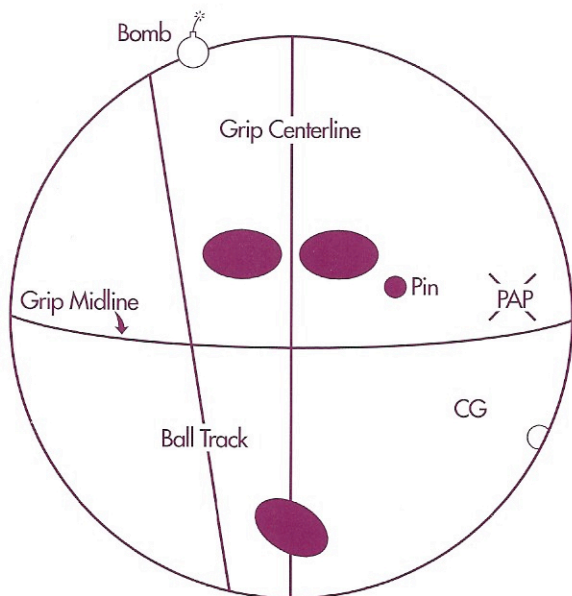
Flare potential: Medium-high

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, 3 $\frac{3}{8}$ 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 3 $\frac{3}{8}$ " Pin / 10:30 BOMB

Ball Choice: Pin out 2 to 5", top weights up to 3 $\frac{1}{4}$ 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: 3 $\frac{3}{8}$ " 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 2 $\frac{1}{2}$ " to 3". Ending side weight between zero and $\frac{1}{2}$ 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.

With Matrix™, we created a series of high performance balls that were designed with a balanced combination of predictability, control and power for any type of bowler and lane condition. And as you know, we garnered new-found respect for these incredible balls in the industry and in the pro shops around the world. Now we'd like to introduce two new additions, the next generation, the Matrix II's.

The new Trimax II™.

We've kicked the original Trimax coverstock up a notch. Using a high tech additive, it has a more aggressive Reactive Resin™, better for faster ball speeds and lower track players - so they maintain predictability and consistency of the original Trimax and combine it with more power.

Inside, our unique top flip block and dense bottom flip block increases differential 20% more than the original Trimax core. So you'll get increased track flare and quicker energy release for a stronger backend hook on heavier oil conditions.

The new TPS II™.

Through extensive testing, Ebonite has found the optimum particle loading that provides the proper combination of traction and reaction. So now, it retains energy longer than our original TPS. This means the TPS II is more versatile on a wider variety of medium-to-heavy oil lane conditions.

With our top and bottom flip block technology, which increases torque, the track flare is increased to give you a quicker, more dramatic release of energy at the breakpoint. You'll also get more length, more energy and a stronger backend than the original TPS. So you can play more areas of the lane...moves as the lanes break down...retain a powerful backend hook.

Matrix II. The next generation

The original Matrix Trimax and TPS performed like nobody's business. We expect these new additions to not only complement them, but raise the bar. After all, Ebonite has become an industry leader not by resting on our laurels, but innovating in all facets of the industry. So look into the new Matrix II at your pro shop today. It's fast becoming the one and only Series for serious bowlers.


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Matrix™ TPS Matrix™ Trimax™ Matrix™ TPS II Matrix™ Trimax™II

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 (left-handers 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 right-handers, to the left of the thumb for left-handers). This will realign the bowtie position into a flare safe position.

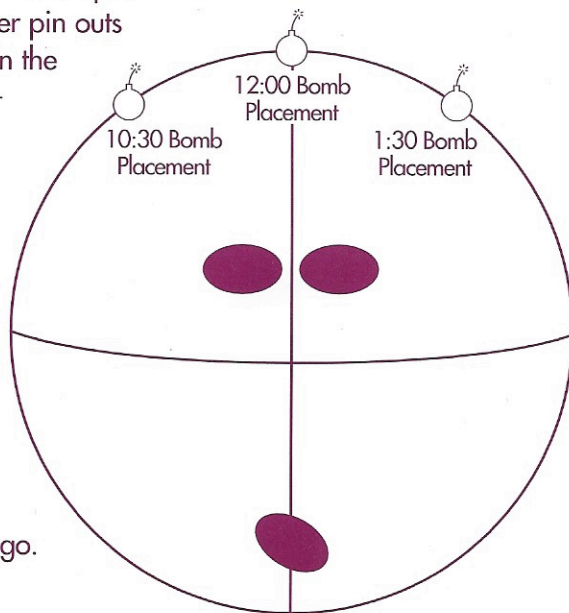
1:30 position (left-handers will have the BOMB in a 10:30 direction) - smooth, continuous arc at the breakpoint. Best for slow ball speeds, overreacting lane conditions.

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 a small, three-ringed bullseye logo.

Surface Preparation

The TPS I & II particle resin coverstocks and TRIMAX I & II reactive resin™ coverstocks are formulated to fine-tune the breakpoint easily with scuff pads and polishes. Consult the Surface Friction Guide for more information. Having the proper surface texture is the most important factor for optimum ball reaction.



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