

SKI SHARP Patent # 4,850,252

These instructions explain sharpening and beveling ski edges with the SkiVisions Ski Sharp beveling tool. This tool was designed to quickly and easily give you edges with polished precision. The tool simultaneously sharpens and de-burrs the side and base edge.

There are six different inserts available to customize your ski edges. Medium (standard) files for precision edge tuning and smooth edge finish, four different hard stones from 180 to 600 grits, and carbide inserts for **very aggressive** edge sharpening.

The Ski Sharp can give your skis a clean 90 degree edge by setting both bevel adjustments to 0 degrees, or, use the adjustment knobs to customize your edge beveling options. It is a good idea to ask your ski retailer for your ski manufacturer's recommended bevel selections for a guideline which is how the ski was prepared at the factory.

Generally, base edge bevel makes a ski more forgiving and makes the edges less "sticky" and feel like they have better glide and transition in the turns, however, greater base edge bevel will make your edges feel less sharp on hard snow. You have to experiment to find what you like, including how and where you ski.

Beveling the side edge has only one function, to adjust the sharpness of the edge. Increase the side edge bevel for hard snow if your skis aren't gripping, decrease it if they are biting too hard in soft snow.

The files must be used in one direction only or they will wear out quickly. We have marked the leading edge of each file with a black dot which represents the forward direction of the file. Please only use the files in the Ski Sharp with the black dot in the forward direction.

If you use the tool with back and forth overlapping strokes, avoid putting pressure on the tool when drawing it back. Putting pressure on the tool when the files are facing the wrong direction wears the files out very quickly.

Brush the metal filings out of the file teeth frequently with the brush provided. If the file teeth load up with metal filings they won't cut.

A burr is always formed when using files on metal edges. The Ski Sharp minimizes the burr because the edges are cut simultaneously, constantly creating and cutting off the burr. Use the accessory Ski Sharp stones for additional polish.

The edges at tip and tail and the tail protector (if it is metal) should be dulled back and polished regularly to reduce the tendency of the ends of the skis to hook or grab. You can use the Ski Sharp hard stones or other hand stone or diamond file for dulling and polishing. A conservative but effective approach when dulling back the tip and tail is to dull back 1 inch behind the contact point. The contact point is located by placing the skis together (with ski brakes retracted), without compressing the skis together, and the points the bases touch at the tip and tail are the contact points. Dulling back from the end of the ski to 1 inch behind the contact point (going toward the ski binding) gives a well balanced ski. Dulling back more than 1 inch will make the ski act shorter. Dulling back less than 1 inch (or not at all) will make the ski act longer and make the tip and tail grabby.

It is **very important** to know that most ski tuners don't take into account that ski edges wear more quickly under foot (where body weight has the greatest effect) and wear slower towards the ends of the skis. They tune the entire length of the ski equivalently resulting in the ends of the skis getting progressively sharper and

the under-foot section getting progressively duller. This is exactly the opposite of how you want your ski to be tuned.

The best tuned skis both bite and hold (grip) when turning but also glide with a slippery feel otherwise. The best way to get this result is to tune your skis using a zone approach where the skis are sharper under foot than in the shovel and tail sections and the edges are highly polished with the Ski Sharp stones. SkiVisions has a tuning video available which focuses on just that result titled "Edge Tuning with the Ski Sharp – Beyond Just Sharpening".

There are four hard stones available ranging in grit from 180 to 600. The 180 grit is used for edge sharpening and polishing out rock damage. The 300, 400 and 600 grits are for polishing. The best tuners will progressively polish each edge starting with 300, then 400 and finally 600 grit. The glide benefits are noticeable.

To get the most life out of the stones, continually rotate them in the Ski Sharp pockets and move them up and down in the side file pocket so that you are always using fresh, flat stone on the metal edges. When you have many cut paths, re-lap the stones on a diamond file until the stone faces become clean, flat and ready to use again.

The files wear out over time and have to be replaced. If you tune your skis as recommended above in conjunction with the stones you will find that your files will last much longer and you will be removing less edge metal than other ski tuners. The video "Edge Tuning with the Ski Sharp – Beyond Just Sharpening" shows edge tuning where files are rarely used, just the stones, which last much longer than the files. The video also includes a "tuning stick" which is a simple plastic rod used for analyzing your edges including complete demonstrations.

You can make the files last longer by using up the entire face of the file, not just the single cut paths that are worn into the file face when fully inserted in the tool pockets. Observe the cut paths after you use the tool to see how the files wear. You add to the life of the files by not inserting them fully in the side edge pocket. Most of the cutting and sharpening is done just with just the side edge file once your base edge bevel is established so moving the file up and down in the side edge pocket extends its useful life. Use the files until you see worn teeth on the entire face of the files.

On rock damaged edge sections, work on them with the 180 grit hard stones to remove or polish out by hand with a stone or diamond file, don't try to remove with the files, the files won't cut the rock-hardened edge sections, won't remove the rock scar, and trying to will wear out the files.

Questions? Problems? E-mail me at msewell1@pacbell.net. I can answer any ski tuning question except some unusual "personal taste" questions.

Safety Rules

Maintain a firm grip on the tool and keep your fingers away from the sharp metal edges when using the tool.

Your ski must be held in a ski vise when using the tool. Safety glasses should be used when using this or any tool. Keep the tool clean and replace any worn or damaged parts.

SKI SHARP SHARPENING STONES. We have new stones that are designed to sharpen skis rather than primarily focus on polish. All polishing stones will sharpen skis to a degree, but sharpening stones can replace files for frequent tuners, with a clear performance advantage. The Ski Sharp Tuning Stick can help demonstrate just how effective the sharpening stones really are. Stone finished skis have superior edge finish. The stones are a high-grade ruby aluminum oxide but both the grit and manufacturing process is proprietary.