PHYSICAL MUSIC

CHRISTOPHER JANNEY CREATES VISUAL RHYTHMS

WITH REAL-TIME IMAGES

by Ellen Lampert-Greaux, Creative Director

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Christopher Janney is a bit of an enigma; a man hard to pigeonhole as his imagination and intellect are continually in overdrive, taking him in new directions as both an architect and musician/composer or several directions at once. Such was the case at his November 25, 2014 concert/ multimedia event, "Exploring Hidden Music," at the Gramercy Theatre in New York City.

Janney gathered legendary bassist Bill Laswell, Lynn Mabry, Dave Revels, Trilok Gurtu, DJ Logic, and Sheila E, as well as special guests including dancer Sunny Hitt and DJ

Adam Gibbons for a concert/dance performance/DJ set. The interactive sound and lighting bollards of “Sonic Forest,” one of Janney’s *Urban Musical Instruments,* were outside on the sidewalk to greet guests (requiring permission from the New York City Department of Transportation).

This event, with lighting by Anne Militello, encapsulated many of Janney’s ideas, including “HeartBeat,” part of his *Physical Music* series, with choreography by Sara Rudner (former principal with Twyla Tharp Dance). To create “HeartBeat” back in 1981, Janney began researching wireless heartbeat monitor systems while an artist-in-residence at MIT’s Center for Advanced Visual Studies, talking extensively with engineers in the MIT community. He modified a real-time Transkinetics wireless telemetry system and had a custom audio filter built, isolating the sound of the heart’s electrical impulses to the brain and it’s surrounding muscles. One of the numerous dancers who performed the piece is Mikhail Baryshnikov who toured with it for two years in the late 90s.

The quadraphonic sound system for the event, including the opening walk-in piece titled "CyberMonks'14," used the Gramercy’s house system, sweetened with four stacks each comprising two Bose 802s and a Bose MB24 subwoofer, while eight channels of amplification came from four Bose Powermatch PM8500's. “The subs were wired directly to the amps and bi-amped. A Bose rep was on hand to analyze the sound and custom-tune the system to the Gramercy space. A totally sweet set up,” says Janney.

Visually, the heart of this particular evening was the “Visual Synthesizer," in which Janney animated a large LED wall upstage of the musicians, for what he calls “a synaesthetic experience,” also part of his *Physical Music* series. “The impetus for this whole event is that I wanted to do “HeartBeat” with Laswell in a rock and rock hall, not a sit-down venue,” notes Janney. “I wanted it to be part of a music concert where people could dance. Laswell and I rehearsed a couple of times and liked what we had. We

discussed what else we needed to make a full-length concert, so I started down the road of reviving the "Visual Synthesizer" piece, using the latest technology available today."

While the idea of visual music dates back to the 17th century, Janney notes, "to create the visual composition in realtime as another instrument on stage is the area I am exploring. The question I asked myself is how can we have a computer fast enough to do multiple images on different keyboards simultaneously." He built an earlier iteration of this instrument in 2006, but the technology wasn't ready then for what Janney visualized. "I could see the pictures in my head, but I couldn't get all the layers to work in reality," he says. By 2014 the technology was there and the new version of the "Visual Synthesizer" premiered at this Gramercy show. Where most of the original music was written by Janney, with Laswell writing one piece and serving as musical arranger.

The result is a real-time cascade of images on a 16' x 9' 7mm DigiLED wall provided by Video WallTronics in New Castle, DE, and pushing out 10,000W of light. "The wall is made up of 20"-square modular LED panels from DigiLED intended for indoor or outdoor use, as well as designed to fit within sets and used for concert touring. The color stays constant under bright light or at low light levels, and the LEDs maintain a perfect gray scale at low brightness or high brightness," explains Mitch

Kaplan, president Video WallTronics, the managing partner for DigiLED in the US.

Playback for the video synthesizer system is via custom software built by Janney with programmer Javier Cruz on Derivative's TouchDesigner platform. "Based on my earlier versions, I have two 88-keyboard controllers with all of the background images or 'backs' on the bottom keyboard," Janney explains. "These images are made up of stills—architecture, nature, eyes, masks—that get processed through SFX—distortion, color/saturation, and tiling/slit screen—all controlled in real-time with two Apple iPads running Lemur. There are also a series of video loops fabricated in Adobe After Effects which include fast videos of hi-speed cars, roller coasters, slit-scan tunnels, and slower videos of diving off cliffs, sky diving, and some GoPro slo-mo stuff."

The top keyboard is to play forms of solid colors on top of the backs. "These 'tops' comprise seven octaves of color- black, green, blue, violet, red, orange, yellow, and white - with each color in 12 shades," notes Janney, whose system also maps platonic forms—sphere, cube, open cube, cylinder, plane, tetrahedron—and have one morph into another, creating unique shapes. "You can set frequency and rate, as well as color and position on a screen preset in the scaler", he explains, using ADSR presets to set attack, decay, sustain, and release of the forms on the screen. There is also a sustain foot pedal to hold images firm on the screen and X, Y, Z scalers to determine rotation/size/rate of the forms, as well as mapping of textures on the forms, adding human eyes, free-hand drawings or icons- from Elvis to Lisa Simpson- to the visuals.

The playback is much like structured improvisation in jazz. "I draw, photograph, make videos with a GoPro and animations in After Effects, then create a series of presets for each section of the music," says Janney. "But, I actually 'play' the forms/images of both the backs and tops in realtime, creating the visual rhythms on the instrument right along with the band.

“I found I had to write the music for the band so I could feature what the Viz Synth can do best: making "Synaesthetic Music," Janney notes. “My interest is not to imitate the rhythmic content of the music, but weave in and out, creating visual rhythms that embellish or move in counterpoint. I have always ‘seen’ this visual counterpoint when I hear music, and I particularly enjoy making music more like architecture—more physical, more visual.”