

JEFFREY E. BLACKMAN

# The Sprint

# Start

**Save as many split-seconds as you can on the start and you'll be in pretty good shape at the finish.**

**T**rack coaches have been striving for years to develop some kind of technique or gimmick to improve their sprinters' performance. Research has produced some staggering advances, but none has had a more significant effect than the starting block.

Check the evolution of the start from stand to the crouch to the trowel-dug holes and you will see that nothing really dramatic occurred until the starting block came along and started propelling sprinters toward the sub-10-second 100.

However, the starting block alone did not produce the magic. That had to wait until the proper techniques came along to maximize the efficiency of the blocks.

Most sprinters, from their

beginnings on through high school, have poor technique. Even many of the top quality schoolboy sprinters who go on to college have to be monitored in this area.

**Fact:** While muscular strength and power are essential in optimizing the sprinter's potential, they are not really prerequisites of proper technique. Coaches who can teach the proper techniques will give their athletes an advantage—enable the kids with average speed to become faster sprinters.

### **"TO YOUR MARKS"** (Photos 1 and 2):

Each athlete must establish the correct distance to set up from the starting line. In almost every case, the lead (or front) leg in the blocks should be even with the starting line and raised off the ground. The

front pedal of the block must be positioned to allow for this.

The rear pedal should be placed in a comfortable position approximately eight to ten inches behind the lead pedal to allow the rear knee to rest on the ground during this phase. The exact position of the pedal can be determined with more accuracy during the "set" position.

Athletes who do not possess the leg strength needed to start with the blocks positioned in this fashion may alleviate some of the force requirements by moving the entire block a few inches farther behind the starting line.

After positioning himself in the blocks, the athlete must lean forward and become motionless. The shoulders will now be over the starting line, the precise distance over the line being dependent on the athlete's size. An angle of approximately 75 degrees will

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produce the desired lean, as shown in Photos 1 and 2.

Cue: The athlete's fingers should become slightly sore from the amount of weight thrust upon them. This shoulder position remains unchanged throughout the set position.

### "SET"

(Photos 3 and 4):

The "set" position is the heart of the start. It is perhaps the most important body position in the entire process. Proper positions will produce a more powerful and consistent start.

The lead leg in the "set" position should create a 90-degree angle between the lower and upper parts of the leg. The 90 degrees will produce the most powerful and efficient position for pushing or driving away from the blocks.

Higher or lower angles will prevent maximum drive and lead to a host of other problems.

The rear leg should attain an angle of approximately 120 degrees allowing the leg to push off the pedal as well as rotate under the body to become the first step.

An important point to remember is that while the lead leg produces the greatest amount of force away from the blocks, both legs must push off to gain maximum efficiency.

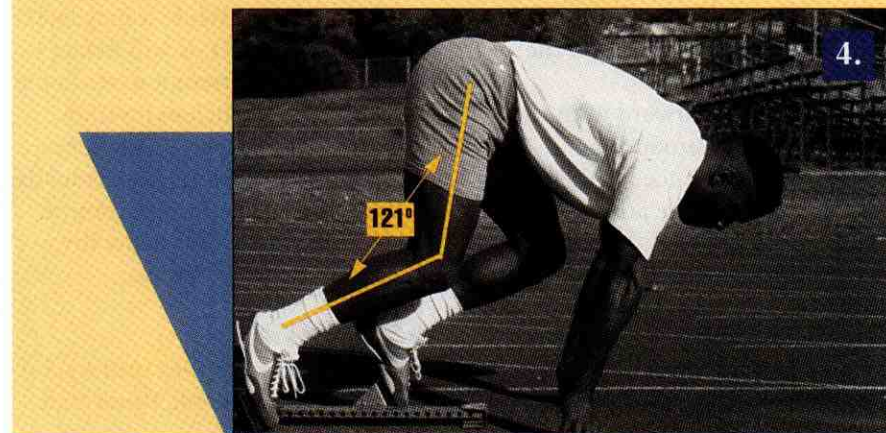
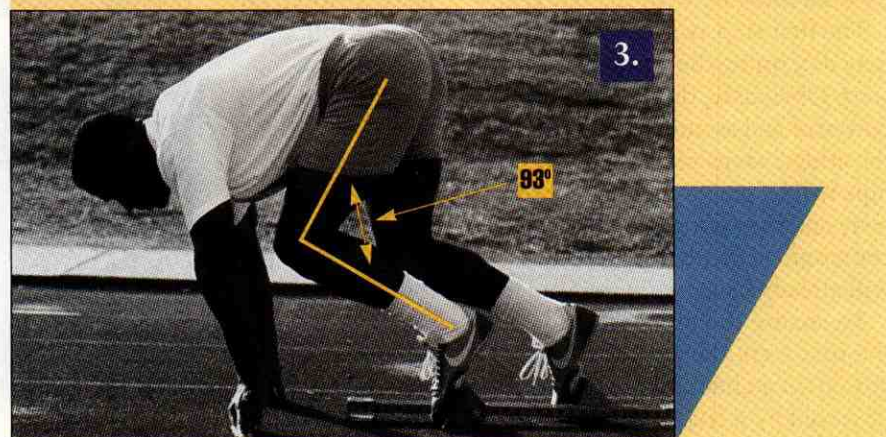
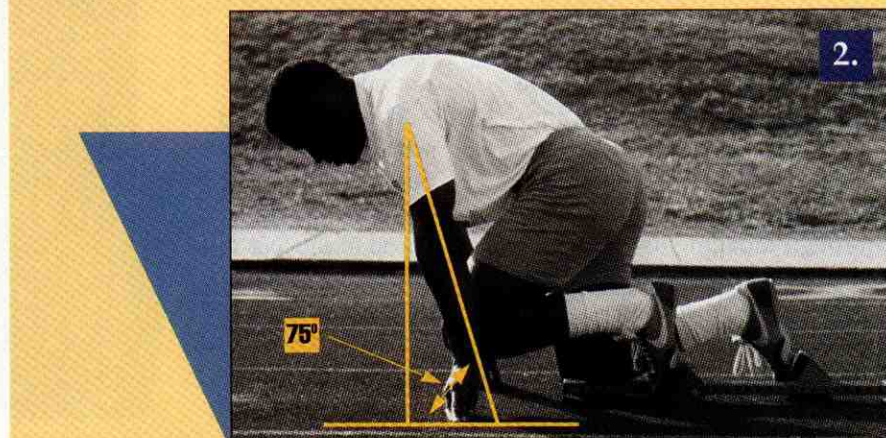
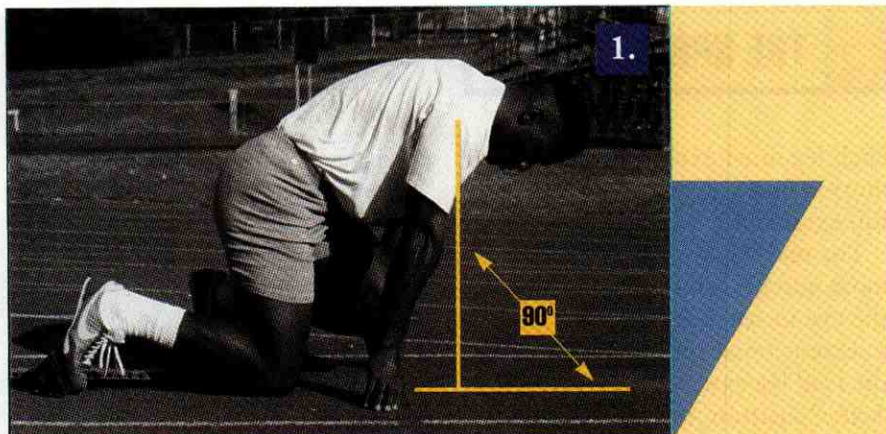
### "GO"

(Photos 5-7):

The sprinter's reaction to the gun should, hopefully, involve no thought process. It should just be an automatic response to the sound. The reaction process is next to impossible to teach and learn, but the proper mechanics that provide for a good start can be taught.

The movement at the gun should be as explosive as possible. The specific movements are found in two actions, both occurring at the same time.

One of these actions occurs as both legs exert as much force against the block pedals as possible.





## THE SPRINT START

Each leg must extend in a driving motion forward, coming to almost full extension.

The rear leg must be extended more quickly, almost too fast for the eye to see, because it is closer to extension at the set position. As the lead leg extends from its 90-degree position, the rear leg must leave the block pedal.

The second action occurring at this time involves the arms. Both arms must leave the ground and begin the exaggerated pumping action. Because the arms serve as counterbalances for the legs, they must be forced into quick and thorough movements while the legs are in the same type of action.

Also, because they are counterbalances, the arms must act in opposition of each leg. In other words, if the first step is with the right foot, the first arm swing forward must be with the left arm.

The first step away from the blocks may determine the success of the start. Obviously, the step must be as powerful and as quick as possible. If the athlete steps too far forward, the hips will be drawn underneath the body and the sprinter will seriously compromise the driving position. He will already have begun to stand up.

To ensure the proper distance on the first step, the sprinter should put down a checkmark that can be observed by a coach or bystander. He should do this by standing normally with the heel of each foot placed against the pedals of the starting block.

A casual step forward with the rear foot should produce an approximate distance for the first step. In practice, the athlete should always try to step on that mark.

The athletes themselves should be warned not to try to observe the step, as this will produce unsatisfactory results. As the sprinter develops explosiveness, the mark may be moved forward as needed to maintain

efficiency.

Photos 5 to 7 delineates the proper foot placement on the first step. Since the model in the photo is a highly trained and explosive starter, his first step is a little longer than the norm.

This kind of step will ensure the athletes of keeping the body weight ahead of the feet and heading in the desired direction.

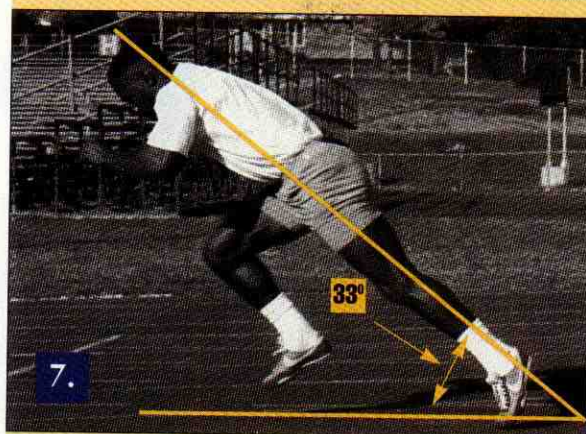
The next few steps are of equal importance. By maintaining proper body position, the athlete will enhance the driving phase of the start. Correct body lean will produce the best acceleration.

The athlete in Photo 7 displays a good position—which can only be achieved by not trying to get into normal running position too soon. While it may feel faster to the sprinter, it will in fact force the body to attempt to reach top speed from an inefficient position.

Photo 7 also displays excellent body lean—a position that gradually elevates until the normal running stride is attained. This generally occurs in 10 to 15 meters.

### TO BE A WINNER:

A lot of thinking goes into a good start. Too many people think that all a sprinter has to do is run fast.



Believe it or not, the fastest runner does not always win. A proper start can spell the difference between winning and losing.

Though it may cover up to only 15 meters before the runner goes into his normal sprinting stride, those 15 meters may be enough to determine the overall success of the sprinter.

Sprinting success is often measured in split-seconds. Save as many of these split-seconds as you can on the start, and you'll be in pretty good shape at the finish! ■