Ace of Bass

Peter Zaret's patented bass bar pleases players and puzzles luthiers

BY PATRICK SULLIVAN

IT WAS AN INNOVATION that improved the sound of a whole orchestra, according to musician Amir Shiff. At the time—about five years ago—Shiff was principal viola in the Philharmonia Hungarica in Germany. Half a dozen of the orchestra's string musicians, frustrated by problematic instruments, sent them for renovation to a violin shop in the United States.

The results were remarkable. "They were improved quite amazingly," recalls Shiff, who now lives in New Jersey. "The sound became very vibrant, and they spoke easily. People were very happy."

Shiff's own Asvaldo Fiori viola was transformed. The volume increased, the C string was deep and full, the nasal sounds were eliminated, and, Shiff says, the instrument now responds in the manner of a fine violin.

The innovation in question? An experimental bass bar by Cleveland violin dealer Peter Zaret that is drawing rave reviews from many musicians—and skeptical looks from some traditional luthiers.

The bass bar has long been one of the most poorly understood components of the violin. Made of high-quality spruce and shaped to fit exactly to the inside top of the instrument, the bass bar is hard to see and often taken for granted by musicians. But the important role it plays in a stringed instrument's sound is hard to overstate, according to Zaret.

RAISING THE BAR: Peter Zaret in his workshop.

A former concertmaster and violin professor, Zaret is a graduate of the Juilliard School with a doctorate in violin performance. But unlike many musicians, he is as interested in the inside of a violin as the sound that comes out. For the past two decades, the 64-year-old Zaret has reconstructed and repaired instruments. Along the way, he experimented with various ways of improving performance.

"After a certain point, I stopped fooling around with modes, and tapping, and flexibility, and all that business," Zaret says. "I gave up on all that and zeroed in on the bass bar."

IMPROVED PLAYABILITY

In 1995, Zaret made what he describes as a breakthrough discovery. He found that adding wood to the end of the bass bar created a dramatic improvement in sound.

Zaret continued to experiment. But eventually he settled on a basic design that departs from tradition by featuring wider ends and a taller center. "The center part on a traditional bass bar for a violin is about 13mm high," he says. "On mine, it's over 30."

The redesigned bass bar is made of three pieces of wood, with a V-shaped notch between the center section and the ends to increase flexibility. That's a radical change: Most luthiers use a single piece of tight-grained wood for the bass bar. They even prefer a piece that's been split rather than cut from a log to ensure the straightest grain.

"A lot of luthiers think I am crazy," Zaret says. "There's a lot of resistance in this business to doing anything new."

But to some musicians, Zaret is nothing less than a genius. Among his biggest fans is Miran Kojian, former concertmaster of the National Symphony in Washington, DC.

"He's very unconventional," says Kojian, who now lives in Los Angeles. "A lot of people don't agree with him. But [this bass bar] works for the player. It does achieve what you want."

Kojian teaches at the University of Southern California and is concertmaster of four orchestras, and he has sent several instruments off to Zaret. "They are all improved, no question about that," Kojian says.

Improved playability is the most dramatic difference, according to Kojian. "The response is easier," he says. "You don't have to press hard. The articulation is easier. And volume wise, it's very present. As soon as you touch the instrument, the volume comes out."

Also worthy of note is the bass bar's effect on wolf tones, those pesky tone inconsistencies that can haunt even very fine instruments. "The wolf just disappears," he says.

Kojian's most dramatic experience with the new bass bar was also his first. About five years ago, he sought rehabilitation for an old German violin that had been sitting in a closet for years. It had been Kojian's first instrument as a teenager—and it was a mess. "It was open, the fingerboard was down, and it was unplayable," Kojian says. "I thought I had nothing to lose, so I sent it to Peter."

When the violin came back, it seemed like a different instrument. "I can play concerts on that violin now," Kojian says. "This was a student instrument, and it sounds like a concert violin now. I didn't expect that at all."

The cost of the Zaret bass bar is $1,500 for a violin; $2,000, for a viola; $2,500 for a cello; and $3,500 for a bass; or 10 percent of the value of the instrument, whichever is greater.

A CAUTIONARY NOTE

Not everyone is convinced of the merits of the bass-bar redesign, however. "There's probably

JANET CENTURY/CENTURY PHOTOGRAPHY

no part of the violin that has given rise to as many varied acoustical theories, heated debates, and patent applications as the bass bar," says Christopher Germain, the director the Oberlin Violin Making Workshop. "For hundreds of years, makers and scientists have developed a seemingly endless variety of bass bars made from different shapes and configurations, made of different materials. Many of these patented discoveries were heralded with the claim that they were uniquely capable of making even the poorest-quality violin sound like a Cremonese masterpiece. In the end, most of the bass-bar inventions proved . . . too good to be true."

Even today, the exact function of the bass bar is debated among experts. "To simplify things, think of the bass bar as accomplishing two functions—one structural and one tonal," says Germain. "The structural function is to support the top against the downward pressure of the strings and bridge. In many ways, the bass bar acts like a floor joist or beam, providing support from below. Without the bar in place, the violin top would eventually sag and collapse. Tonally, the bass bar helps to transmit vibrations along the surface of the top. While some makers choose to make a bar from the lightest, strongest material possible, others advocate a bass bar that is heavy in mass, made from the densest spruce obtainable.

"From what I understand, the Zaret bass bar adds a significant amount of mass to the instrument. In many cases, the extra mass can act like a mute, which can cancel out some of the more objectionable overtones [wolf tones] found in some instruments. While this might be appealing in the case of a particularly edgy sounding instrument, most professionals and serious students seek a less muffled or withdrawn sound. They require an instrument that is capable of a wide range of tonal dynamics, all of which must be heard in a large concert hall.

"It's important to remember that changing a bass bar is the equivalent to major surgery on a stringed instrument. Every time that a top or bass bar is removed, you run the risk of doing damage to the instrument. Before you consider changing the bass bar, make sure you've tried other, less invasive tonal adjustments."

SEAL OF APPROVAL

Still, Zaret stands by his claims that his bass bar can improve the sound of stringed instruments, especially less expensive ones, and satisfied customers readily endorse the innovation. Indeed, young players may benefit the most from using instruments with his bass bar, according to Los Angeles music teacher Derwin Landis. "One of my younger students sent him a half-size violin," Landis says. "It now sounds like a good full size. It's astonishing."

Landis has sent several of his own instruments to Zaret, including a viola. "Most violas are a pain to play on the A," Landis observes. "But this one came back with a great improvement on both ends."

Zaret has seen his bass bar work especially well on violas and cellos. Neither instrument is the correct acoustical size—if they were, they'd be monsters no one could play. "With my bass bar, the viola is balanced like a violin," Zaret says. "They have a rich lower tone, but also the volume."

Despite accolades from players, Zaret continues to encounter skepticism from luthiers. In one attempt to validate his invention, he commissioned acousticians Norman Pickering and Oliver Rogers to test two violins fitted with his bass bar against a traditional instrument—a Stradivari provided by Pickering.

The result? The retrofitted instruments produced greater volume than the Strad—and approximately the same tonal balance. Zaret was so pleased that he posted the details to his website (www.zaretandsonsviolins.com).

"I don't dispute that an original Strad with papers is a marvelous thing," Zaret says. "But if you think the more you pay and the bigger the name, the better the sound, that's nonsense."

And he says his experiments with bass bars will continue. "I can't tell you exactly why it works, or how it works," Zaret says. "It just works unbelievably well." □