

WORLD'S MOST DANGEROUS LUTHIER



## Roger Sadowsky

### Bass Setups of the Rich & Famous

by Scott Malandrone



The backbone of Sadowsky Guitars (L to R): luthiers Norio Imai, Ken Fallon, and Roger Sadowsky

PHOTOGRAPH BY ERIK ROBBERS

If you type [www.sadowsky.com](http://www.sadowsky.com) on an Internet-connected computer, you'll see why Roger Sadowsky is one of the world's greatest bass builders. His high-performance Fender-inspired instruments are some of the most sought-after axes in the industry. (Just try finding one of these beauties on the used-bass market—they don't exist there.) Located in the heart of New York's Times Square, Sadowsky Guitars is regularly visited by such bass celebrities as Will Lee, Marcus Miller, and Darryl Jones, all of whom rely on Roger for custom instruments and setup work.

"Instruments need to be set up a few times a year, mainly due to seasonal changes," says Sadowsky. "A neck will back-bow [curve away from the strings] in the summer

when it's humid and front-bow in the winter when it's dry. A setup includes adjusting the relief on the neck, tweaking the action at the nut and bridge, cleaning the fingerboard, fine-tuning the intonation, setting the height of the pickups, and checking the electronics. It's like having your car tuned up."

Step one is adjusting the relief, which is the amount of curvature in the neck. (You can see how much relief a neck has by sighting down the fingerboard from the headstock.) Sadowsky says most people assume you can tweak the action by manipulating the neck's truss rod, but that's not true. "The only reason to adjust the truss rod is to make the neck properly straight," he says, "which is almost straight but with a bit of relief. If the neck

is too straight, it'll buzz in the first position." To adjust the relief, Sadowsky slowly loosens the truss rod an eighth of a turn at a time until the first position plays cleanly. "Once the relief is set," says Roger, "the proper adjustments can be made to the action."

Although a poorly cut nut can affect the action, Sadowsky warns that the nut affects mainly the open strings. "As soon as you fret a string, the nut plays no role at all," he says. "If a nut's too high, though, the strings feel stiff in the first position, and the intonation is thrown off because you need to depress the strings harder. On the other hand, if a string buzzes when played open but doesn't buzz when fretted on the 1st fret, the string slot is too low. Both situations can be fixed. If the nut is too high, we can cut the slots deeper. If the slots are too low, we

can shim up the nut from the bottom."

After adjusting the neck relief and nut height, the action at the bridge can be set by raising or lowering the string saddles. "The action adjustment depends on how hard the bassist plays," says Sadowsky. "Someone with a light touch can take a lower action than someone who digs in." To adjust the action, Roger depresses the string at the 1st fret (with his finger or a capo); this takes the string height at the nut out of the measurement. He then uses a 6" rule graduated in 32nds and 64ths and measures from the top of the 12th fret to the bottom of the string. Roger defines low action as 1/16" on the G string and 3/32" on the E string. High action specs are around 3/32" (G) and 1/8" (E). To set the height of the A and D strings, he radiuses them to

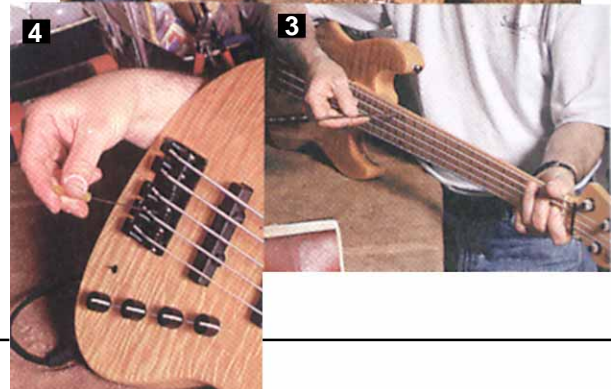
#### 1. Sighting the neck relief



#### 2. Adjusting the truss rod

#### 3. Measuring the string height at the 12th fret

#### 4. Adjusting the height of the bridge saddles



# BassNotes

Roger Sadowsky *continued*

the fingerboard based on the G-string and E-string specs. "If the G is at 1/16" and the E is at 3/32", the A and D need to be in between—around 5/64" each," he says.

Setting the intonation involves comparing the pitch of the harmonic and fretted notes at the 12th fret and moving the string's bridge saddle forward or backward as needed. (For more on adjusting intonation, see Rick Turner's Bass Tech column in Sept/Oct '96.) Again, attack and finger pressure are important factors. "The harder you squeeze a note," says Sadowsky, "the sharper the instrument plays—so if a player has a light touch, I intonate with a light touch to simulate the attack."

Although every instrument is different, Roger says there's a typical intonation pattern. "On a bass with full-wound strings, the G-string saddle is closest to the neck, the D behind that, the A behind the D, and the E the closest to the rear."

The B saddle on a 5-string goes behind the E as long as the B has a full set of windings at the saddle—but if it has tapered windings or an exposed core, it tends to be one of the forward-most saddles.

Good strings also play an important part in the intonation process. "If a string intonates out of proportion to the other saddles—let's say the A saddle has to be all the way toward the front of the bridge—it could be a sign of a bad string. It's common to have a setup affected by a faulty string."

How do the pros like their basses set

up? "Marcus [Miller] and Will [Lee] have gone in opposite directions in terms of setup," says Sadowsky. "In the early '80s, Marcus had an amazingly low action of 1/16" (G) to 3/32" (E), but he realized the bass didn't 'speak' very well that way. Going to a slightly higher setup has given him a wider range of articulation. Ten years ago Will, who plays more aggressively, had one of the highest actions of anybody I've worked with; his setup was 1/8" on the G and 5/32" on the E. Even at that height, though, he'd complain his basses buzzed too much!" Now, Will has more reasonable specs of 3/32" (G) to 1/8" (E).

Roger's newest big-name client is Metallica's Jason Newsted, who recently ordered seven Sadowsky basses: four 4-strings and three 5-strings. "Jason's a very sophisticated bass player," says Roger. "He's sensitive to the smallest adjustments in action. Jason likes his instruments set up on the low side—5/64" to 3/32"."

Are you interested in what a Sadowsky setup can do for your bass? The shop charges \$75 plus the cost of strings; for more information, call (212) 586-3960 or write to 1600 Broadway, Room 1000, New York, NY 10019. Roger cautions, though, that you should not be tempted by the idea of duplicating a particular pro's setup. "It doesn't matter how other players set up their basses," he says. "What matters is how you need your bass set up for your style." ♪