

ROCKER GOES RIGHTER

No Longer Just for Powder, Ski and Snowboard's Hottest Technology Goes Mainstream

BY PETER KRAY

Like a Top 40 pop song you can't get out of your head, "rocker" ski and snowboard technology will be what everyone's talking about this season—as well as what's beneath just about everyone's boots.

"I've seen three revolutions in my 30-year career—snowboards, shape skis, and now this," says Craig Albright, managing director of the Mammoth Mountain Ski and Snowboard School. "And just like how the old-school guys said that shape skis were cheating, or that snowboarding wouldn't last, the same people are pooh-poohing this."

"Until they try it," he laughs. "Then they become great advocates."

Also called "early rise," "reverse camber," and even "pre-

bent," skis and snowboards have all employed some form of rocker since boards were first built with curled tips. But in recent years, a more exaggerated rise in the shovel—and often the tail—has proven to provide excellent flotation in powder and crud conditions, all while giving the rider quicker maneuverability underfoot.

In powder especially, where instead of deflecting snow the tip is riding above it, the ease of turn initiation is especially dramatic. So is the decrease in leg fatigue from pushing all that snow around, as riders who might've tired out by mid-day are suddenly ripping until the last lift—as many ski and snowboard companies have been quick to notice.

"Depending on the category, about 80 percent of the powder skis on the market have rocker right now, and I'd say it's employed in about 15 percent of the skis being built



The late Shane McConkey was an early proponent and innovator of rocker boards.

for the mainstream market," says Kurt Hoefler, Rossignol's alpine brand division manager. "But I think in two to three years, it will be hard to find a ski or snowboard that doesn't have some level of rocker design in it."

The numbers certainly back that up. According to Snow-Sports Industries America's *Retail Report*, while snowboard sales fell in units and dollars this season, rockered snowboard sales doubled, from 20,070 boards sold in the 2008-09 season, to 43,772 rockered snowboards sold through February 2010.

This year those numbers are expected to grow even more dramatically, especially as more hardgoods manufacturers discover that the relaxed tip design that works so well in powder also has tremendous advantages on-piste. The bottom line is everyone can benefit from a ski or snowboard that's easier to initiate or to pivot, and rocker design is rapidly being incorporated into everything from beginner boards to skis for the World Cup.

"Many manufacturers of World Cup downhill skis have had early rise for the past four years, and it's really an extension of what most people have been trying to accomplish since they first detuned their tips," says Mike Porter, the former director of the Vail and Beaver Creek Ski Schools, as well as a former member and coach of the PSIA Alpine Demonstration Team (the precursor to today's PSIA Alpine Team).

The pre-bent shape of reverse camber actually mirrors a carved ski or snowboard's mid-turn flex—but without the aggressive tip initiation traditionally needed to accomplish it. With varying levels of early rise in the shovel, ski and snowboard engineers are working to keep the forward edge of a board off the snow until the exact point that a rider needs to engage it.

Which all sounds fantastic. But as the industry introduces so many technical variations on the same theme, it's difficult to know what tangible information skiers and snowboarders are actually picking up. And with so much new terminology hitting the market, how many different technologies are we actually talking about?

"There are all sorts of different levels of rocker, and the term is really being used to describe a broad category where we're seeing a lot of experimentation right now," says Porter. "It applies to everything from the more aggressive turned-up tips and tails of rockered skis that really don't have much relevance for the recreational piste skier, to early rise, which I think is more the bread and butter of where this trend will go, just because it makes skiing so much easier and more efficient."

ORIGINAL ROCK(ER) STARS

In the same way that Elvis electrified rock and roll, and Michael Jackson fused funk and pop, rocker has needed its share of high profile prophets—if only to first prove the new technology's worth. Shane McConkey, arguably the most influential big mountain skier North America has ever produced, almost singlehandedly provided the push for more rocker designs on the two-plank front.

McConkey, who died in a ski BASE jumping accident in Italy in 2009, reasoned that since snow was simply frozen



ROSSI ROCKS THE MASSES

Big mountain thrill-seekers and new-school pros may have been the first to embrace rocker technology, but Rossignol's new Avenger 74 is aimed at a decidedly more mainstream audience.

A rental ski, with dimensions of 120/74/110, and 27 centimeters of early rise in the shovel, the Avenger has rocker in both the tips and tails, and traditional camber underfoot (a technological cocktail that Rossi calls Auto-Turn, or AMPTEK). While the camber delivers power and grip, the rocker provides easier steering and more forgiveness.

"The first time I skied rocker in deep powder, I knew there was an evolution to come, and this is it," says Jason Newell, Rossignol's director of sports marketing and partnerships. "The ability to merge maneuverability with a longer effective edge that engages as you need it is perfectly suited for building more versatile skis for groomers, and better learning products."

Newell says that Rossi has aggressively sold the Avenger into several resort rental programs. They have also been discussing the ways in which instructors can integrate the Avenger into their beginner and intermediate lessons, all in the name of getting more skiers further up the slopes.

"As a ski manufacturer, we partner with the snowsports schools and the mountains to build a program that works for all of us," says Newell. "The educational body, the manufacturing body, and the resort body all form the three-legged stool that both supports and builds this sport."

— PETER KRAY

Lib Tech's "Banana Tech" put rocker between the feet for greater transfer of energy along the length of the board.

SKATE BANANA

Blake Jorgenson



water, the best skis for deep powder skiing should be designed in the same fashion as the hull of a ship. He famously put a pair of alpine bindings on water skis and proceeded to rip big lines in Alaska to prove his point. Then he developed the category busting catamaran-styled Spatula ski with Volant (introduced in 2002), and the appropriately named Pontoon with K2 after that. When interviewed for the SIA tradeshow dailies during the Pontoon's 2006 debut, he said, "Over the next few years, all the companies out there are going to start making rockered skis. It just works too well."

But it was snowboarders who first started to develop the design for widespread use. That's because the same way that the wider bases and greater surface area of snowboards influenced fat skis, they were also better adapted to incorporate rocker first. Particularly as traditional camber, that holy grail of ski design, didn't add nearly as much energy to the flex of a snowboard as it did for someone riding skis.

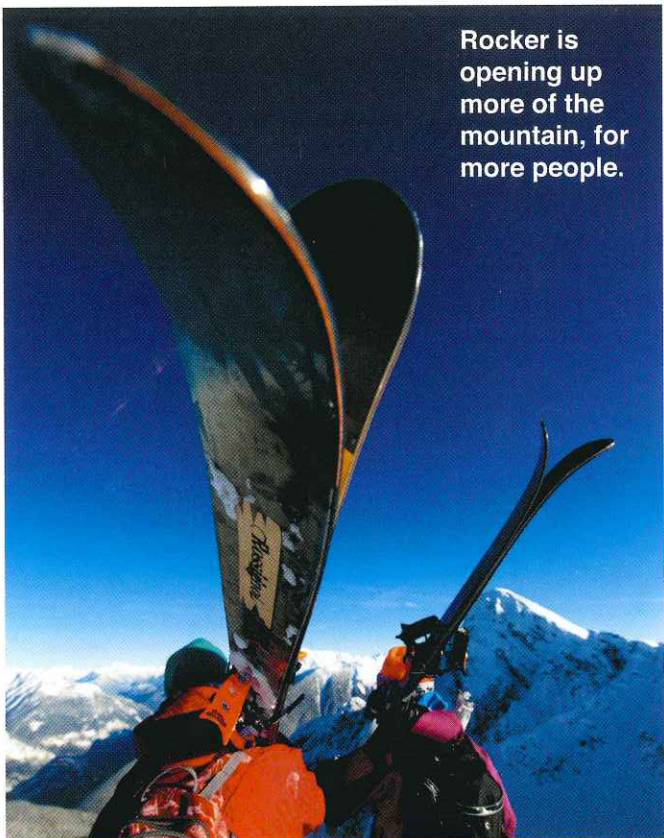
In fact, that piston-style pressuring of one foot on one

board—the classic initial impulse for beginning to flex and carve a ski along the length of the shovel—got trapped when it was placed between two feet. On snowboards, that often meant that traditional camber wasn't enhancing the turn, but instead was actually sucking energy out.

"As snowboards became more inspired by dual directional freestyle skateboarders, we began building twin symmetrical shapes," says Pete Saari, co-founder of Mervin Manufacturing, which owns the snowboard brands Gnu and Lib Tech. "This meant camber was centered between your feet, leaving a 'dead' and un-pressurable spot."

In the effort to transfer more positive energy along the length of the snowboard, for Saari and partner Mike Olson, trying to reverse that dead spot was the most obvious place to start. What they came up with, called Banana Tech, places the most aggressive rocker or reverse camber between the feet, with less pressure on the tips and tails until the depth of a turn warrants direct contact.

Rocker is opening up more of the mountain, for more people.



Blake Jorgenson

ROCKER TALK: THE GLOSSARY

Still confused? Here's a quick-hit glossary of rocker lingo. We'd love to hear your best explanation or metaphor for rocker. Send your thoughts to: 5050snowpro@thesnowpros.org, and we'll post them on PSIA-AASI's website www.TheSnowPros.org.

CAMBER: Ski and snowboard manufacturer's go-to flex technology for the past few decades, traditional camber is the arch in the center of the board which, when pressured, engages the tip and the tail for grip and control.

ROCKER: An exaggerated rise in the tip of a ski or snowboard for easier turn initiation and more float in mixed conditions and deep snow. In full rocker, there is also an exaggerated rise in the tail. This provides quick turn release and a marked increase in the ability to smear out of a turn as well.

EARLY RISE: Primed for even more innovation in future seasons, this is a designed rise from the forebody of a ski or snowboard that extends into the shovel. With an infinite possibility for adjustment and fine-tuning, it reduces the effort required to initiate a turn, with a pre-bent flex for improved edge control.

— PETER KRAY

"The pre-bent rocker between your feet is the natural arc you need to turn your board," Saari says. "And also what allows the board to provide incredible edgehold on hardpack and ice."

Which seems to be the mantra of what rocker technology is offering us: Control when you need it, catch-free float when you don't. This benefit is even more pronounced in a telemark turn, according to PSIA Nordic Team member Ross Matlock, who says that "Rocker technology is telemark specific."

"(During a telemark turn) tip pressure is created on the rear ski when we develop a lead change and lift the rear heel," says Matlock. "The lifting of the rear heel causes the binding springs to activate, resulting in tip pressure on the rear ski. This can be detrimental in soft snow conditions, causing the rear or trailing ski to dive."

"Tip rocker in a ski essentially neutralizes rear tip pressure, allowing the rear ski to stay with us rather than plunge," he says, and adds that it also makes telemark turns in powder easier for beginners and intermediates.

"Rocker skis allow the ski tips to float at lower speeds," says Matlock. "You can be less precise with your movements, allowing for better balance, and they are easier to steer and pivot compared to regular cambered skis."

Which all might mean that the nonstop search for the quiver of one board that really can do everything may have reached its last stop. For once, there really is a design that can be surfy in the soft stuff, but with hold and stability on the hardpack.

It is why rocker is being more quickly adapted in the West, due to its big mountain, variable snowpack focus. In the East, the technology will have a more subtle, cumulative impact, with the first real results expected following the introduction of the more on-piste rockered boards that are only just hitting the market.

But make no mistake, across the country rocker is already providing snowsports instructors with plenty of new tools to bring to class, as well as at least one potentially significant roadblock.

PROVIDING THE BACKBEAT

Talk to a couple dozen instructors about rocker, and "short-cut" is the term that keeps coming up. From the bunny hill to the backcountry, the technology promises a more intuitive style of learning, with a methodology that can focus more on the environment than it does on the equipment.

"I do think it's better to learn on rockered boards because the board is friendlier, less likely to catch edges, and easier to steer and skid," says Earl Saline, PSIA-AASI education co-manager. "For somebody learning to ride, that offers a little more wiggle room than you get on stiffer, cambered boards. Which means less falling down. And more distance from the myth that 'learning to snowboard has to hurt.'"

Bobby Murphy, director of skier services for Keystone Resort and a member of the PSIA Alpine Team, says that while the methodology and movements of on-snow instruction will remain as relevant now as they were in the 1970s, the big breakthrough of rocker will be in how quickly it

THE AMPLIFIERS: HOT ROCKERED GEAR

Rocker will be on stage everywhere this year, from the shops to the slopes. With all the new designs on the market, it's a good idea to check out a few of your favorite magazine tests to narrow down just which boards best fit your style of riding, and your own specific winter environment. Be aware that some brands have gone hard for rocker—K2 has designed early rise into every ski in its line—while others are still fine-tuning their innovations in sidecut and flex. Here are a few snapshots of where you can expect to see rocker next.

SKIS:



DYNASTAR PRO 115

While Rossignol's S-7 has been dropping jaws with its rocker tip and tail and camber underfoot, Dynastar continues to build on the cult of the Legend line with the Pro 115. Deep rocker and bomber construction make this a heavy condition favorite.



VOLKL BRIDGE

Big mountain and freestyle skiing meet in the middle, with Volk's own early-rise Extended Low Profile (ELP), utilizing the new technology for versatility in all terrain, from the top of the mountain all the way down to the halfpipe.

SNOWBOARDS:



BURTON CUSTOM FLYING V

For boarders who want to "soar from peak to park" Burton is offering the Custom Flying V with a "just right" mix of rocker and camber under each foot for a surfy, laid-back feel but with lots of pop.



NEVER SUMMER SUMMIT

Rocker hits the backcountry with the built-to-order Summit Series. The surprise? The upturned rocker tips of these splitboards are turning heads on the uptrack, because they make it just as easy to skin up a powder slope as they do to rip down it. — PETER KRAY

provides students with immediate results.

"With rocker technology, what we've been teaching for years will now be more quickly and more easily felt," Murphy says. "We don't have to reinvent the wheel as far as teaching goes. Instead, we should be preparing for how the blending of skills that we've always relied on is now going to be that much more effective and easier to pick up."

This is good news for instructors at any level, especially those who can expect to start teaching mixed classes, with some students on rocker, and some who aren't. The lesson plan doesn't have to undergo a complete overhaul—nor does the terrain choice—as long as instructors realize that the students on rocker are likely to start picking up new techniques more quickly than the rest of the class.

In fact, the real concern is that rocker is so intuitive—especially in the most variable, challenging conditions on the mountain—that it might signal the end of the expert, all-mountain, deep-powder private.

"If we don't figure out a way to make rocker an opportunity, especially on the upper mountain, then it will be a threat," says Mammoth Mountain's Albright. "You don't have to be as skilled to have a great time on a powder day now as you did on older equipment. And if we don't figure out a way to talk to those people who are trying rocker right now, then they will try and figure it out by themselves."

"As easy as it is for them to start having fun," Albright adds, "is a measure of how quickly they could be forever lost to us."

The message instructors and the industry as a whole needs to impart to those newly born to rocker may also be skiing's most timeless. From the first steel edges all the way to this new breed of snowships that we're starting to ride right now, we just need to keep reminding skiers and snowboarders that now that they've bought such great new gear, they could certainly benefit from having a snow pro showing them the best way to use it.

"We have to help people understand that 'yes, the equipment is magical,' but we have the ability to show them an even better experience," says Albright. "It sure feels good. But we can help make it great." ❄️

Peter Kray is the special projects editor for 32 Degrees, with a particular focus on emerging snowsports trends, on-snow innovations, and the PSIA-AASI 50-50 Project. Kray skis, telemarks, and snowboards out of Santa Fe, New Mexico, and is the founder of Shred White and Blue (www.shred-whiteandblue.com), a media and apparel company celebrating American boardsports.