

# Post

## MONSTER MASH

WORLDS COLLIDE IN THE  
CG HOTEL TRANSYLVANIA 2



**PLUS:**

EVEREST DIRECTOR BALTASAR KORMAKUR

PRIMETIME: FOX'S *EMPIRE*

VFX: MARVEL'S *AGENTS OF S.H.I.E.L.D.*

REVIEW: EIZO COLOREDGE 4K MONITOR

SPECIAL REPORT: 4K/HDR-PART II



# Post

SERVING THE INDUSTRY SINCE 1986  
VOL 30 · NO. 9

## FEATURES

### 16 WOMEN BEHIND THE LENS

A look at the sometimes-overlooked demographic: Rose McGowan & Lesli Linka Glatter  
*By Marc Loftus & Linda Romanello*

### 20 MASH UP

Worlds collide in Sony Pictures Animation's *Hotel Transylvania 2*  
*By Marc Loftus*

### 24 COLOR ME THIS

Facilities set high standards for color calibrating displays  
*By Christine Bunish*

### 28 WEB-BASED SERIES BREAK OUT

PlayStation, Netflix, Hulu and YouTube serve up big-name talent and must-watch shows  
*By Christine Bunish*

### 32 GETTING INTO GEAR

Audio pros open up their toolboxes  
*By Jennifer Walden*

### 37 SPECIAL REPORT: 4K/HDR - PART II

How the latest technology is affecting post workflows



## DEPARTMENTS

### 2 EDITOR'S LETTER

Industry Insight  
*By Marc Loftus*

### 2 POST SCRIPT

Women of Hollywood  
*By Linda Romanello*

### 4 BITS & PIECES

What's new in post production

### 10 VISUAL EFFECTS

Marvel's *Agents of S.H.I.E.L.D.*  
*By Linda Romanello*

### 12 PRIMETIME

Fox's *Empire*  
*By Marc Loftus*

### 14 DIRECTOR'S CHAIR

Baltasar Kormakur — *Everest*  
*By Iain Blair*

### 42 POSTINGS

A graphic glimpse of some recent work

### 43 EDUCATION

Creating their own luck  
*By Karen Moltenbrey*

### 44 IN THE MIX

5.1 upmix challenges  
*By Brian Riordan*

### 45 EMERGING TECHNOLOGIES

Virtual & Augmented Reality re-writes the rules of audience engagement  
*By Tim Sarnoff*

### 46 REVIEW

Eizo ColorEdge CG318-4K monitor  
*By M.J. Foley*

### 48 PEOPLE

Keeping tabs of the industry's movers & shakers

## ON OUR COVER



Sony Pictures Animation's *Hotel Transylvania 2*

## THIS MONTH IN

# CGW

COMPUTER GRAPHICS WORLD

- Transitioning iconic 2D characters to 3D
- The challenges of transmedia projects
- SIGGRAPH 2015: It's a wrap
- The latest in motion capture

## WEB EXCLUSIVES

- **CAREERS:** Audio engineer/composer Cosme Liccardo
- **EDITING:** *Mission: Impossible's* Eddie Hamilton
- **IBC 2015**
- **SIGGRAPH 2015**



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# GET INTO GEAR

Audio Pros Open Up Their Toolboxes

BY JENNIFER WALDEN

Avid's S6 control surface is getting good reviews, thanks in part to its colorful interface.



Sony Pictures Post's (inset, L-R) Steve Pederson and Daniel Leahy put Avid's S6 console to use on the HBO series *True Detective*.



**F**rom the reliable iZotope RX 4 Advanced to the newly-designed Avid S6 console, these audio post pros talk about their favorite pieces of gear. Find out what they're using and how they used it to help complete their latest projects.

#### AVID S6

Although Sony Pictures Post re-recording mixers Steve Pederson and Daniel Leahy have mixed several projects together over the years, including *Southpaw*, *The Equalizer*, and *Training Day*, their recent mix on HBO's *True Detective* series was the first time they've mixed together on the new Avid S6 console. "The Avid S6 is just now getting into Hollywood as the new console surface in the re-recording world. Six months ago, this board really wasn't active anywhere," says Pederson, who handled the dialogue and music on *True Detective*.

Pederson has been working 'in-the-box' via an Avid ICON for several years and his first impression of the Avid S6 was that it feels more like a traditional console, and less like a workstation. "The Icon D-Command and D-Control work surfaces were born out of digital audio workstation editors wanting to touch something tactile, and not just do everything with a keyboard and mouse. Those surfaces came along almost as an afterthought to the workstation," states Pederson. "The Avid S6 is more reminiscent of the culture of the traditional board. You're still dealing with the workstation, and it's the same concept of mixing in the box, but the S6 is a real effort to have a console surface as opposed to a workstation surface."

The Avid S6 ([www.avid.com](http://www.avid.com)) combines the best features of the Euphonix/Avid System 5 console and the Avid ICON, but one advantage over the ICON is the amount of visual feedback the S6

offers. "Avid really took the time to pay a lot of attention to the TFT displays that give you such detail. You get the track waveform, the track name, and everything is color-coded as it is in a session," says Pederson. "When I set up my sessions, everything is color-coded. It helps the eye go to things quicker. The S6 console and its meters display that for you. It's a lot of visual feedback, and that is terrific."

Effects/backgrounds/Foley re-recording mixer Leahy, who typically works with over 300 tracks at a time, likes having all his session information, color-coded, on the console in front of him. "After being a very traditional mixer for the past 30 years, I'm a big proponent of the S6. We never lose the work that we started with in the temp dub, and we can take that all the way through the final mix. I think it is a fantastic, new way to go," he says.

While mixing *True Detective* on the Avid S6, Pederson and Leahy were able to work on the same episode simultaneously, independent of each other, with Pederson cleaning dialogue over headphones on one side of the board, and Leahy pre-mixing the effects, backgrounds, and Foley over the speakers in the theater. "We could work independently of each other, each being at our own place in the session for that episode," says Pederson. He notes that with a traditional console, they'd have to work on the same section together. Pederson would pre-mix the dialogue and music, and then stop working while Leahy pre-mixed the effects. But with the Avid S6, Pederson says, "We could work at the same time in different places on the reel." Once Leahy was happy with the effects pre-mix, he used headphones to finesse his edits while Pederson pre-mixed dialogue and music over the theater speakers. "We only had a few days to prep the mix. I don't think we could have done it any other way.

The S6 is part of this workflow culture that we are heading into where you can do multiple things at the same time."

Pederson will be mixing the upcoming Screen Gems film, *When the Bough Breaks*, on the newly-installed Avid S6 in the Anthony Quinn Theater at Sony Pictures Post ([www.sonypictures.com](http://www.sonypictures.com)) in Culver City, CA. "It's the first of what I think will be many S6 consoles at Sony," says Pederson. "The S6 console design has a more traditional feel, but with amazing displays. Having so much information in front of us, there is hope that [we] mixers can focus on the theater screen and the console, with less diversion to the computer screen. It's the board of tomorrow and it represents the workflow culture that we are all going toward."

#### IZOTOPE RX 4 ADVANCED

Across the pond in London, freelance sound editor Lucy Johnstone ([www.lucyjsound.com](http://www.lucyjsound.com)) is one to watch — or rather, hear. Named a Broadcast Hot Shot in 2013 (a distinction given to rising stars in the broadcast industry who are under 30 years old), she's lent her talent to several popular TV series, including *Gold Rush: Alaska*, *Dark Matters: Twisted But True*, and *Top Gear*, as well as the award-winning short film *Knit Me Some Happiness* that recently aired on BBC Two, and the animated short *Magarwasi*, honored with the 2015 Best Sound award at IBSFF (an international student film festival held in Michigan).

Johnstone often uses the iZotope RX 4 Advanced ([www.izotope.com](http://www.izotope.com)) audio restoration software in her workflow, choosing the Dialogue Denoiser for 'factual' work, i.e. documentaries and reality series, to help clean-up background noise. Additionally, Johnstone finds the Ambience Match feature equally helpful on factual projects.

"People are talking so quickly and you

don't really get much 'silence' to grab and use as filler on the dialogue edit," she says. "If you do find a small bit of silence and loop it, it doesn't sound very natural. So the Ambience Match has been super useful. It's a life saver!"

Another favorite RX 4 Advanced feature is the Spectral Repair, which Johnstone used to help remove unwanted bird tweets from the post-apocalyptic short film, *The Reverie*, created by Sam Wildman, which tells the story of Amy, the sole survivor of a catastrophic event, who seeks out the source of a mysterious radio signal. Johnstone notes there was no dialogue in the film, just the sound of the main character walking in the woods and breathing through a gas-mask. "They did record sound on location, so I had the sound of her breaths and some faint natural sounds, like her walking through the leaves. But in the more open shots, you hear birds along with her breathing which is not what you want if everything is meant to have died," says Johnstone. Although she replaced a few sections with ADR to remove the birds, Johnstone liked the sound of the movement and breathing on the production tracks. "I used Spectral Repair to go in and find the specific frequencies of the birds, and was able to draw them out and remove them."

For *Knit Me Some Happiness*, a film created as part of the Arri short film challenge for the Sheffield Documentary Festival, in which filmmakers use Arri's Amira camera, Johnstone notes they shot, edited, and mixed the film in three days. Due to the tight schedule, the voiceovers for the film were recorded when and where it was possible, using a Zoom H1 portable digital recorder. In post, Johnstone used the Declip tool in RX 4 Advanced to help rebuild several lines that were distorted. "When I zoomed-in on the waveforms, they were completely squared off. The Declip feature essentially rounded them again," says Johnstone, who did additional processing on the lines using Denoise. "It didn't sound perfect, but it sounded a hell of a lot better than it did originally. The RX 4 Advanced was very helpful on such a tight schedule. Being able to have all these different tools in one place was so useful."

**AUDIOKINETIC WWISE**

It's no secret that the game industry has the talent, the tools, and the budgets to create soundtracks and scores that rival those of big Hollywood films. But if you're thinking of crossing over from film sound



Lucy Johnstone (right) used iZotope on *Knit Me Some Happiness* (here) and *The Reverie* (below).



Ubisoft's Nicholas Bonardi (inset) says Audiokinetic's Wwise middleware allowed the publisher to make the guitar game *Rocksmith* truly interactive.

to game sound, there's something you have to understand — integration — getting your sound into the nonlinear game world, and having it do what you want, when you want. Popular middleware, like Audiokinetic's Wwise ([www.audiokinetic.com](http://www.audiokinetic.com)) isn't just a means to get sound into a game. It provides tools that can help you be more creative with game sound, explains lead audio designer Nicholas Bonardi at Ubisoft Studio SF ([www.ubisoft.com](http://www.ubisoft.com)) in San Francisco, creators of guitar skill-building game *Rocksmith*.

"Think of it like this: Wwise is the audio engine for your game. It holds all your original files, converts them for use on your target platform, and gives you the tools to make your audio accessible from the game engine," says Bonardi. "On top of functioning as a pipeline solution, Wwise provides AAA realtime audio tools that give you a metric ton of flexibility to create solutions and experiences. It was absolutely crucial for the execution of *Rocksmith*."

*Rocksmith* looks similar to games like



*Guitar Hero* and *Rock Band*, where players have to hit the notes that come down the note way, but there's one huge exception. For *Rocksmith*, players use an actual guitar, any electric guitar they have on-hand, to play the game. Instead of hitting buttons on a guitar-shaped controller, *Rocksmith* players play real notes on a real guitar, essentially learning how to play popular songs. The challenge was making a player's real guitar sound exactly like the guitar that's on the album. "The player's guitar tone proved to be one of the pillars of the *Rocksmith* experience. If you're tone didn't match the song, or worse yet, didn't make any sound at all, there was no feeling of participating with the music. That's the hook — connecting to music through par-

ticipation,” says Bonardi. “We needed tone modeling that rivaled digital amp modelers on the market. To achieve this, we developed several plug-ins with Audiokinetic for the specific purpose of recreating those iconic tones.”

He worked with Audiokinetic’s co-founder Simon Ashby to make that happen. “I’d give them a design and they’d go nuts with it — we really squeezed every horse out of the console hardware,” says Bonardi. “From there, we were able to create hundreds of amps, guitar pedals, and speaker cabinets for Tone Designer.”

*Rocksmith 2014* introduced the new Session Mode, and consequently, a new set of challenges. In Session Mode, an AI band accompanies, and adapts to, a player’s performance. Players can customize their virtual band from over 70 different instruments. “We knew that players were going to want to change everything about their band and the jam session, like instruments, key, scale, tempo, groove, style — there was no way we were going to be able to provide this flexibility using .wav files,” explains Bonardi. So Audiokinetic built a whole MIDI infrastructure for *Wwise*. “Our solution turned out to be sampler instruments powered by MIDI data. That opened us up to manipulating the MIDI data, which allowed us to transpose notes, adjust tempo, change key, change scale, and more, all in realtime. Without that, Session Mode would not have been able to exist as it does today.”

*Rocksmith* isn’t the only game that can take advantage of the MIDI features in *Wwise*. It’s open to all users of the software. “The new MIDI features crack open a world of opportunities to take advantage of with *Wwise*. There is so much potential for creating truly unique experiences,” says Bonardi. “I’m very excited about the future of interactive music. We’re in an awesome time.”

#### IZOTOPE RX FINAL MIX

Toronto-based studio owner Damian Kearns is a jack of all audio post trades. “I think of myself as a Swiss Army knife. When someone needs any type of post audio work done, I show up with the appropriate tools,” he says, even if ‘showing up’ involves traveling outside Toronto. Recently, Kearns traveled nearly 1,000 miles to Winnipeg, Manitoba, to work on the upcoming reality series *Polar Bear Town* at Frank Digital ([www.frankdigital.com](http://www.frankdigital.com)).

ca). He brought along his mobile studio: a MacBook Air with Pro Tools 11 HD, and a spare iLok 2 carrying duplicate licenses for his favorite software, such as iZotope’s RX Final Mix and RX Loudness Control. “I know most places might not have these plug-ins because they’re new, but I need to have them with me, so, I bring them. That basically gives you an idea of what I think of the software.”

RX Final Mix ([www.izotope.com](http://www.izotope.com)) combines an eight-band Dynamic EQ and a True Peak limiter in one plug-in, offering users the ability to sculpt the frequency ranges of dialogue, sound effects and music. It supports surround formats up to 7.1.

Additionally, Kearns uses RX Final Mix in the standalone version of RX 4 Advanced. By selecting the Dynamic EQ from RX Final Mix in place of the standard static EQ in RX 4 Advanced, Kearns says, “I can set a threshold and have it compress or expand. That is really handy, especially for taming rumble or sibilance, or even trying to add some air back in.” Prior to RX Final Mix, Kearns used Ozone 6 for Dynamic EQ, but he finds the one in RX Final Mix has more bands with tighter EQs, and lower latency. “What’s great is I use it to break down individual elements and maximize each one of them. It has the same great sound as Ozone 6 but in a more post-centric iteration.”

Kearns also prefers the True Peak limiter in RX Final Mix, which is based on the IRC II limiter in Ozone 6. “The Final Mix limiter is class-leading. It doesn’t have the artifacts I usually associate with digital limiting, meaning it’s not harsh and there’s not the typical thinning out of the sound I associate with other limiters.”

As a beta tester for iZotope RX Final Mix, Kearns says he was able to influence the plug-in’s design, particularly regarding CPU usage. “With some companies, you send in an email and you’re not part of the discussion, but iZotope really listens. You are part of the team,” he says. In Version 1.01, users now have the option to hard by-pass the limiter and choose a different limiter model to bring down the overall CPU usage substantially. “The scalability of RX Final Mix is a vital part of why I find it is such a wonderful tool. Now that there’s a low latency limiter setting available, I can actually run multiple instances of RX Final Mix on my puny MacBook Air without absolutely killing my track count. When I hit the studio to finalize my mixes, I can upscale to the highest

Damian Kearns (below) used iZotope’s RX Final Mix to add some punch to this baseball doc.



quality settings and let my mix shine a bit more.”

From documentaries to commercials, Kearns uses RX Final Mix on all types of projects to add punch and sparkle to his mixes. For example, while working on *The Complete Game: The Rick Langford Story*, a baseball documentary for Rogers Sportsnet (a major sports network in Canada), Kearns edited and pre-mixed the show in stereo and 5.1 on his MacBook Air, then took everything to a dub stage for his final on-air mix. “The show had a quick turn-around; only two-and-a-half days for edit and mix,” explains Kearns. “In the mix theater, I instantiated iZotope RX Final Mix on all my stems and mastered the show in five minutes. That’s all it took for me to get the sound I wanted.”

Kearns continues: “The tools we have available now, like iZotope RX Final Mix, allow you to work in less than ideal circumstances. You can walk in somewhere, plug RX Final Mix into your project and it brings your mix to life.” **P**