

# Fulcrum Weather-Resistant WR Series Loudspeaker Enclosures

Coating plywood enclosures with fiberglass is a generally accepted process for creating weather resistant (WR) loudspeakers for outdoor use. However, this construction method is prone to a number of maladies. When the inner plywood core is subject to moisture or humidity it can swell, causing cracking of the exterior fiberglass shell, and the plywood can rot or decay over time.

For years, Fulcrum Acoustic has used composite materials for smaller WR loudspeaker enclosures, thereby eliminating wood entirely from those products. More recently, we have researched and engineered a more modern construction technique that replaces plywood with advanced composite sheets for our larger WR products.

For decades, composites' many advantages over conventional materials have revolutionized industries ranging from aerospace and defense, to transportation and construction. Now, Fulcrum leverages the strength-to-weight ratio and material consistency to completely eliminate plywood and its inherent shortcomings from our WR loudspeakers, and deliver the following unique benefits over traditional weatherized products.

#### **STRONG**

- Dual layers of embedded fiberglass optimize the composite's structural strength
- Fulcrum's composite materials are impervious to damage by water, sand, salt, UV radiation, mold, mildew and temperature fluctuation

### LIGHTWEIGHT

- Fulcrum composite enclosures weigh less than plywood enclosures and significantly less than conventional fiberglass-covered, weather-resistant enclosures
- Lighter enclosures facilitate installation while lightening the load on rigging and support structures

#### CONSISTENT

Fulcrum composite enclosures provide greater dimensional and surface finish consistency than conventional weatherized products

#### Dimensions:

- Fiberglass-covered wooden enclosures can crack due to moisture-related dimensional instability of the underlying plywood
- Fiberglass buildup can vary depending upon the spray application process, resulting in less control over external enclosure dimensions

#### Finish:

- Composite enclosures present a smoother, more consistent finish than fiberglasscovered plywood
- Composite enclosures' smooth finish and uniform sheen facilitates painting for more accurate color matching than colorized fiberglass
- Fulcrum composite enclosures' neat appearance and familiar formats have improved aesthetics





Typical Fiberglass Finish

Typical White FRP Finish

## **PRODUCTION FRIENDLY**

While many U.S. loudspeaker companies manufacture overseas to take advantage of low-cost labor and relaxed environmental regulations, Fulcrum composite enclosures are built by experienced loudspeaker fabricators in our Massachusetts shop in an environmentally responsible manner.

- Our inherently VOC-free, clean manufacturing process complies with all U.S. environmental and worker safety regulations
- Fulcrum composite enclosures have shorter curing times than fiberglass-clad enclosures, resulting in faster turnaround and more timely order fulfillment
- The tremendous design flexibility of composites combined with Fulcrum's domestic manufacturing efficiencies enhance our ability to custom-build products to meet your specific needs

## OTHER BENEFITS OF FULCRUM WR PRODUCTS

- A three-step zinc plating and powder coating process allows our grilles to provide superior resistance to weather and scratching
- Grilles are backed with advanced hydrophobic-treated stainless steel mesh to minimize water intrusion, even from wind-driven rain
- Stainless steel mounting hardware offers durability, strength and rust resistance
- Weatherized woofer cones are standard on all Fulcrum loudspeakers
- Performance per IP55

