

"Like any professional, amateur or Olympic athletes want to make the most of their skill," Ken Read said in a Dec 2002 Ski Canada article. He went on to say....."pared down to the bare essentials, Olympic athletes want to be the best at their chosen sport." I love this quote, because I think it applies to nearly everyone in the sport. Certainly it applies to me and definitely most of my customers. While I am called a boot-fitter, skiers seek me out to do much more than make boots comfortable. A boot fitter should make skiing easier, more fun and exciting. Success requires using all the tools of human alignment and balance to make balance on skis easier. Most interesting, is that it nearly always involves changing basic ski boot design to what works best for the individual.

With thanks to Blake Lowden for getting me started again on this path, I have also learned that there are changes to fore/aft positioning of ski bindings that can make balance hugely easier (Hugely), and therefore make skiers immediately perform at a higher level.

I believe, am convinced, have tested and conducted research to determine that the position of the boot on the ski is critical for balance, and often is not close to the optimal position for individual skiers. To ski consistently at your best, easily and safely you must be mounted in the appropriate spot for you on the ski.

Blasphemy, you say!? Manufacturers spend millions designing products and binding position is part of the design. Well actually, it isn't. Most manufacturers use a test team and on-snow sessions to determine position. Some, simply use a formula that has produced reasonable results in the past. Here is what I have learned and how I learned it. At the University of Calgary Human Performance Laboratory, I helped design research methods for a binding position study supported by Atomic. We learned racers speed through gates was altered by binding position, where they applied pressure to the ski was affected, as was balance.

We learned recreational skiers had preferences that did not always correspond to the manufacturer's recommendations. During conversation with an Atomic designer, I learned they used very different methods for determining racer and recreational skier positions. Racers were typically forward of recreational skiers as much as several cm.

What we didn't learn was how to determine the preferred position without on-snow testing. I finished my masters and left for a year of bootfitting work at Snowbird. There I discovered a tool (Campbell Balancer) that I thought filled in the missing piece. It determined a persons balance point and had a repeatable formula for positioning that point on the ski.

I saw the opportunity for more research and organized a study of the balancer, supported by Nordica. We blind tested seven skiers, that skied both the factory and the balancer determined positions for several runs. When offered the chance to free ski in either position, all chose the balancer position. The average difference between the positions was 3.7cm. Two additional skiers tested outside of the organized study had the same results. When asked differences between the two positions, common replies were, "skiing was easier in the Campbell position, skis felt more responsive and it was easier to maintain a balanced fore/aft position on the skis."

For the past two seasons, I have been balancing skiers and measuring factory positions in my store. I have seen even for directly competitive ski models, manufacturers chose different binding positions. Comments such as "for aggressive skiers only", or "stay forward and let them rip" tell me a ski is mounted behind a model labelled "quick and forgiving." If I reposition the bindings on the "aggressive skiers only" ski, it becomes quick and forgiving, without losing any of its designed in good properties.

---

Finally, I remember back to a discussion with one of my customers before he was balanced. On learning what skis he used I asked if he had a problem sitting back or maintaining balance. He replied "sure, but I don't mind earning my turns. Personally, -40C, fog and whiteout conditions are all the earning I want. In a steep, rock lined chute, with a rock band at the bottom I'll take some forgiveness. The story about how I almost crapped my pants as I shot towards the rocks because I sat back and missed a turn is a lot more enjoyable in the telling than it is in the living.

