

PARK-WIDE PARADE SYSTEM

Ocean Kingdom's Journey of Lights Parade

Q-SYS Lights up the Night at Chimelong Ocean Kingdom

📍 Zhuhai, China

Every night on the island of Hengqin, in Zhuhai, China, visitors to the breathtaking [Chimelong Ocean Kingdom](#) theme park are treated to one of the most spectacular night-time parades of any entertainment venue in the world. Named "Journey of Lights", the parade represents a delicate meeting of art and technology. Dancers and other performers accompany the ocean-themed amusement park's distinctive mascots on a series of floats as they embark on a 40-minute journey around the central lagoon. Covering 32 different zones, the result is an ingeniously choreographed Son et Lumière.



“ Q-SYS gives the team the flexibility to do whatever is needed, whenever it is needed. ”

Evan Hall

Forward Thinking Designs

Challenges



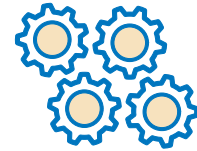
Intricate Choreography of Zone Audio

Handle GPS and wireless comms for perfect audio and visual sync of floats in the 40-min parade across 32 zones.



Control Functionality

Flexibility to simplify complex design with scripting to handle data streams between Cores.



Ease of Integration & Simplicity

Integrate Q-SYS into existing park-wide deployment to track signal paths and easily identify changes.

Immense Audio-Visual Demand

With one of the floats involving more than two hundred universes of DMX alone, the scale and intricacy of the lighting design are difficult to comprehend. The same can also be said, however, of the audio and control system which delivers the parade’s original musical soundtrack. The [Q-SYS Platform](#) processes and routes every audio element from every float and triggers third-party visual controls while maintaining tight synchronization as each float crosses from one zone to the next. The solution was devised by primary consultant Evan Hall, of [Forward Thinking Designs](#), and utilizes Q-SYS to deliver audio and control for the individual floats as well as full integration with the park-wide audio system.



Solutions

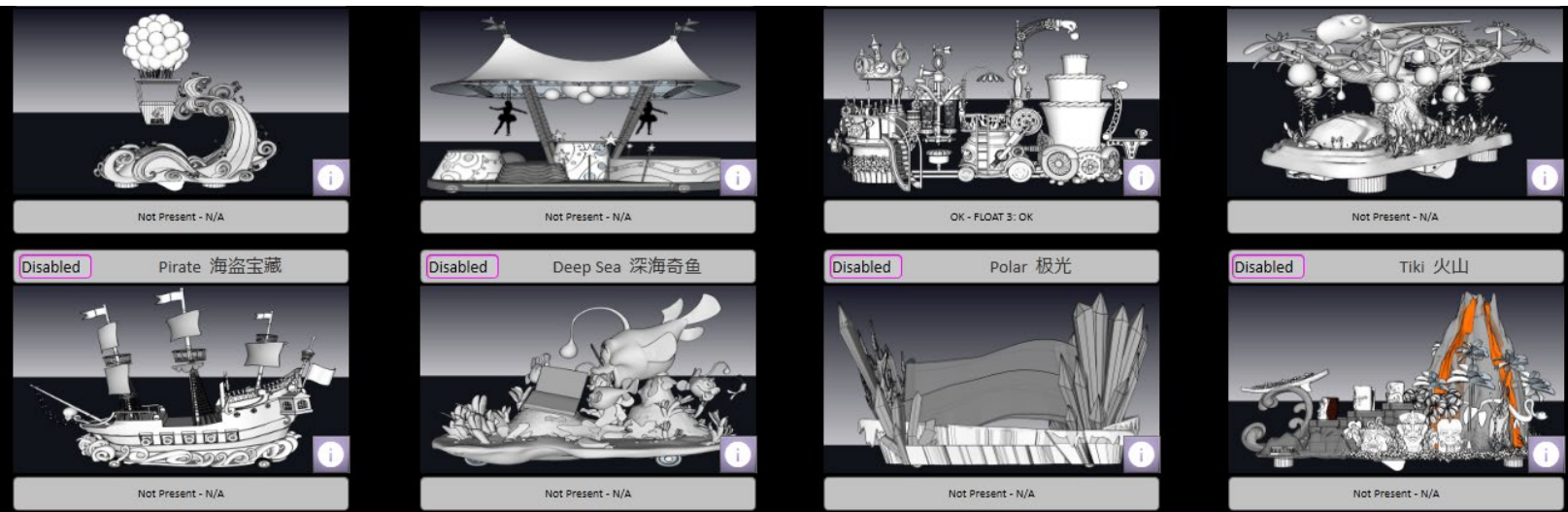
Powering an Epic Journey

The investment in Q-SYS spans the entire Chimelong Ocean Kingdom site and includes multiple units of different Q-SYS Core processors, including the Core 250i and Core 4000 (updated to the [Core 610](#) and [Core 5200](#)). But for "Journey of Lights" the specification revolves around a standalone Q-SYS [Core 110f](#) processor located on each of the floats, facilitating the multi-track BGM playback that accompanies the show. The Q-SYS Platform was designed with a singular software stack, which means all processors in the platform offer the same functionality and the only difference between them is the channel count. In fact, the Q-SYS Core 110f delivers a market-leading cost-to-I/O ratio within a single 1RU chassis, which suits the requirements of the floats perfectly.

"Q-SYS plays such a pivotal role in Journey of Lights," explains Li Kai Wai, Technical Manager, Entertainment at Chimelong Ocean Kingdom. Li was confident that Q-SYS was capable not only of handling all the audio requirements on each float but also serving "as part of the show control system". The result is that each of the eight floats in the parade features an onboard audio configuration of loudspeakers and amplifiers managed by a Q-SYS Core 110f. There is also an Alcorn McBride unit which is triggered by Q-SYS custom Lua scripting. Q-SYS enables broader show synchronization by supplying an overarching control function for the entire Parade system via a single Core 250i processor which is located in the main show operations area.

Lua Scripting with Q-SYS

The capabilities of the [custom user control interface \(UCI\)](#) and the ease of coding within Q-SYS through Lua were hugely beneficial, as Brice Helman, of Forward Thinking Designs, remarks: "The wonderful thing about Q-SYS from a control standpoint is the magic of the Scriptable Control component. The single block allows me to source all the controls for the user interface in the same place where the code base lives, which drastically cuts down on the complexity of the entire design. Moreover, the way Lua behaves allows me to do several clever things with data manipulation, which was crucial for handling constant data streams between multiple Cores."



Show Control 表演控制

Enable Show 启用表演

Core: OK
GPS: OK
Serial interface: OK

Enable All
激活全部

Disable All
禁用全部

Solutions

Simplified Park-Wide Deployment

The parade's Q-SYS Core processors provide ease-of-integration with the park-wide Q-SYS deployment – a primary advantage of their use for "Journey of Lights", but only one of many, as Li reveals: "The Q-SYS technology can also handle GPS location and wireless communication so we can achieve perfect synchronization of the audio and visual control as the floats cross from zone to zone, as well as other show elements. We were also struck by the user-friendly and easy-to-create graphical user interfaces. The [Q-SYS Designer Software](#) makes it possible to build user controls for touchscreen devices quickly and easily." The simplicity of the routing enabled by Q-SYS was another important factor. "The use of name tags to route the audio and control signals is very user-friendly," says Li. "This makes it easy to trace and identify signal paths when changes need to be made."

Site-wide Q-SYS integration means that audio can be shared to other areas of the parade if required, via Core-to-Core streaming. In addition, the system can be scaled quickly and easily – Q-SYS Cores are software-based processors, built on standard IT networking protocols, so if Journey of Lights needs to grow, its Q-SYS backbone has the ability to grow with it.

Illuminating the Possibilities

Both Hall and the park's technical team are quick to emphasize that Q-SYS has more than proven itself as a solid platform for this application. In particular, Li praises the "stable network audio transmission and user-friendly audio routing" that Q-SYS has made possible. "Adding, changing, and deleting audio files on the fly is no problem at all, and there have been many positive observations about the wonderful GUI interface," he says. As Hall observes, "Q-SYS gives the team the flexibility to do whatever is needed, whenever it is needed. They didn't have to go out and buy lots of music servers and control systems. Despite sophisticated integration requirements on the floats, Q-SYS never made them feel boxed into a corner and that – in terms of control and future expansion – they have infinite possibilities." Q-SYS is dedicated to pushing the boundaries of sound system design and delivering immersive experiences for theme parks and guests around the globe.



Q-SYS is a globally recognized manufacturer of audio, video and control (AV&C) solutions for huddle rooms to stadiums—and everything in between. Our systems make it easy for your team to design and integrate flexible, scalable solutions and deliver the native IT integration and standards-based technology your customers expect.

qsys.com

QSC Asia Regional Headquarters

Suites 1911-12, 19/F, Tower 6
The Gateway, Harbour City,
Tsim Sha Tsui, Kowloon, Hong Kong

Phone +852 3752 2740

E-Mail APAC.sales@qsc.com