

a nightlife destination unlike any other in Las Vegas. Initially, Hakkasan contacted The Rockwell Group as principal design team for the 24,000-squarefoot luxury entertainment nightclub. Rockwell, one of the leading design houses in the world, has

shared a rich past of successful collaborations for Hakkasan and is known for their broad spectrum of design work. The firm has put their creative stamp on hospitality installations, airport terminals, hospitals, festivals, museum exhibitions, and Broadway sets.

He notes "a 12-month process" from "initial design meetings and presentation of the project to opening the doors upon completion. It was a very compressed timescale," he adds, "but nothing out of the norm for Las Vegas construction schedules."

### >> The Channel

entire project.

Likewise, Hakkasan again reached out to nightclub design firm AudioTek to "get the band back together" so to speak. AudioTek, along with local integrators, National Technology Associates (NTA) had previously worked together on the group's Omnia nightclub, which opened at Caesars Palace in March 2015.

Frank Murray, COO of AudioTek, a company noted for design, installation, and maintenance of high end audio, media and lighting systems to some of the most recognizable leisure, hospitality and corporate customers worldwide, talks a bit about the project and his company's history.

"Over 30 years ago, AudioTek started with a basic philosophy, that everything we knew benefitted the customer first and foremost," he begins.

"We are basically an installation company that has design, logistical, and project management elements. The project and interior design teams drive the design process. For Jewel, on the client side, we have James Algate and Jerry Klint from Hakkasan. James is a very good guy and set out very ambitious goals for the club, while Shaun Sullivan from Rockwell and Shawn Yauch from project architects BWA are the design principals. We take our cues from these players," he says.

#### >> The Oculus

One of the main aspects of the design brief was the elimination of any conventional rig above the patron's heads, and dispense with the standard nightclub fare of flat static video walls prevalent behind the talent and DJ's.

Bu MikeWharton

To achieve this, a "grid" in the main room constructed of concentric oval rings highlighted by ROE Hybrid 15S LED tiles, encircles "The Oculus", a molded art piece that mimics facets of a stone. Eight Robe Pointes and a ring of eight Robe DL4X moving heads also hang from the rings with another 40 Pointes configured in 'spoke' formations emanating from the center of the ceiling.

The rings descend into four corner pillars of video creating a canopy to define the space and add a kinetic and sculptural shape to the overall club — not just the dance floor area. Three thousand custom ROE 15mm 6x6 LED tiles with a 90W high intensity spot in its center make up this sculpture.

There are no chain hoists; however, DeSisti Pantographs deploy Ayrton CosmoPix-R fixtures, filling the whole room above and below the mezzanine with beams. MagicDot-R fixtures, which are compact Ayrton products that emit tight, bright beams, create another layer on the surrounding balcony.

The Oculus may represent Jewel, but the real gem of the nightclub are the 54 DreamPanel Twin fixtures that make up an ever-evolving matrix wall behind the DJ. This Ayrton product, capable of continuous pan and tilt on both axis, is a moving yoke style unit with 64 high output LED on one side and a 6mm video tile on the other side. Thus, the entire wall can appear to turn on its own axis.

Las Vegas-based Morpheus Lights is the exclusive U.S. distributor of all Ayrton products. The design team at AudioTek contacted Morpheus early on. As the project proceeded, the Ayrton distributor was pleased to provide logistic support and technical information to the both the AudioTek programming and design team and to systems integrators NTA.

"We thought this was the perfect time and place to unveil all the power of the DreamPanel Twin fixture to its truly stunning potential," says Morpheus Lights' Keith Bennett. "Morpheus extends our thanks and congratulations to everyone involved for this brilliant realization."

"We are the first company to put this fixture, which articulates video in 360 degrees, into action," says Murray. When you flip them, you are moving them on two axes and mapping on video and lighting."

That old phrase "Beauty is only skin deep" simply does not apply once a deeper observation takes place. Jewel bears this out on multiple layers.

It is still very common to see audio, video, lighting, and control systems functioning in isolated islands of technology. These systems will function, but by their nature can inhibit growth and change — unless they are joined together as one.

## >> The Setting

"The creation of Jewel, just like our other nightclub projects," Algate says, "was a collective process between all parties involved. We worked with each team to discover new and innovative elements, which would provide an aesthetically pleasing and cohesive overall design coupled with an overwhelming technological audio experience for our guests."

One of the goals of the design team on Jewel was to eliminate the restrictive nature such a design produces. "Ed Shaw, video director at Hakkasan, wanted to integrate the lighting and video elements into a cohesive unit," relates Murray. Along with the desire for a cohesive system, the capability to expand as needed was essential to the build.

Jewel's production network is a managed multi-virtual local area network (VLAN) system that is redundant, fast and flexible.

Joe Garcia, of NTA, who designed and built the backbone of the entire system at Jewel, says, "Our role was to take their design, turn it into shop drawings, and make it a reality by making it work. The key to making it work was to make it integrated."

Garcia physically achieved this by the use of Luminex switchers "out the wazoo" as he puts it." When it comes to ease of use, Luminex GigaCore switches make it super easy for an end user to change the group of a port to suit his or hers need. With all traffic, be it Art-Net broadcasts, sACN multi-casts, time code clocks, streaming audio or video (even the lasers are on IP!), the flick of a knob makes it possible," he said.









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Murray says, "AudioTek coordinated the companies that worked on Jewel. We brought together our preferred vendors that we have worked well with on previous projects. They understand the intricacies, and the timelines, with this type of work. This is not the same as creating a bar or installing a public address system in a sports hall. There is a lot of diplomacy involved. During the course of concept to completion, clients can throw in unusual or unforeseen demands. Our clients require the versatility that we are capable of to meet these adjustments. We like to be on top of things so our vendors can hit the curves, so to speak. The fact is we repeatedly work with these vendors because they are so capable to do just that."

NTA is such a vendor.

Says Garcia, "From the initial build, we figure out where the gaps are. Anybody can throw a number out there and be the cheapest. However, without the prep work we do, that number is meaningless. Nevin Edwards is really good at spotting and filling in the gaps, which reflects well on us with the other people on site, who are also trying to meet their budgets and hit their timelines.

Edwards, senior project manager at NTA, speaks about the company's standards of practice, illustrating perfectly what Murray requires of AudioTek's vendors.

"With the Jewel installation, as with every project we take on, the goal is to be ahead of the game before the game even starts," says Nevin." We accomplish this by building the racks and testing all products ahead of time. Our team is well versed technically with all aspects of these intricate systems and willing to do the preparation required to make the job successful."

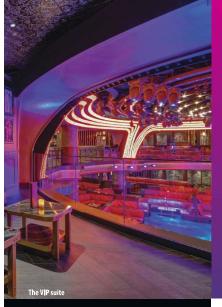
Just as a touring crew would prep their system, NTA does a burn in at their facility on the fixtures and actual console before installation on site.

"Given the way Vegas runs," says Edwards, "which is go, go, go, with 20 different trades working on top of one another, time crunch is always the most challenging aspect of these installations. Minimizing the economical onsite time is a priority."

Such foresight is why Nevins took delivery of the Avolites board and Ai servers before in

This job would require video and lighting data to run at a degree that most live shows have never done, and we knew it would challenge existing desks and servers," recalls Murray. With the sheer amount of data that the system needed to deal with, Jewel represented the biggest system that AudioTek has ever put together, even taking into account their concert touring projects.

Avolites has done a lot of very big projects for us," says Murray. They are without a doubt one of the sincerest, decent companies I have ever met. Their ability and commitment to help is second to none."



#### Design Team

**Lighting Designer:** Andy Taylor AudioTek Team: Frank Murray, COO; Chris Kmiec, Technical Engineer; Len Bolger, Installation Engineer; Mags Morton, Project Coordinator; Paul McMullen, Audio NTA Team: Nevin Edwards, Senior Project Manager; Joe Garcia, Audio Visual Systems Design & Engineering

Focus Lighting Team: JP Lira, Jenny Nicholas, Jon Blitstein

Rockwell Group: Shaun Sullivan **BWA Architects:** Shawn Yauch Hakkasan/Jewel: James Algate, Jerry Klint Morpheus/Ayrton Rep: Keith Bennett

Avolites Rep: Brad White

#### Gear

- Ayrton DreamPanel Twin fixtures
- 2 Ayrton DreamPanel-HD Box units
- Avrton CosmoPix-R fixtures 48 Avrton MagicDot-R fixtures
- KVANT Clubmax 6000 color laser projector
- Panasonic AW-HE40 PTZ camera
- Panasonic AW-RP50 remote camera controller Absen video screens

# Control Setup:

Avolites Sapphire Touch, Tiger Touch II and Quartz controllers; Titan Net processors; Avolites Ai Infinity R8 and S4 media servers: Livestream Studio HD31 soft video mixer.

#### Networking:

Cisco 1921 router, 2960X switch, Aironet Wireless unit; Luminex GigaCore12, 14 and 16XT switches: Luminex DMX-2 MKII IP/ DMX nodes (18), DMX-8 MKII IP/DMX nodes (4), DMX-4 MKII IP/DMX node (1), Crestron DMMD 8X8 media router (1)

# Related Links

Hakkasan Group: hakkasangroup.com Rockwell Group: rockwellgroup.com BWA Architecture + Planning:

bwa-architects.com

AudioTek: audiotekinternational.com National Technology Associates: ntechassoc.com

Focus Lighting: focus|ighting.com

The result of AudioTek's discussions with Avolites resulted in the delivery of the Sapphire Touch, Tiger Touch II and Quartz lighting consoles with Titan Net Processors and Ai Infinity R8 and S4 media servers to control the

The three Ai media servers not only control the, Ayrton DreamPanel Twin, ROE Hybrid ribbons, and the staircase, but also the portrait marquee screen in front of the venue," adds Shaw. "They are integral to the success of the project as they make it very easy to program and operate multiple areas at once." At the entry, a massive wall of mirrored LED screens by Absen, welcomes visitors to Jewel with video content. High quality 3D visuals evoking a series of pathways and walls run across the 8 columns and 15 stairs to highlight the architectural design of the space and encourage guests to ascend to the mezzanine level.

"Having an installation like Jewel gives Avo the opportunity to show what we have been working toward," says Brad White, head of Avolites US for Group One Limited. "Our mantra is, 'We're going for total visual control."

The console's operating system backs up that ambitious goal. The standalone Sapphire has a rating of 16 universes, but the console's engines are not limited to parameters or universes. Instead, the control system calculates a "load factor" by taking into account everything the board is processing. Simply put, when needed, another universe is there. Jewel has more than 50 operable universes.

"Due to the selection of fixtures, it was imperative to implement a control system that seamlessly integrated both lighting and video," notes AudioTek lighting designer Andy Taylor. "Once suggested, everyone agreed Avolites was the natural choice.

An ETC server provides the capability to control the architectural lighting separately from theatrical lighting. However, the Avo surface platform lighting desk can control both to create different effects and looks throughout the venue.

JP Lira, senior lighting designer at Focus Lighting, explains the company's approach to the architectural lighting, "With the whole club being a single room, we were able to produce an environment that allows the crowd a closer connection with the on-stage performer. We accomplished this by using soft accents to distinguish architectural features, which creates a nice balance with the energetic LED content and theatrical lighting."

"At AudioTek we believe music is transformative," says Murray, "not just substantive. We are the technologists, not the creators. We are really just the nuts and bolts, but we love to continue contributing. However, we like to think we make creative people better at what they represent."

Jewel Nightclub is clearly a shining testimonial to that fact.







www.lighting.philips.com/main/products/entertainment-lighting-solutions