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The ABYSS!

Skiing/Riding on Plastic

By Charles C. Roberts, Jr.

Teaching students the intricacies of beginning moves on terrain park features typically involves skiing or riding on a box. A box feature entails a box like structure with a top deck of a plastic (such as polyethylene, a polycarbonate, polybutylene terephthalate (PBT), etc.). Your students are familiar with skiing or riding on snow but may not be familiar with riding or skiing on plastic. This article explores the 50/50 (straight over the box) and the board slide moves over a box or simply put, skiing/riding on plastic.

We all have experienced that the friction between ski and snow varies widely depending on snow characteristics. The gliding of skis or a board can be impeded (slow/sticky snow) or accelerated (fast/slick snow). Waxing of the ski/snowboard plays an important part of friction at the ski/snowboard/snow interface. Likewise on the top deck of a box (the plastic), the friction between the plastic and the skis/snowboard varies. With a dry top deck, the sensation can be slow (sticky). With residual water or snow on the top deck, the sensation can be slick.

Very cold or warm days as well as humidity levels also affect the feel of a feature.

Another aspect of plastic, involves edging of the skis or board. On snow, engaging the edge results in the ski or board edge sinking into the snow for carved turns, skidded turns, side slips, etc. This results in noticeable ski/board resistance depending on the maneuver. On plastic, engaging the edge has little change in resistance and the absence of the sensation of gripping the surface. Edging on plastic is tantamount to edging over solid blue ice.

Now let's apply this to teaching. The most elementary maneuver over a box feature is the 50/50 (the term 50/50 comes from skateboarding where the toe side wheels are on one side of a feature and the heel side wheels are on the opposite side of a feature).

Essentially, the 50/50 is when the long axis of the skis or snowboard is traveling parallel to the long axis of the feature.

Figure 1 shows a reasonably good 50/50 over a dance floor. Using the ATML method (approach, takeoff, maneuver, landing, Reference 1), Figure 1A shows a braking wedge to adjust speed, the approach. Figure 1B shows getting ready for the takeoff which is mounting the dance floor (a wide box feature located close to the snow surface). Figure 1C shows skiing parallel over the box. The landing is skiing away from the feature.

Figure 1A

Figure 1B

Figure 1C

First time students tend to treat the plastic the same way as snow. In Figure 2, this youngster is performing a 50/50 and is attempting to control speed on the feature using a wedge. He continued edging in this position for the maneuver on the feature. Since the edging is ineffective on the plastic, he ended up doing a split and a fall. It is helpful to teach keeping the skis flat without edging until exiting the feature. Have the student shuffle over a dance floor to sense the difference between snow and plastic. Remind the student that if the lineup to the feature is bad, then simply ski off the edge of the feature and try again. Attempting to steer the skis on plastic in an attempt to correct a bad lineup is ineffective and usually

results in a fall. Once you are committed to a particular line of travel you have to ride it out. In other words, "Set it and forget it."

Figure 2

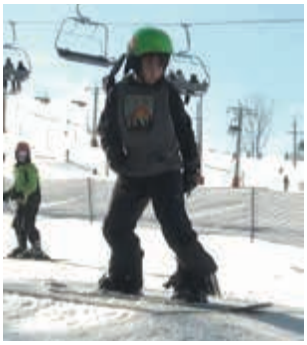

Figure 3

For snowboarders, the 50/50 is usually easily accomplished. Figure 3 shows a reasonably good 50/50 over a dance floor. Errors in stance toward the tail or nose of the board are almost inconsequential. After all, a nose or tail manual 50/50 that requires a significant nose or tail weight shift is a maneuver that can be easily performed (Figure 4). The main thing to look for is to make sure the upper body is aligned with the lower body and board (A frame stance). An upper body twist will cause the board to slide sideways when mounting the feature.

Figure 4

Figure 5A

Figure 5B

Figure 5C

Another aspect that your students may encounter when riding on plastic is the change in friction as one travels from snow onto the feature. In some cases, the top deck is stickier than the snow, in other cases it is not. A slight back seat stance is not a problem as long as it disappears when back on the snow as shown in Figures 5A and 5B, which illustrate a top deck that is slower than the snow. In Figure 5C, this student has stopped on the feature due to excessive friction between the skis and top deck. This may require cleaning of the ski bottoms, new wax or new skis as all the other students in this class did not have the same problem.

If your students are sliding off the side of a feature it may not be a result of poor line up. In Figure 6A we see a rider sliding off the toe edge despite a good line-up. This is a result of the feature tilting toward the toe edge. The rendering in Figure 6B depicts a feature that is not level. This causes skiers and riders to drift to one side and slide off before reaching the end. A landing area (easily recognized by the ski or snowboard tracks) that is located to one side of the feature confirms that it is not level.

On some warm days, the top deck can expand and cause ripples as shown in Figure 6C. This may cause problems with performing maneuvers where the board or skis are traveling sideways (board slide) along the long axis of the feature. Choose another feature and alert the park maintenance crew as to these issues.

Figure 6A

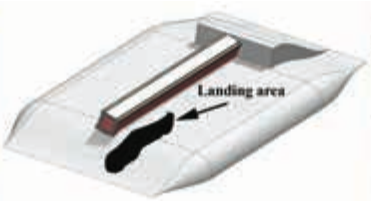

Figure 6B

Figure 6C

It is helpful to check out the terrain park in order to pick the appropriate features for your lesson. Talk to the park staff and those frequenting the terrain park ("park rats") as to the best features available.

Now let's look at the board slide. A board slide is a maneuver on a box or rail where the skis or board are oriented with the long axis perpendicular or at some angle to the direction of travel. This maneuver does not cause wear to ski edges when using a dance floor. For narrow boxes, the coping on the side is typically steel and may cause some wear on the edges. For board slides on rails, a separate set of skis may be in order (Reference 2).

Figure 7A

Figure 7B

Figure 7C


Figure 7D *Figure 7E*

Figure 7 depicts a sequence of the board slide on skis using a dance floor. The approach is shown in Figure 7A with the skier satisfied with the approach speed. A braking wedge may also be used to adjust speed. Figure 7B is the takeoff which is unweighting either from the lift from the entry ramp, or a hop by the skier. Figure 7C is the maneuver with the skis traveling sideways and the center of mass between the skis. Center of mass outside the skis, especially opposite the direction of travel, is typically disastrous. It often results in a fall because edging of both skis is involved which causes the skis to slide out from under the skier. Perform static exercises focusing on keeping the center of mass between the skis. During the maneuver, the lead ski is slightly edged to avoid catching the outside edge in the feature. The trailing ski is usually flat. The upper body is rotated in the direction of travel. Figure 7D and 7E show the landing where the lower body counter rotates against the upper body, aligning the skis with the direction of travel.



Figure 8A *Figure 8B* *Figure 8C*

Figure 8A depicts a student performing a relatively good board slide at approximately 45 degrees (crooked grind). A board slide where the skis are at an angle other than 90 degrees to the direction of travel, like the crooked grind, has the same ingredients as the 90 degree board slide. Center of mass is between the skis, the leading ski is edged slightly and the upper body is facing the direction of travel. In Figure 8B, the student has edged both skis with center of mass outside the stance width toward the trailing ski. Increasing the edging on plastic will not aid in bringing the center of mass toward the direction of travel, instead it may result in a fall. Have the student practice the proper stance by standing statically on the feature with a flat trailing ski and slightly edged leading ski. In Figure 8C, the student has not rotated the upper body in the direction of travel which makes it difficult to exit the feature with the ski tips facing the direction of travel. Consequently, he exits the feature in a side slide. Statically work on jump turns and counter rotating the upper and lower body.



Figure 9A *Figure 9B* *Figure 9C*

The board slide on a snowboard is shown in Figure 9. The approach (Figure 9A) is parallel to the long axis of the feature. At takeoff, unweighting occurs and the rider counter rotates the lower body and lands with the board at an angle to the direction of travel (Figure 9B). Traveling at an angle that is not 90 degrees (say 45 degrees) is called a crooked grind. (If the student is pursuing Level 3 Snowboard Certification, a 90 degree board slide is required.) Finally, the countered lower body is aligned with the upper body and the rider exists with the tip of the board pointing in the direction of travel (Figure 9C). Riders often have the same problem as skiers, i.e. allowing the center of mass to shift away from the direction of travel, as shown in Figure 10A. Emphasize "knees over toes" to correct this. As with skiers, Figure 10B depicts the result of insufficient counter rotation of the lower body during the maneuver. The student is unable to realign the board so the tip is facing the direction of travel, which results in a side slide while exiting the feature. Static exercises on counter rotating the lower body with respect to the upper body often help.


Figure 10A *Figure 10B*

Riding/skiing on plastic is a skill that is necessary for terrain park moves over box features. The low and wide dance floor feature is very helpful for introducing your students to the dynamics of skiing/riding on plastic because it is tolerant to many errors committed by students. Both static and dynamic exercises can be easily performed. Your students will be delighted with their progress on learning how to ski/ride on plastic.

Chuck Roberts teaches at Wilmot Mountain, in Wisconsin. He is a Level III Ski Instructor and a Level II Snowboard Instructor. He has been teaching skiing since 1970 and snowboarding since 1987.

References

1. Freestyle Technical Manual, American Snowsports Education Association, Inc. 2016. 2. Coaching Park Rats on Rails: The Daily Grind, Central Line, Issue 1, 2012.