

Galil Assists WET Design® in Creating Performance Water Sculptures

Throughout history, artists have sculpted magnificent works using exotic materials such as bronze, gold and ivory, and some not too exotic materials such as clay, wax and plaster. Some sculpt using wood and plastic, while others take parts from discarded automobiles and machines to create works of art.

Then, there is WET Design, a Los Angeles-based company founded by Mark Fuller that creates magnificent sculptures using water. Not ice. Water! As in the world famous water show that attracts thousands daily to the Bellagio Hotel in Las Vegas and at other unique fountains found at Walt Disney World, the Los Angeles Music Center, Seattle Center, Navy Pier in Chicago, and many more around the world.

These water sculptures amaze viewers with wondrous shapes ranging from dramatic arches, syncopating tubes, spirals, shooting geysers and tidal wave-like walls to subtle drops the size of a golf ball. They are choreographed to “perform” oftentimes to music.

Scott Malherbe, Manager, Product Development and Engineering at WET Design, says the artistic process begins with “clients that are interested in incorporating a ‘water feature’ within their architectural project. Our designers will travel to their site to better allow them to visualize and create a water expression that will exceed the client’s expectations.”

For the Wynn Macau, a new luxury resort hotel in China, WET Design worked with Steve Wynn to imagine a “Performance Lake” with grand fountains that would deliver commanding and romantic performances set to the world’s greatest music.

To bring this dream to reality, WET Design developed extensive conceptual drawings along with models to show form and sculpture, and mock-ups to show texture, sound, light, reflectivity and scale.

As the design developed, WET Design choreographed the water motion to music using their proprietary “VirtualWET” software, a 3D particle model simulation tool that generates a real-time stream of data. This data is



The WET Design watershow dazzles visitors at the new Wynn Macau luxury resort.

then sent to robotic smart nozzles called “Oarsmen®” which incorporate Galil Motion Control’s DMC-21x3 multi-axis controllers in order to move precisely in any direction to spray the water.

“The Galil controller operates our Oarsmen motion gimble, resulting in a spinning, articulating nozzle,” adds Malherbe. “Because of the multi-axis capability provided by the DMC-21x3, we are able to use 2, 3 or 4 axes to control the Oarsmen, giving us a scalable controller based on a single software and hardware interface.”

According to WET Design, “the Oarsmen nozzle was designed to address the more lyrical and legato passages in the music. Each Oarsmen can tilt and sway through any position in an upward expressed cone. It was designed to bend and weave in an infinite array of gestures, responding to the most subtle and interpretive elements of the music.”

In addition to the Oarsmen, WET Design used their MicroShooter® and MiniShooter® technologies in the Macau project to shoot controlled streams of water to heights over 120 feet, creating spirals, linear passages and “high speed water chases.”

Malherbe said that he also “liked the 96-pin DIN connector on the DMC-21x3 because it allowed WET Design to design a custom interconnect board for their other hardware devices that mounts directly to the Galil controller.”

“Reliability is critical with devices which spend their life underwater. Units must be removed from the feature in order to service. I have always been impressed with the reliability of Galil controllers.” Malherbe added. “Because of our unique needs, I also knew that Galil had the ability to customize commands quickly if necessary.” ■

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