

INSTRUCTION

Here is a shot of me just after apex. My outside hand is near my outside hip. The rope could be slightly tighter so it tells me I chose to turn just before apex.

Power Triangle

Written by Chris Rossi

Ever feel like you are pulling like an animal and still getting beat by the boat? It is not a good feeling. The way we have thought about it in the past has been a fight against the boat. I would like to change that thought. After an improper turn, acceleration is delayed due to poor leveraging position and a severe spike in load. This leads to a loss of body position and a subsequent

loss of ski direction, also known as getting beat by the boat. The loss of body position while under load is the cause of many of the injuries felt by slalom skiers. Let's take a look at where our focus should lie to get us into the best skiing position while under load.

When a proper turn is completed, acceleration starts at the point of connection with the outside hand. This is a very important

moment in the course because just after connection, load from the boat will be felt on the body. This load will propel you in the direction you are pointed only if you are in a position of leverage. Once the load is felt, it is extremely hard to switch body positions and doing so will take considerable muscle. This is the main reason that being stronger in skiing is an advantage. It is not that you ski better because you are strong, it is that you can get yourself out of a poor position without breaking. This is *not* how we want to base our skiing, but it *is* an inevitable fact of skiing.

So our goal at the finish of the turn should be to connect what I call the "Power Triangle." It is defined as the outside hand (trailing arm), the outside hip (trailing hip) and the handle. At the completion of a buoy one turn, your right hand will connect to the handle and the handle will connect to your right hip (or slightly below). When done properly, all three will connect at the same time. You will feel your outside elbow tight against your vest. This is very similar to old school skiing *except* that it is not done with the inside hip and elbow.

The Power Triangle is connected in this photo. My error is that I dropped my front shoulder and will pay for it with loss of direction through edge change.



This is a great photo of Julien Beaufile on a wake crossing at 32 off. When your Power Triangle is connected, this is sufficient lean to run 32 off at 36 mph.

This puts you in the hip forward, accelerating position. If you miss getting your hip to the handle at the connection point, you will have a gap between your outside hip and your outside elbow. The bigger the gap, the greater the chance you will get pulled out of position coming into the wakes. When you get all three connected, you will feel like the handle is hooked to an imaginary belt around your waist. I find that most skiers harness the boat's pull through the upper back and never get connected through the hips. When the Power Triangle is connected properly after a good turn, you will feel like Hulk Hogan, but if you ask the boat driver how hard you loaded on the boat, the driver will not notice any extra load.



Here is Billy Susi at 32 off.

At the apex of the turn, your reaching arm should be fully extended, your upper body and head should be facing down course, your core should be engaged, and your free hand should be hip high and just outside of the hip. You do not have to make this unnatural with the free hand. Most skiers do this without thinking about it. At apex, your reaching arm should feel a slight pull (that's how you know you are at apex). Use this line tension to pull your outside hip to the handle by keeping your core connected. There is no need to rush your outside hand to the handle. If it was extended hip high, just leave it where it is and as your outside hip comes to the handle, so will your outside hand. This is what we call a turn without rotation. Most skiers leave the outside hip out and rotate the outside hand and upper body into the handle. This causes a large gap between the outside hip and outside elbow at connection. Thus, the Power Triangle will not be connected and loss of direction and body position will happen before the wakes. Apex to handle connection is not a rapid motion. Most skiers rush this area. I tell people that you want to ski to the handle. This will reduce how much you slide your ski at the finish, which will give you more ski to stand on while accelerating. The best

turns are the ones in which you cannot tell where the finish of the turn and start of the acceleration zone starts.

Now that we have the Power Triangle connected, what do we do? As I mentioned earlier, when this is connected, you will feel as though the handle is connected to an imaginary belt that is hooked around your waist. From here, just allow your upper body to fall away from the boat with your shoulders at a level height. This does two things. First, by keeping your shoulders level, you will keep your hips in the forward accelerating position. Any lowering of the lead shoulder increases line load and this overloading of the line will cause early loss of ski direction. Second, your upper body leaning away from the boat with hips connected to handle will roll your ski up on a higher ski edge angle, but keep it pointed in a direction that you can maintain. Most skiers are too concerned with ski angle vs. the boat's direction. This causes the overturn, over line load, rapid loss of body position, and loss of that excess angle taken. The goal is to finish the turn with no more than 45 degrees of ski angle vs. the boat and keep the focus on increasing ski edge angle into the wakes. This is only done by more upper body lean *with* hips connected to the handle.

Common Errors Made By Skiers

- "Knee bend at finish of turn." This is done only when a poor turn is chosen and too much load is felt. By bending the knees,

you can limit how much your Power Triangle is pulled apart. We do not want to base our skiing around knee bend but rather use it when we need it. What I am looking for is fairly straight legs (not locked out and pushing) in an athletic position.

- "Drop my lead shoulder (front) for more angle into the wakes." This will temporarily increase ski angle vs. the wakes but it also heavily loads the rope. The excess load on the rope will take away the extra temporary angle you achieved *plus* more, leaving you on a straighter/ narrower line than you would have been on.

- "Back arm pressure is my focus." I am talking about the old school thought of lead shoulder away from boat. This requires excessive upper body rotation, which will cause excessive ski angle vs. boat angle before the wakes and a rapid loss of direction through the edge change. We want a 45-degree ski angle vs. boat with increased ski edge angle for sustained direction in the course. Outside hip/ outside hand to handle will leave your shoulders level with your hips forward. Now all you have to do is lean and you will be rewarded with the best wake crossing you can have for the turn you completed.

Chris Rossi is a professional slalom skier and coach who is sponsored by Radar Skis, Tige Boats and Performance Ski & Surf. For more discussion on this and many other water ski-related topics, visit proskicoach.com or come ski with Chris at SkiTek in Orlando, Fla.

