

# Micah Sheveloff on How to Make a Hi-Res Live Recording

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Sheveloff, checking/tickling the ivories.

*In addition to being a master CE industry marketing and PR specialist, Micah Sheveloff is also a brilliant pianist and composer, having put out a number of fine albums under his own name as well as with [The Voodoo Jets](#). He recently released [Live and on Fire](#), which was recorded live at Firehouse 12 in New Haven, Connecticut on June 18, 2015. **HRAC** asked the man himself to detail all the minutiae about*

*how one goes about making a high-resolution live recording. Sir Sheveloff, we now turn the hi-res floor over to you...*

My motivation for making a live recording was simply to capture the magic of musicians playing for an audience. There is always an energy present when you perform for a live audience that is different from the vibe of a traditional studio session.



We 3 are One, from left: Shulman, Sheveloff, and Patella.

And with this trio — myself on piano and vocals, Marc Shulman on guitars, and Beth Patella on guitar and vocals — I was working with a lot of open space: capturing interplay between two voices, the beautiful 9-foot Steinway (which used to reside in Carnegie Hall), and Marc's signature guitar style. Whether live or in studio, Marc's guitar rig is always in stereo. This is a unique approach, and I love how he adeptly uses dynamic changes as well as other deft playing techniques to create such an interesting palette throughout the recording.

Because we were tracking live and the venue was small, the lid of the piano was closed to try and minimize external bleed into the piano mics. This isolation strategy worked well, enabling engineer Greg DiCrosta to gain separation of the various instruments and voices

while capturing the rapturous tone of the big Hamburg Steinway. I love how the recording retains the imperfections of the moment such as door creaks, coughs, and Marc's frenetic stompbox activity. I also appreciate the tremendous detail captured in a 24-bit recording, most notably (to my ear at least) the sense of space in the venue and the dynamic changes throughout the set. Having been raised playing classical music, the range from soft to loud is a vital creative tool, and I think high-resolution content does a superb job of bringing that sense of real-life dynamics to the listener.



Cover art for Live and on Fire.

At the Firehouse 12 venue where the *Live and on Fire* record was performed and recorded, they typically use a sample rate of 44.1kHz/24-bit for live sessions, and 96kHz/24-bit for studio sessions. The way it was explained to me (I am a songwriter with no pretense of being a schooled engineer) is that 24-bit refers to the bit depth of each sample. CDs are 16-bit, but it is very typical to record (even at high sample rates) with 24 bits of resolution. This determines the dynamic range (loud to soft) of your recording. With 24-bit recordings, you have the theoretical possibility of 144.5 dB

of dynamic range, although no converter is capable of achieving that. Most converters can achieve around 120 dB of dynamic range, which translates to around 20 bits. But the extra resolution is useful in mixing and recording, and means you don't have to slam the converter (i.e., push it to its limitations) to take advantage of the full dynamic range available. And it also means the converter handily outperforms pretty much any piece of gear you are connecting to it.

Throughout my years in audio, it has become clear that headroom is a good thing, so I can only assume that the richness, dynamic range, and dimensionality of the *Live and on Fire* record can be attributed at least in part to the use of 24-bit recording technology.

## Song Speak



Whenever I see a live show, I am always curious how an artist opens it. The first few seconds make an impression on many levels, so I was very thoughtful about how to open the show at Firehouse 12. The “opening salvo” before the first song begins is piano and guitar on the throttle, and I chose the key of D because that is a half-step below the key of E-flat — the key that “The Simplest Things” is in. I like that modulation.

I like all of the patina on the recording that makes it real. Just as song one is starting, someone arrived late, and the big studio door creaks loudly. And the *big* notes — like the first chord of the choruses in “The Simplest Things,”

where I hit a low E on the piano and Marc’s low string is open — I left all of that dynamic content intact when mixing.

Another wart you can hear that I am fond of is the piano’s sustain-pedal action as the dampers release from the strings — as in the beginning of Track 2, “Every Time She Falls.” At the beginning of Track 3, “Late Train Home,” you can hear us moving around and discern some activity in the audience — a lot of these details would be masked in a lower-resolution recording. In the last verse of “Late Train,” there is a brief rest after the word “fighting,” and I appreciate how that moment of blackness is captured on the record.



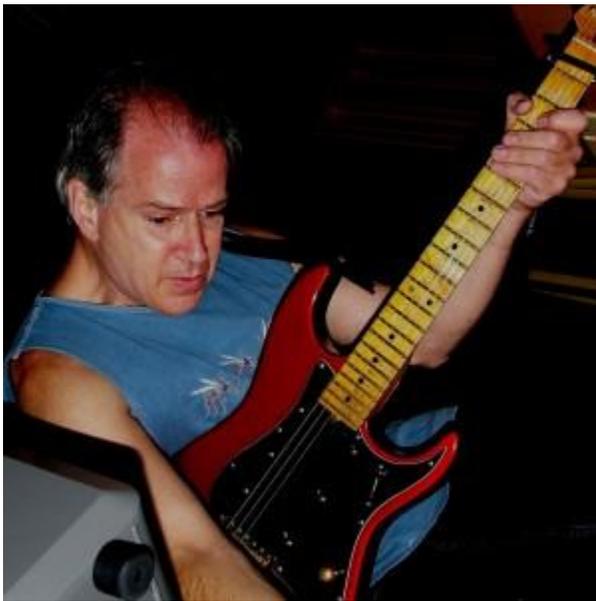
Patella bowls us over.

The unusual timber of the crystal bowl Beth played on “Favorite Son” is a unique sound, and the audience was buzzing about it; you can hear some of their activity. And Marc’s full-throttle guitar swells on the bridge really show the range of loud to soft in the performance.

I could point out details throughout the whole recording, but sparing you that elongated verbiage, I will suggest that you listen to how the piano has a personality — from the bass notes to the middle of the keyboard where I play accompanist to my own voice, and the upper register with its sensual purity, balance, and grace. These attributes are what make a fine instrument, and I am doing the best I can as a player to let the piano shine in each song. The bridge of “Things I Know” and “Tumble” both place the piano front and center.

## Geek Speak

The room we performed in at Firehouse 12 in New Haven, Connecticut was designed by John Storyk in conjunction with local architects. The room is 1,200 square feet with a 15-foot wood ceiling and bamboo floors. We had a full house that evening to see the trio, roughly 70 people or so. Vocal mics were Shure SM58s, though I have recently started using the Beta 87C, which works well with my voice in this trio.



Shulman rocks.

To mic the two vintage Fender guitar amplifiers, we used a pair of Royer 121s (one on each amplifier), and on the piano, we used a pair of Schoeps Collette (spaced cardioid, facing the hammers). Greg was in charge of this setup, and I loved the sound. He has many gigs under his belt, and I felt very comfortable placing setup at his discretion.

The ambient room mics were a pair of AKG 414 XLII in wide cardioid facing the audience, directly under the PA speakers. This is what gave me that expansive open feeling to the recording, which was super-important to me — trying to capture the energy in the room as much as possible.

The signal path for the recording was simple yet elegant. We tracked through API Legacy Plus preamplifiers to Pro Tools 11, and the converters are PrismSound Dream ADA-8XR at 44.1/24. Master clock was an Apogee Big Ben. I'd like to be able to comment on the use of compression on the vocals — if there was any, it was very light, but in all honesty, none of us can recall for sure what if anything was applied in this regard.

When we mixed the record, we used the Waves SSL Channel, SSL Compressor, RDeEsser, and L2. From Avid, we used the EQ3 and D3 DeEsser. And finally, from UAD, we used the EL7 Fatso Sr. and the EMT 140 Plate Reverb.

