Fast Bases

Tools and Materials

- Ski Vise
- Fibertex
- Wire file card
- Brass brush
- Stiff nylon brush
- Soft horsehair brush
- Ski wax iron
- Plexi-scraper (3 or 5mm)
- 320 grit, wet-dry, sand paper

Base preparation concepts – Do not try to wax or do final base preparation before the edge tuning process. Also, ensure the base is clean and free of contaminants.

- Structure – Bases arrive from the factory with a structure. Structure reduces friction between the ski and the snow surface by eliminating suction/adherence due to moisture. There are many different structure patterns. Generally, the warmer and wetter the snow, the more course the desired structure. Structuring is best accomplished through stone grinding. I generally only structure the skis twice per year (beginning and before spring races) unless the skis have suffered some major trauma. Structure is very important. An unwaxed , correctly structured ski will glide faster than a waxed but unstructured ski under some conditions.
- Pores – Today's fast sintered bases are porous, which allows the wax to penetrate. Believe it or not, a good base surface has a fairly intricate pore structure. These pores are useful as they accept wax into the ski, those providing lubrication without a surface layer of wax. Pores can become clogged or damaged in three ways. First, dirt and chemicals can clog pores. Secondly they can be damaged and sealed by an overly hot iron. Finally, they can be clogged by the introduction of flourocarbons found in racing waxes.
- Wax – There are many fine waxes on the market today. Good quality all-purpose waxes can be purchased in bulk for a reasonable price. Good racing waxes can be as expensive as $150 per ounce. The two variables in waxes are hardness and fluorocarbon content. The colder the snow granules, the harder the desired wax. The warmer the temperature, the softer the wax. And the higher the moisture content in the snowpack, the more fluorocarbons needed for acceleration and speed.

Fast bases

- The best base preparation is stone grinding, however, don't overdo it. Stone grind after major repairs, change of seasons (cold dry winter to warm moist Spring) or extensive fluoro contamination. Remember, when you structure you remove all that good wax in the pores.
- Threads of base material give a grayish hue to your ski base and feel a little rough to the touch. These are like speed brakes! Aside from grinding, the easiest way to remove all of these is with fibertex. Take a piece and wrap it around a sanding block.

Rub down the ski (generally tip to tail) until all loose/protruding fibers are remove. Follow with a brass brush. I do this before every waxing.

- Wax build-up – This isn't a bad thing provided it is good, clean wax. We never race a ski right after grinding. I like to get at least 6-10 coats of wax through the pores before going for full race prep. Sometimes this has meant week long waxing process to built this minimum base content. The fastest ski is one that has 50-100 clean waxings since the last structuring. That's right. Wax every day, leave it in overnight and scrape/brush each morning. Around the 40th day your skis will hit a new gear.

Cleaning the bases

- Never use liquid base cleaners.
- Bring the skis to room temperature.
- Run the skis with a damp cloth to remove all surface dirt.
- If this is a routine cleaning before waxing, and you intend to use the same wax again, brush the skis with a brass brush until no more wax powder appears on the ski. Use the file card to remove any wax from the structure. Follow this step with a quick, firm, tip-to-tail rub with fibertex. This will remove dried wax, hairs and other surface impurities. You are ready to go for a routine waxing.
- If you are going to change wax types, suspect chemical or other dirt has impregnated the bases, have not done a thorough cleaning for a couple of waxings, or are preparing for a race, then you should clean the skis by waxing out the dirt. This is accomplished by selecting a very soft wax (cheap) and generously hot-waxing the base. Move the iron back and forth over the base until it is warn, end-to-end. While ironing, you may notice some parts of the base remain molten (wet) while others cool (dry) more quickly; if this occurs simply pass the iron quicker over the wet spots to prevent overheating the base.
- Scrape off the wax immediately, before it cools and recedes back into the pores.
- In extreme cases, this process may have to be done twice. You can tell by checking the wax as you scrape it. The wax will be dirty and discolored.
- After the cleaning process, let the skis cool and fully scrape/brush them before proceeding with the real wax job.

Waxing

- Decide what wax you want. For routine use, a good all-temperature wax will do. For race training, a good quality chloro-hydrocarbon wax of the appropriate temperature range will do. For race day performance you will want a hydrocarbon base coat (one temp range colder than the surface coat), either a low fluorocarbon or high flouro carbon surface coat (moisture dictates the choice) and possibly a topping coat at the start line. Pick one brand of wax and get used to it. Learn the temperature ranges, idiosyncrasies, etc. There are a few top-of-the-line brands.
- I like to crayon the wax onto the surface first, then drip one bead down the middle. Stay alert to areas not receiving full coverage as you iron in the wax. Iron the wax several passes, length to length, or until you begin to sense warmth on the opposite side of the ski.
- Use a good iron designed for waxing – it will give a more consistent temperature. Dial in the temperature recommended on the wax package. If you don't have a dial,

make sure the wax isn't creating smoke. This tells you the iron is too hot, is degrading the wax and probably is damaging your base pore structure.
- Allow the ski to cool at least 2 hours (preferably overnight) before scraping. Yes, for every coat!
- Fully scrape and brush between coats of wax.

Scraping and brushing
- Sharpen your scraper.
- Once the ski has fully cooled (see above) use a plexi-scraper to remove all surface wax. Continue to scrape until no more shavings appear. Do not bend or rub the scraper to remove wax from indentations. This could damage the structure. The brushing will remove the residual wax.. Many race skis, namely Atomic, have a concavity near the shovel and just ahead of the tails. Do not worry, this was designed into the ski.
- Carefully scrape the chunks of wax from the side of the ski using the narrow edge of the scraper.
- First brush the bases (tip to tail) using a medium nylon brush to remove wax from the structure. Continue to brush until you cease to produce wax dust.
- On the final coat, brush the ski again with a soft horsehair hand-brush. The more you do this, the faster they get, within reason!

Top coatings and additives
- There are a number of top coatings and additives on the market. Molecule F is well known, as is Cera F. Both are very expensive, both are useless on dry snow. If you grab the snow, squeze, and it falls out of your mitten in flakes just as it was found, save your top coatings. However, if the snow forms any sort of snowball or if there is new precipitation falling, top coatings are worth their weight in gold.
- I prefer Cera F because it comes in a stick form. Molecule F is a spray and with the slightest breeze you are squirting dollars into the wind. Follow the instructions. Make sure you work in the Cera F with the felt pad, then brush either of the products gently with a horsehair brush. Leave the skis base down in the snow until racing.
- The liability of these additives is that they impregnate the bases with fluoros that eventually clog the pores. If used as I described, the problem is vastly reduced and you still get great performance. If ironed in, you may be stone grinding more often than you like.