

# Illuminating Dark Corners for Arch Motorcycle Riders

J.W. Speaker Partners with ARCH Motorcycle to Enhance Safety with Cutting-Edge Design and Technology



**Case Study** 

ARCH Motorcycle is a bespoke production motorcycle manufacturer located in Los Angeles, California. What started off as an exploration of what may be possible in the world of motorcycle design has quickly evolved into the benchmark for the premium motorcycle category.





#### Challenge:

 Incorporating lighting safety and technology into a uniquely designed motorcycle



### Solution:

• The J.W. Speaker Adaptive 2 Series Headlights



### **Results:**

- Dynamically fills in dark areas while cornering
- Eliminates dark corners on winding roadways
- Improved rider safety through cutting-edge lighting design

"Working alongside a trusted partner like J.W. Speaker and their Adaptive 2 Series Headlights ensures that we'll have best-in-class lighting on our motorcycles, now and into the future."

- Gard Hollinger, ARCH Motorcycle Co-Founder



# **Challenge:** Incorporating lighting safety and technology into a uniquely designed motorcycle

For Gard Hollinger and his business partner Keanu Reeves, building a successful new American motorcycle brand from the ground up started with a singular vision to craft motorcycles that "don't make compromises" through an obsession for innovative design, engineering excellence and dedication to the rider.

As part of working with each customer to craft unique, one-of-a-kind rides, safety plays an important role in the exceptional comfort and control of the unrivaled ARCH Motorcycle riding experience. "Safety is a very important thing for us with our customers and lighting is big part of that," said Hollinger. "Not only so that you're seen by other motorists, but also to see where you're going."

Even though motorcycles deliver exceptional control around corners, making split-second corrections while navigating through turns can be daunting – especially at night when typical headlight beams don't illuminate the full turn and leave dark voids that impact rider visibility and safety.

"Unlike cars, motorcycles actually lean as they turn," said Gary Durian, Engineering Director for Technical Solutions at J.W. Speaker. "This situation presents a unique challenge in front of the motorcycle as you're cornering as there's a black line out in front of the cutoff for the low beam."

## Solution: Adaptive 2 Series Headlight with On-board Intelligence

J.W. Speaker's passion is incorporating technology into design, so Durian and his engineering team incorporated an accelerometer and a gyroscope into the Adaptive 2 Series Headlight design. When coming into turns, this on-board intelligence calculates bank angles and speed in real-time to automatically adjust LED lighting elements – illuminating the road when and where the rider needs it most to improve safety for night-time riding.

"J.W. Speaker was the first to create an adaptive headlight for a motorcycle," said Hollinger. "Instead of the headlight just shining straightforward, even though you're turning the fork, the headlight actually adapts to where you're turning and will light the inside of the corners as well as down the road."

"What brings customers like ARCH Motorcycle to J.W. Speaker is the ability and willingness to push the envelope of what's possible with technology as well as styling to help increase brand recognition for those customers."

- Gary Durian



# "We're excited to evolve our partnership with J.W. Speaker as we look ahead to the release of upcoming models like the ARCH 1s."

- Gard Hollinger

### Results: Intuitive lighting delivers safer riding and a dynamic partnership

By incorporating vehicle dynamics to respond to the unique characteristics of cornering, the Adaptive 2 Series Headlights help make every ARCH Motorcycle safer and more enjoyable, without sacrificing design, while helping the company continue to evolve its products and original vision.

"Our riders' safety is of utmost importance," said Hollinger. "Working alongside a trusted partner like J.W. Speaker and their commitment to precision, innovation and design, the Adaptive 2 Series headlight ensures that we're delivering best-in-class lighting technology, now and into the future."

ARCH Motorcycle has built its brand around utilizing best-in-class components and J.W. Speaker is proud to be part of its roster of partners.

"These two premium brands coming together and developing solutions just makes sense," said Durian. "We're excited to be working with them on the upcoming 1s models to bring new technology into the market in a unique design and styling that just isn't there today."

## About J.W. Speaker

J.W. Speaker specializes in the design and manufacturing of vehicle lighting systems for OEMs and aftermarket applications. For more information, visit jwspeaker.com or contact J.W. Speaker at 800.558.7288 or speaker@jwspeaker.com.

