



## 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