The Machu Picchu Challenge

Staging a show in the mountains of Peru is no simple matter

By: Richard Cadena

The next time you have to load your show in through a long back alley and up a narrow flight of stairs, be thankful that you are not at Machu Picchu. No matter how narrow the stairway or how many flights up you have to haul your gear, it will never come close to the harrowing load-in that Red Power Peru had to overcome to stage a show at the ancient Inca landmark almost 8,000' above sea level.

"When we arrived at Machu Picchu," said audio engineer and owner of Red Power Peru Andres Cuadros, "it rained for three days."

That was the conspicuous start to the project, but that was just the beginning.

"It was really crazy," he continued, "because not only did we need to bring in the sound system and the rest of components—the console, distros, mics, cable—also 60 Vari*Lite luminaires, four Super Troupers, two lighting consoles, 20 Atomic 3000 strobes, and eight 15,000-lumen projectors; all this on the backs of the workers."

Laborious load-in

For a production of this size, this is one of the most unwelcoming venues that can be found. It's more than a mile and a half above sea level and is situated high in the mountains of Peru. It is surrounded by steep mountains and deep precipices with sharply inclined terraced hillsides. That, plus the dense vegetation, prevents the practical use of wheels or animal power. There are 140 structures on the site and over 100 flights of stairs. And then there were the great distances involved.

"The performance was a long way from main gates, but that was the only place we could put the power plants," Cuadros said. "We had four 200kW portable generators and they were 500 to 700 meters [1,640' to 2,296'] away from power distros. We used more than 3,000 meters [9.842'] of cable. The head electrician kept saying, 'There is not enough power for more lights,' 'The cables are too long,' and things like that."

Wireless DMX played an important part in the production, since the area to be covered by the lighting was so vast and the cabling challenges so great. For that purpose, they used two Wireless Solutions W-DMX F-1 G4 transmitters and receivers. Red Power Peru, the supplier of over 20 tons of gear for the event, is located in Lima, Peru, which is over 700 miles from the site.

"You can imagine what we had to do to get to Machu Picchu," Cuadros said. "First of all, there was a 1,000-kilometer [621-mile] trip by truck to Cusco (Peru), and a plane trip for the technicians, then 200 kilometers [124 miles] by train from Cusco to Machu Picchu Pueblo (the nearest town to Machu Picchu). Then it was another 30 minutes by smaller trucks, and, after that, all of the

All photos: Courtesy of Andres Cuadros/Red Power Peru

The Cusco Symphony Orchestra performs, under the direction of Theo Tupayachi.

equipment was carried by workers on their backs, more than 500 meters [1,640.4'] on average." Most of those meters were vertical.

"Our worst adversary was the terrain," said lighting director Gian Franco Di Vitto.

"There is no way any kind of vehicle can ride inside the old city, not even cases on wheels or cargo beasts. No sir. We hired 60 local stagehands to carry the gear out of their cases to where they would be placed. We ended up with less than 20 of them, because they ran away from that torture…I mean job, that ugly job. It was very hard to breathe and very easy to get altitude sickness."

Mystic maneuver

The rain only served to add to the stress of the gig. "We had only eight days to do all the work," Cuadros said, "six for set up and rehearsals, including sound check, one for the show, and one day for a cushion. But we lost three days!"

Just when it seemed that the rain would never stop, a mystic appeared and asked for divine intervention.

"At the end of Day Three," Di Vitto said, "Mr. Eduardo San Roman, the director's assistant, arrived and said that the only way to stop the inclement weather was to ask the apus."

An apu is an Incan spirit that protects the people of the Inca Empire. There are 12 apus of Cusco: Ausangate, Salkantay, Mama Simona, Pikol, Manuel Pinta, Wanakauri, Pachatusan, Pijchu, Saqsaywaman, Wiraqochan, Pukin, and Senq'a. The DA said they could appeal to the apus by performing a "payment to the Earth" ceremony. He called a mystic shaman who performed the ceremony, and, out of curiosity, Di Vitto assisted.

The very next day, the rain was gone.

"The sky was empty and clear with the sun shinning," Di Vitto said. "At night, it was so clear that I stood at the highest point of Machu Picchu and looked to the sky. I felt like an astronaut doing EVA [extravehicular activities]. Was it a coincidence? I don't know but it was real."

Look Ma, no plot

The first part of the show was a theatrical re-enactment of the arrival of Hiram Bingham, who discovered Machu Picchu 100 years ago. It included over 200 live actors, who played the Incas. Live music was provided by the Cusco Symphony Orchestra, under the direction of Theo Tupayachi, and Manuel Miranda and his band performed music from the Incan culture with traditional instruments. The second part of the program included a performance by Peruvian singer Tania Libertad, standing in a lift high in the air with Machu Picchu and its natural scenography in the background. The show, which will become a one-hour

broadcast, was created and directed by Peruvian director Luis Llosa, whose movie projects include *Anaconda*, *Sniper*, and *The Specialist*.

When Di Vitto was asked about the lighting plot, he came back with a surprising answer.

"Actually, there was no plot," he said.

He goes on to explain that the entire show was designed, programmed, and played back on location.

"The advance visit only helped to get a general idea of what the director wanted to happen," he said. "The moment I arrived to load in was the moment I chose the best location for the fixtures. The places where I normally wanted the lights to be [were] not where I could actually put the gear. It's a 700-year-old archeological site, and, even with the full support of the scientists in charge of the city, about 90% of the area was not available to locate any 40-kilogram [88lb] lighting fixtures."

On the night of the fifth day, the lighting system was finally ready for programming. It was then that Di Vitto began programming from scratch.

"I had only two nights to program all the cues," Di Vitto said, "and there were a total of 153 for the act, 45 for Tania`s concert, and 52 for the lighting show depicting the discovery with the music of Dvorak, the *New World Symphony No. 9*."

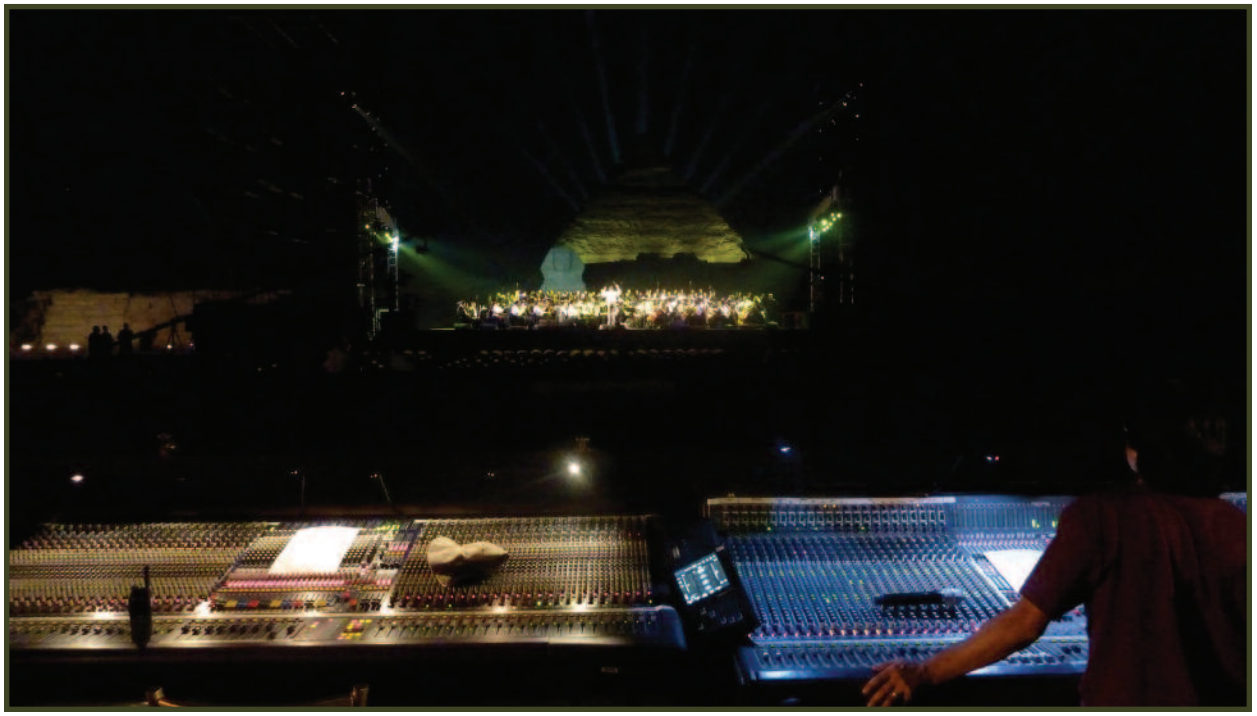
The lighting rig included 40 Philips Vari*Lite VL3500s, 24 VL3000s, 20 Martin Professional Atomic strobes, 40 one-cell 1,000W cyc lights, 20 one-cell 500W cyc lights, eight Strand 1,000W ellipsoidal spots, eight Strand 1,000W Fresnels, two Strong Super Trouper 2,5000W followspots, one MA Lighting grandMA 2 ultra-light console for the automated units and one High End Systems Wholehog II for the conventional gear, and the W-DMX system.

Splendid spots, wonderful wash

Di Vitto's concept was to wash the city in color and project beams of light. He located the fixtures all around the grounds and he used them to cover the walls of the structures as well as the fields.

"To save time, I used a previous show where I had a similar quantity of equipment and merged into this show, so all the palettes for colors, gobos, and beams were already done," he said. "The only palettes I had to create on site were focus positions. Then I started with the cues.

"It was really crazy, because not only did we need to bring in the sound system and the rest of the components—the console, distros, mics, cable—also 60 Vari*Lite luminaires, four Super Troupers, two lighting consoles, 20 Atomic 3000 strobes, and eight 15,000-lumen projectors; all this on the backs of the workers."—Cuadros



The lighting was controlled by an MA Lighting grandMA and a High End Systems Wholehog II; the sound was run by a DiGiCo SD8.

Di Vitto says he programmed the show from scratch, completing it in two days on site.

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Very modern Meyer Sound gear laid out against the ancient splendor of Machu Picchu.

"I added some spot fixtures in the areas near the walls to help the wash fixtures to illuminate specific spots of the performance, as well as to create the mystic look of broken shadows over the actors and over the walls of the performance area," he said. "There were some [Martin] Atomic 3000 strobes on the main platforms and in the far field to create a storm effect that the director wanted. The spots also gave me the chance to propose to the director some gobo projection over the actor's walking area and create very mystic 'forest shadows' over them and the walls near them. The actor's shadows also created the movement of the looks."

Di Vitto was especially pleased with some of the luminaires. During pre-production, he told the director that lighting the entire side of a mountain would require some very specific kinds of luminaires that were not available in his country but that maybe the Vari*Lites might provide almost enough light.

"I was wrong," he admitted. "The VL3500 wash did a

hell of a job in this project," he enthused. "Behind Machu Picchu City is Wayna Picchu Mountain, which is about 800 meters [2,624'] away from the platforms where the VLs were placed. They hit Wayna Picchu with no problem at all!"

Modern technology conquers ancient wonder

The audio portion of the program was equally daunting. Although the live audience was limited to about 300 VIPs, capturing the audio was among the biggest challenges.

"The challenge was enormous, since it had to give voice to a complete symphony orchestra in addition to a series of effects," said Cuadros. "Meyer Sound allowed us to use a sound system of a compact size but of high quality and power. The DiGiCo console gave me the versatility to do this in the short time that we had. The Shure systems, as well, allowed us to catch every detail of the music and the artists. It required a lot of effort, but it was well supported by the equipment. I don't think we could have done it without this equipment. We were very satisfied with the end results."

The sound rig included 12 Meyer Sound UPQ-1Ps with eight 500-HP subs, ten Meyer Sound UM-1P monitors, one DiGiCo SD8 console, two Shure UHF-R Beta 58 wireless mics, four Sennheiser e 300W in-ear monitors, and a 6-station Clear-Com communications system, also supplied by Red Power Peru.

"It was quite a task considering not only the artistic and aesthetic challenges, but also the technical limitations. It was an adventure, and there were endless funny anecdotes," Di Vitto confided. "After 10 days of walking up and down this rocky area at the top of this mountain," he said, "my $300 mountain shoes broke!"

Andres Cuadros and Guillermo Riera, co-owners of Red Power Peru.

"We had to deal with the lack of power, the difficultly of the terrain, the high altitude and a very, very tired crew," said Cuadros. "But to manage to illuminate one of the Seven Wonders of the Ancient World with a staff of only 30 technicians, all of whom were Peruvian, is something that we are very proud of."

Above, left and right: Philips Vari*Lite units illuminate the mountains at night.