

BLOCK START MECHANICS

The goal of any start: Produce max horizontal force while minimizing forces in all other directions.

Prior to the Set Position:

1. Get in 3-5 practice starts of 10-15 meters. Do NOT do the 2-3 step starts. They only promote poor mechanics. Practice as you will perform.
2. Stay loose, stay relaxed, stay moving.
3. Position blocks appropriately (200/400, tangent to curve).

“Runners, to your marks.”

1. *Be the SECOND-TO-LAST runner in the blocks.* The starter will wait for you, so no need to rush. If you’re first, you’ll have to hold yourself in the cramped set position for longer than you want. If you’re last, *then* the starter will yell at you. So be second-to-last.
2. High finger bridge; shoulder-width hand separation.
3. Shoulders back (not hunched, relaxed) and either above or slightly in front of hands.
4. Three deeps breaths, exhale, then calm in blocks.
5. Core MUST be tight (and *strong*; this is the reason for all the general strength routines).

“Set!”

1. Come up swiftly but controlled.
2. Tight core; capture breath and hold.
3. There should be a straight line along your spine and neck to the peak of your head. Relax your head; don’t tuck it or have it up (you don’t need to look down the track; you know where you’re going).
4. Lead foot under the hip.
5. Don’t lean. Stay poised.
6. Front leg should be at a 90 degree angle with ground; *never* less, sometimes more.
7. Feet should be flush with the blocks (heels all the way back). Use your ankle spring.

The Gun

1. PUSH AGAINST THE BLOCKS. Do not step out; EXPLODE out.
2. Aggressive separation of hands.
3. Full three-point extension (fully extend the ankle, the knee, the hip).
4. Should be able to draw a straight line from the heel of your power leg to the base of your head, a line which should be 45 degrees from the ground.
5. Keep heel recovery low.
6. Allow body to unfold naturally; do NOT stand straight up.

ACCELERATION DYNAMICS

SYSTEM	PROGRESSION
Stride Length	Short → Long
Ground Contact Time	Long → Short
Shin Angle w/ Ground (degrees)	Small → Big
Velocity	Slow → Fast
Step Frequency	Slow → Fast
Heel Recovery	Low → High