Slalom Keys for the First-Timer

Whack, whack, whack.
The sound of slalom. The collision of plastic on plastic can either be addicting or intimidating. Ski racers dressed like warriors ready for battle. This is slalom. Although this may be the macho attitude, slalom could also be regarded as the ballet of ski racing. Weaving through red and blue flagless gates is as much an art form as it is World War III.

While the speed events deal with high external forces, slalom deals with high internal forces. The average time per turn on the men’s world cup is only 0.82 seconds—not much time, so every tenth of a second is critical to the job of negotiating gates. While slalom can seem incredibly athletic, it is precision that is the key to success. Traveling 28 mph with a ski tip that is only 1 mm away from the gate is indeed a finesse proposition.

We envision slalom as a fast event because we hear clichés like “quick feet” and “fast twitch muscle fiber.” Moving fast is not necessarily the answer. One of the reasons for DNFs (Did Not Finish) is “hooking.” Hooking is where the inside ski tip ends up on the wrong side of the gate. If the ski tip ends up on the inside side of the gate, then turning the skis too fast is the problem.

Simultaneous leg steering
Being precise involves knowing where your skis are at all times. Since there is not much time between gates, turning the feet simultaneously is advantageous. This is a general rule, and on hard snow, or a result of a low line, a rule that is broken. In the search for speed there are times when the finish of one turn melds into the next. A “finishtimation” of sorts emerges, when the finish and initiation blend into one move.

Gate clearing
To ski a tight line, the body travels through the gate as opposed to around it. This involves “clearing,” blocking, or moving the gate out of the way. The important part of this gate-clearing movement is not so much what you do, but what you don’t do. Keeping a body quiet in space is important. Any reaching movement toward the gate must be independent of the torso.

Outside arm clearing is the convention, although an inside-arm clear has many valuable uses (see figure 1). Flushes start with an

Figure 1 Ivica Kostelic, so close to the gate that his inside ski intuitively slides on top of his outside ski. In spite of being so close, Ivica prepares for an inside arm clear.

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outside arm and continue with that same arm, which makes it an outside, inside, outside arm clearing strategy. Learning an inside arm clear will also serve you well in developing jumps which seem to migrate the line farther and farther from the gate with each passing skier. If the outside arm clear is your only option, the odds of overreaching or banking the turn are increased. Neither are a good recipe for finding the finish line.

**Vision**
To facilitate your body going through the gate rather than around it, focus your vision to the inside of the turn by looking to the opposite side of the gate from where your skis will go. Since the body tends to follow the lead of the head and eyes, this will help to get you closer to the gate such that you ski through rather than around the gate. Don’t confuse this with leaning in, but using your vision to merely lead your body to the inside of the turn and through the gate.

**Vertical spine line**
The external forces in slalom, albeit high, are less than in the other events. Therefore the inclination we see at higher speeds is replaced with greater angulation in slalom. This bend is solely at the hip joint, and when performed correctly leaves the spine in an anatomically aligned position. This is not only good for a Master’s aging back, but a biomechanically-efficient edging position. We do see inclination although the risk of a lateral balance issue is increased. A vertical spine line eliminates the travel distance of the upper body and creates a solid support for the lower body to edge the ski(s) against.

**Pressure in the fall line**
No matter how much the turn is down or across the hill, the general rule is to create pressure in the fall line. This is accomplished, first, by having purchase with the ski edge in the snow and then standing against, or better yet, extending against the ski.

**Round turns**
One of the reasons those World Cup guys can look so slinky and flowing (and are fast) is that their turns are round. Skiers that tighten their turn shape during the turn end up with unmanageable forces. These turns end up in a skid or chatter, both leading to a loss in line.

**Gate contact**
A concern of a round turn is its placement around the gate. Basically, how much of that round turn is above the gate...
and how much is below the gate! A line that has half of the turn above the gate and half the turn below the gate is not always the safest, but it will be the fastest. Safe in the sense that the margin for error is nil, and fast in that to go any straighter would most likely scrub speed. This 50/50 general rule is for even rhythmic, swinging turns. This round line can be further dissected.

Taking into account the upcoming gate, the angle of gate contact should be such that the “gate fall” is toward the upcoming gate. This can be seen by the indentation in the snow the gate has left from it impacting the snow. If this gate fall impression is more downhill than toward the next gate, too little of the turn was accomplished above the turning gate. If the track is more across the hill than toward the upcoming gate, it would evidence that the skier completed too much of the turn above the gate—although safe, it is slow!

Fore/aft movement

Staying in the “sweet spot” is an often-heard cliché—basically a mantra of racers that have fore/aft balance issues. Attempting to stay in one spot on the ski is a novice approach to balance. Although difficult to see in eight tenths of a second, elite athletes initiate with tip pressure and finish with tail pressure. This slight fore/aft movement is faster and will actually facilitate balance. To achieve this sort of fore/aft balance, there needs to be tension in the ankles during the entire turn. Don’t confuse this with just flexion of the ankles. While flexion is good, it does not necessarily create balance or tip pressure. The movement forward comes from leg and hip extension.

Inside leg flexion

Flexion of the inside knee and hip are essential for the extreme edge angles needed for tight quick turns in slalom. This flexion allows for angulation, which permits outside ski dominance. With the inside leg essentially out of the way for angulation, the outside ski is free to do its job. The inside ski then works as a pressure control device, either adding to or taking away pressure from the outside ski by increased flexion or extension during the turn.

To master this extreme position requires outside ski dominance with the ability to balance on that ski. Practice skiing one-ski drills. Then progress to greater independent movements with the inside ski.

While slalom is a seemingly fast event, the real secrets lie in precision. Whether you are a seasoned slalom skier or thinking about entering your first slalom race, it will be the precision you apply that will make you not only successful at finding the finish line, but will be the key to walking away with a medal at the end of race day.

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Photos: Getty Images and RonLeMaster

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