

Studio • Live • Broadcast • Contracting • Post

PRO AUDIO REVIEW

Gear & Software Reviews For The End-User



Lifehouse
Page 82

April 2005

U.S. Exclusive!

Smart AV Post-Production Console

In This Issue!

- **A-Line Acoustics Line Array**
- **Grammys Go All Out For 5.1**
- **Recording Live-For-DVD In China**

Test Driving



HHB's PortaDrive

**NAB Surround
Showcase Section**

\$3.95



www.proaudioreview.com

PRO AUDIO REVIEW

Gear & Software Reviews For The End-User

Vol. 10 Issue 4 • April 2005

Evaluating audio products for professionals in commercial recording, broadcast production, audio for video/film, project studios, live sound, contracting and multimedia.

Studio

- 8 Studio News and New Products
- 10 Smart AV Smart Console
by Stephen Murphy
- 16 Lipinski Sound L-408 and L-409
Microphone Preamplifiers
by Russ Long



Broadcast

- 22 HHB PortaDrive Hard Disk Recorder
by Mark Ulano
- 26 Ricsonix PIN-MIC
by Ty Ford

Post Production

- 28 Apple DVD Studio Pro 3 Authoring
Software
by Charles Ibis

Showcase Surround Sound

- 54 Recording in Surround: The Wall of
Hope Concert
by Jim Pavett
- 60 Surround Radio: NeuStar Takes to
the Airwaves
by Stephen Murphy
- 62 Broadcasting the 47th Grammy
Awards in 5.1 Surround Sound
by Mel Lambert

Live

- 66 A-Line Acoustics AL-10 Line Array
Speaker System
by Will James

Departments

- 6 Publisher's Page: Looking for
SACDs
by John Gatski
- 20 Studio Sense: Death of Tape
Greatly Exaggerated
by Stephen Murphy
- 40 The High End: The DMP Archive
Project Part 1 (The Live-to-Two-
track Years)
by Tom Jung
- 70 Buyers Guide: Studio Consoles
- 74 Buyers Guide: Wireless
Microphones
- 82 Single Slice: Lifhouse
"You and Me"
by Strother Bullins



BY JIM PAVETT

Recording in Surround: The Wall of Hope Concert

The director counts down over the intercom and the adrenaline kicks in as I hit multiple record buttons. I tell myself "There's no turning back now... no retakes." A crowd of 10,000 people cheers to the thunder of Cyndi Lauper bellowing out from the ancient, hand built stone walls. I must be dreaming. But no, I'm recording the first ever foreign concert at The Great Wall in China. As Cyndi Lauper completes her set and leaves the stage, my wing man Rick and I scramble to set up the levels for the next act. With only five minutes before another countdown we check and recheck our settings and then yell over the intercom "record room ready"! Again the director counts "3 - 2 - 1" and Alicia Keys hits the stage. Nelly McKay, Sylvia Tosun, Doyal Bramhall II, and Boys II Men follow. Six hours later the crew briskly packs up master tapes and equipment for their safe return to the U.S. while 2,000 Red Army soldiers escort fans out of the temporary concert venue. We'd made it.

This magnificent experience began when I received an unexpected phone call from my friend, Steve Atchley. "Hi Jim, do you have



a passport?" Passport? Yeah. Steve needed a recording engineer for the audio side of a 14 camera, high definition video shoot with multitrack audio. The recording would have post production for future broadcast as well as DVD and CD releases. The live concert production would be manned by teams from five countries. The Great Wall of China! Not only that, all the ticket proceeds, up to \$1,000 per seat, would be donated to the Chinese Children's Foundation and also aid in restoration of the wall itself. Mentally, I began to pack. But time was of the essence because my departure date was less than two weeks away.

PREPARATIONS

I was to fly into Los Angeles on Friday morning Sept. 17, 2004 to catch a direct flight to Beijing. That same week I had been booked solid in the studio and still needed to finalize the carnet list of recording gear with the rental companies. For some reason, it was like pulling teeth to get any equipment, so I went into survival mode Wednesday afternoon Sept. 15. That was just two days before I left for China and one day before the shipment needed to go out. I decided to redesign a whole new system from the ground up, since my only constraints were it had to be in stock locally. As soon as I finished the list of items, I headed out to the stores to purchase and put it together. The next day, we were still rackmounting items when the shipper arrived.

After a 12-hour flight, I finally arrived in Beijing about 5:30 am Sunday, Sept. 19 having crossed the international dateline. The ten or so of us who flew in from Los Angeles took a shuttle out of the city and into a vast mountainous countryside.

We arrived at our destination after one hour and 20 minutes, with still no English to be seen. The section of The Wall where the concert would take place was originally a five-mile span that surrounded a training camp. The barracks for the camp was now a hotel in

No latency. No modeling.
Only electrons cruising along in a vacuum.
And sound in 3-D.

Class A Vacuum Tube Signal Processing

Pendulum Audio www.pendulumaudio.com
(908) 665-9333

which we would stay. People normally were able to come to this area of The Wall and sightsee, yet it was half shut down for the construction of the stage.

At this point, I had been awake for 30 hours and still had another 14 hours to go before turning in. Therefore, I decided to take a tour of the stage area. The stage was approximately a third completed and centered in front of a main gate of The Wall. Back in the day, these gates were the only way for someone to get through the wall. It made a perfect pass through tunnel for the artist to go back stage located directly on the other side. It was situated in a valley between two huge mountains. The view from the audience was no longer just a stage, but a fixture attached to a wall spanning up each side of the mountains with towers on top. It was just an absolutely amazing sight.

The floor of the stage was a huge 40 feet-in-diameter motorized turntable on top of an 80-foot wide stage. A small wall separated the turntable into Stage A, and Stage B. While Stage A was performing, Stage B would be setting up to lessen the time between sets. I was informed that due to Feng Shui, no lighting trusses were allowed to be positioned over the performers. This design constraint helped evolve a creative set with a wall on each side of the stage and all the lights being inserted into windows overlooking the stage. Underneath one of the facades, a 12-foot x 16-foot prefab metal building was being built for the audio recording room. Hold on, was my Feng Shui being considered?

There were approximately 100 Chinese laborers constructing the set. In China, everyone wore button down shirts, slacks and loafer type shoes including the workers. Everything was built by hand. Five workers, holding a single rope and pulley to hoist up part of the façade, took the place of a winch.

I was ready to dig in and start building, but I found out that our equipment, flown in from the USA, was being held up in customs for several days. Our staff recommended that this unusable time be spent sightseeing in Beijing.

THE DESIGN

Choosing the mix and wiring design required two areas of focus: what specific mixers and equipment were the Chinese going supply to us, and the level of redundancy to make management at ease.

Originally, I was told that I would have two 56-channel Soundcraft Series 5 mixers and some type of Yamaha digital mixer supplied by the Chinese. Knowing this, I brought as much cabling as possible so I could hook up to anything. As the days went by, I received conflicting information regarding both when and what equipment would be arriving. This gave me an unsettling feeling. For instance, I did not know what type of digital I/O was on the digital mixer or even what model number. I could not talk technical jargon in person with any supplier. Everything had to go through a translator who was supposedly calling the supplier over a cell phone. In the main office, we only had three 28.8 kHz Internet hook ups that mainly supplied PR and management access to the outer world. Any research on potential possibilities was not an option.

Because of the time constraint, I had to start focusing on what I did know and take action. No matter what, we were going to have two analog mixers of some kind. I initiated a meeting with management and received sign-off to forget about the digital mixer and proceed with just the analog consoles.

Another hard decision that needed to be made regarding the mixer set up was the level of redundancy. We had 48 channels of

audio on each stage, which made a total of 96 channels entering the recording room. Since we had two 48-channel recording systems, we had three options:

Option 1:

1 mixer (for mic preamps only) and 1 recording system per stage

Option 2:

1 mixer (for mic preamps only), 1 mixer as playback, 1 recording system feeding the second recording system digitally for redundancy

Option 3:

Split the 96 channels to two separate mixers and sets of recorders

Option 1 gave us no redundancy and the performances recorded would be staggered across different recorders which would be a post production nightmare. Option 2 was a risk because the second set of decks only worked when the first set of decks worked. We chose option 3 since it was the only full redundant system which far outweighed the loss of another split.

I decided to use four Alesis HD24 recorders in 24-bit, 48 kHz mode since this recording was specifically for a 5.1 surround DVD mix. The final post production house was unknown, so I kept the master recording in a very transferable format that any system could import without worrying about sampling rate conversions.

The video control room supplied a SMPTE timecode and video black burst feed. I recorded the SMPTE on one track of each set of

continued on page 56 ➤

THE ULTIMATE SURROUND MIC



Blah blah blah blah blah blah blah blah blah
blah blah blah blah blah blah blah blah blah
blah blah blah blah blah blah blah blah blah
blah blah blah blah blah blah blah blah blah

What words could possibly explain the greatest microphone invention of the last thirty years?

Call, get a demo, then you'll understand.
This is *real*.



AVAILABLE IN THE U.S.

EXCLUSIVELY FROM

LASVEGASPROAUDIO

WWW.LASVEGASPROAUDIO.COM
(702) 307-2700 BRAD@LASVEGASPROAUDIO.COM
7320 SMOKE RANCH ROAD, STE G, LAS VEGAS, NV 89128

AUDIO NOUVEAU



R88



**AUDIO ENGINEERING
ASSOCIATES**
BRINGING YOU THE FUTURE OF
RIBBON MICROPHONE TECHNOLOGY
WWW.RIBBONMICS.COM

► Wall of Hope from page 55

decks. (see sidebar Trial & Tribulations in a Foreign Land on my attempt for another option) The video black burst signal was fed into an Aardvark Aardsync II master clock. The Aardsync then gave me four word clock outputs to drive the Alesis HD24 machines word clock inputs.

SETUP

I waited until Tuesday Sept. 21 for my two China-supplied Soundcraft mixers to show up. I really could not set anything else up since we needed the space in the room to install the large consoles. I hooked everything in a serial-type fashion starting with wiring the two 48-channel splits. The Soundcraft Series 5 consoles have two sets of mic inputs on each channel with an A/B switch so I was able to wire Stage A to Input A, and Stage B to Input B of each board.

During set changes, all I had to do was flip the A/B switches and adjust the mic gain. Next, I used the fully balanced insert send to feed the Alesis recorders. This with a few other switches bypasses any EQ, fader adjustment affecting my sends. On the mid section of the console, I had 12 returns I could bring in with fader control. I selected the most important tracks I wanted to hear back, when I was not recording, and then wired the outputs of the recorder appropriately. Keep in mind - I was able to hear all the tracks on the way in to the recorder. I did not have to worry about feedback loops or any tracking accidents since I was not using any busses at all to feed the recorders. And last but not least, I had two Focusrite Producer Pack 430II that were used on the lead vocal channels. I wired these directly between the snake and the recorders. This not only allowed me to capture superb audio, but also allowed some compression to tame down the powerhouse singers I was dealing with.

SOUND CHECK

During sound check, I jumped between both consoles adjusting gain pots so there were no overloads. Along with the chaos around me associated with live performances, I was documenting my levels for future recall as fast as I could. Communication at this time was barely being setup with intercoms, and I was isolated and out of sight from anyone. All I had was a 12-inch video monitor so I could see the stage via video. I still could not contact anyone even when I did have the intercom setup. Everyone else

was engrossed with their own thing. Because of the full redundant setup and the turntable stage, I had only eight minutes or less between acts. I informed management that another hand, who could handle extreme pressure and could be trusted, was needed in the recording room. Rick Brown became my wing man/assistant to help setup all the recall spread sheets and manage the other console. The two-man system required hard work, and no room for breaks. A third engineer in the recording room would have been ideal, but was not an option at this time. The show must go on.

CONCLUSION

Normally, I sit in a highly controlled environment, recording and editing for clients. Since I am conscientious of providing my customers with top-quality recording and service, I usually steered away from live recordings. Historically, too many unknowns translated to "too risky." However, recording the Wall of Hope con-



Making do in a foreign land. Lots of cabling, some equipment and the job somehow gets done.

cert convinced me that quality live recording is achievable - even in an isolated area of a foreign country. My patience was tested, yet the payoff was worth every moment.

What We Used

In China:

- 1 Soundcraft Series 5 56-channel console
- 1 Soundcraft Series 5 40-channel console
- 2 Focusrite Producer Pack 430IIs
- Electro-Voice monitors with power amps

In the USA:

- 2 Focusrite Octo preamps
- 2 Aardvark Sync IIs
- 4 Alesis HD24 recorders
- 8 Seagate 80 GB hard drives
- AKG 240M Headphones
- Vic Firth Isolated Headphones

► Continued on page 58

All you need is ONE



Fastest set-up ever! Only **ONE** Holophone® H2-PRO Surround Sound Microphone was required to capture the complete emotion and the natural Surround ambience of the National Anthem, the game, and the multi-dimensional Half-Time performance by Sir Paul McCartney - FOX HDTV 5.1 broadcast of Super Bowl XXXIX in Jacksonville, FL, February 6, 2005.



Recent Holophone® Broadcasts

Winter X-Games 2005 – ESPN HDTV
Super Bowl XXXIX 2005 – Fox HDTV
The Grammy Awards – CBS HDTV

HOLOPHONE®

Surround. Simple.

www.holophone.com

416.362.7790

NAB Booth N2026 W/SRS LABS



Trials and Tribulations in a Foreign Land

Being an electrical engineer, producer, and musician who has owned a recording studio in Arizona for over 20 years, I have precisely crafted every nuance of my studio on my own timeline. When I have a problem I can talk directly to engineers linked to the device and get a solution. Until I went to record "The Wall of Hope Concert" in China, I did not realize the level of control I commanded in my own environment, let alone the things I took for granted on a daily basis when it came to communication.

The first thing I experienced when I started working on this project was not to move equipment myself when there was a Chinese worker there to do it for you. This was dishon-

would be delivered by 2 p.m. that day. A day later in the afternoon, I finally got the Timepiece and was excited to connect it up. As I started walking away I looked and saw only MIDI jacks on the back of the unit. No SMPTE or ADAT Sync! I looked at the front of the unit and it said MIDI Timepiece not Digital Timepiece. It was much too late to try again.

- 2) At the end of the show I was tearing down my room. Since the consoles were so big, they were only 12 inches away from the wall and there was just enough room for me to slide behind and wire them up. It was 12 a.m. that night after the show



Jim Pavett in "the shed"

orable. But to make it happen, you first had to locate an interpreter, try to tell the interpreter what you needed, hope they understood what you meant, and then wait (sometimes a very long time – even days) for it to happen. Once it did happen, it might not have been done the way you actually wanted and the loop would start all over. There was really no way to fully know if your needs were correctly interpreted. Here are two examples.

- 1) One morning around 8 a.m. I had requested a MOTU Digital Timepiece so I could convert my SMPTE time-code to ADAT Sync and not use an extra track on the recorder. I was told that they located one in Beijing and it

when I started dismantling the 400+ wires. All of a sudden the power went off. The floor was multilevel with cables all over the place and barley any room to get around the equipment without hurting yourself even when the lights were on. It took me a few minutes to work my way out, find an interpreter (another 5-10 minutes), and wait 15 minutes and, voila!, back to work. As soon as I got back behind the console, you guessed it, the power went off. This went on for three hours. Ah, yes, Grasshopper, I truly learned patience is a virtue.

Jim Pavett has been recording for over 20 years. He owns Allusion Studios, a commercial recording facility in Tucson, Arizona.