



PSIA-Rocky Mountain-AASI ADAPTIVE INFORMATION GUIDE



SKI BIKE

Ski bikes were popular in Europe for a long time. US Ski resorts first introduced ski bikes as a fun, new “sliding toys” with many resorts making them available for rent to the general skiing public. They are relatively easy to learn, but may require innovative solutions for lift riding and safe transport uphill. Some areas do not allow ski bikes for the general public because of lift or general slope traffic issues, but will allow them on the mountain as adaptive devices.

It soon became apparent that the Ski Bike is an excellent piece of adaptive equipment allowing people with certain disabilities access to a fun day on the slopes. Because you sit on the bike and steer the bike with your whole body, arms, feet and legs, it allows people with trouble standing or limited leg stamina the chance to enjoy their day on the slopes.

Typical Disabilities for Ski Bike Users:

Muscular or strength problems.
Multiple Sclerosis
Amputations
Brain Injuries
Balance Problems
Temporary Disabilities
(knee injuries or hip replacement)



Ski bikes require a certain amount of balance and leg/arm coordination in order to maneuver safely in a mountain environment. Controlling speed on a ski bike requires the ability to turn the bike across and/or slightly back up hill. Because of this, the Ski Bike may be very easy to learn for someone who has already skied and understands how to make turns for speed control. Ski bikes can be tethered, or ridden independently. Careful assessment of students is important to make sure the Ski Bike is the best choice of adaptive equipment.

Equipment and Set Up:

The Ski Bike is essentially a modified bicycle frame with handlebars and a long seat. The front fork of the bicycle is attached to a small ski that turns in conjunction with the handlebars. The rest of the bicycle frame is attached to a second ski (without turning power) that primarily supports the weight of the skier. Skiers using the Ski Bike can wear specialized “mini skis” on regular ski boots or snowboard boots called foot skis. The skier’s legs help balance and steer the bike as their boots and skis glide along the snow.

Lift Loading Procedures

There are several ways to load a ski bike dependant on the brand of bike and the ski area policy. Since the skiers have mini foot skis attached to their boots, they are able to skate up to the loading area with their bikes at their side, and easily glide off the chair at the top. The key to lift loading with a ski bike is to effectively lift the bike onto the seat next to you or hold the bike on your lap for the duration of the lift ride. Most Ski Bikes do not come with straps and carabineers to attach the bike to the lift while riding the chair – this is something that should be added for ski area policy , the safety strap is then detached at the top when ready to unload . Some ski bikes can be adapted to load with the rider staying seated on the bike. Always familiarize yourself with the ski bike manufacturer’s instructions and the ski area lift policies and procedures before attempting to ride the lift with a ski bike.

Adaptive Ski Bike Progression

Beginner / Novice Zone Objectives

- Level 1:** Welcome to skiing / Build the foundation
Student assessment
Medical history
Equipment selection, introduction and set up
Equipment orientation and Static balance exercises, indoors
Student/instructor communication, safety and emergency stop
- Level 2:** Introduction to Flats
Pushing, turning, pivoting on flats
Static balance exercises, outdoors on flats
Mounting and dismounting the Ski Bike
Maneuvering on “mini foot skis” without the Ski Bike.
Falling and getting up
*Straight runs
*Stopping and slowing through turns
Stamina and ability may limit some students to straight runs and turning without a lot of time spent on the flats. Plan lesson accordingly.

- Level 3:** Introduction to Turning
 Turn left & right through balance and turning movements, the turn of your head causes the rear ski of your Snowbike to skid and thus decrease the speed.
 Practice slow speeds, turning your head and allowing the handlebars to follow into steered turns
 Slightly flexed arms and shoulder similar to a position on a bike
 Vary turn shape and size
 Speed control
 Turning to a stop
 Fun progression
 Linked turns
 Master beginner area
 Introduction to Chair Lift and Green Terrain
 Chair lift loading and unloading procedures
 Review lift evacuation procedures
 Student assisted/instructor assisted chair lift loading and unloading
 Develop greater skill blending
- Level 4:** Explore the beginner mountain experience
 Introduce skidded turns
 Teach counter steering
 Develop a short-radius braking turn
 Vary turn shape and size for terrain and condition
 Explore a variety of snow conditions

Intermediate Zone Objectives

- Level 5:** Develop and Enhance Intermediate Movement Options
 Refine proper body movement and position
 Develop medium- and short-radius skidded turns with speed control
 Edge control exercises for Ski Bike
 Rotary control exercises for Ski Bike
- Level 6:** Anchor Intermediate Skills and Movements
 Practice skidded medium- to short-radius turns with speed control
 Ski varying snow conditions
 Proper body movements
 Hip and lower body angulations
 Independent lift loading and unloading
 Introduce more carving in turns
- Level 7:** Exploring Movements and Skills for Upper Level Skiing
 Bump skiing on easy blue terrain
 Short-radius carved turns
 Explore carving sensations in greater detail
 Total independence

Rebound turns for Ski Bikes

The Advanced Zone Objectives

- Level 8:** Refining Advanced Movement Patterns
Carving medium- and long-radius turns
Ski short turns on the steeps
Ski blue and easy black bumps
Boot-top powder
Braking, gliding control movements on steeper terrain
- Level 9:** Develop Movement Options for Steep Terrain
Refine movements in short-radius turns
Develop optional movement patterns for varying speed control and conditions
Develop optional movements and skiing tactics for advanced bump skiing
Bumps, racing, off-piste, terrain parks and pipes