

**Weatherized Enclosures  
Suitable For Outdoor Installation**

The weather resistant construction of Renkus-Heinz loudspeakers produced with the WR option allows them to be installed outdoors, even if they will be directly exposed to harsh environment conditions, such as rain, sleet and snow.

WR construction is the product of extensive Renkus-Heinz research to determine the maximum amount of protection that can be provided without compromising the loudspeaker's audio performance.

It has proven itself in hundreds of outdoor installations around the world over the last 20 years, under blazing desert sun, on frigid, snowy ski slopes and in numerous outdoor installations in high humidity environments.

**Applications**

Any outdoor installation where the loudspeaker will be directly exposed to harsh environmental conditions, such as rain, sleet and snow.

Indoor installations in high humidity locations.

Portable systems which may unexpectedly be subjected to severe weather, such as touring sound systems during a thunderstorm.

**Weatherized Enclosures**

The exact design varies with cabinet types and construction. Loudspeaker cabinets constructed from multi-ply hardwood are finished with either a shell of durable fiberglass/gel coat that is virtually impervious to the elements or encased in black TuffTex that is even tougher to damage. The multi-ply hardwood is chosen for its durability and low moisture absorption characteristics.

The key design element is a 3-layer grille assembly that effectively retards the entrance of moisture into the cabinet. An outer perforated steel grille shields a 1/4 inch thick reticulated foam grille and fiberglass screen and protects them from physical damage. Together, the 3 grilles form a shield that keeps water outside the enclosure.

Extruded aluminum Iconyx enclosures feature a 3-layer grille assembly having two perforated metal grilles with a fiberglass screen sandwiched between them. The enclosure is finished with a durable paint.

All hardware is rust resistant stainless steel with all other metal parts treated to withstand a 96 hour salt spray test. Water tight Neutrik connectors or "pig tails" are used for external connections, connector plates are sealed to the cabinet with silicon caulking and all loudspeaker cones are treated to increase their resistance to moisture absorption.

**WR  
Weather Resistant Option**

**WR  
WEATHER RESISTANT OPTION**

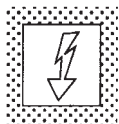
**APPLICATION BULLETIN**



- **Sealed, Weatherized Enclosures**  
Offer maximum protection without compromising the audio performance; resist moisture penetration and damage from the sun's ultra-violet rays..
- **IP-54 Rating Under IEC Standard 529:1976**  
Renkus-Heinz loudspeakers having been weatherized with the WR option qualify for a IP-54 rating under this international standard.
- **Choice Of Weatherproof Finishes**  
Choose between a durable gel-coated fiberglass finish that is available in colors or a black TuffTex shell that is virtually indestructible
- **Unique 3-Layer Protective Grille**  
Effectively retards the entrance of moisture into the enclosure, has excellent resistance to the sun's ultra-violet rays and protects against physical damage.
- **Stainless Steel Hardware**  
Is rust resistant, easily passes a 96 hour salt spray test.

## Ingress Protection (IP) Ratings

### Protection Against Solid Objects



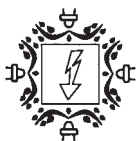
IP Rating Range:  
0 to 6 - No protection to totally protected against dust

Renkus-Heinz IP Rating  
**5** Protected against quantities of dust that could interfere with satisfactory operation (limited ingress permitted)

The Ingress Protection (IP) rating system provides a means of classifying the degrees of environmental protection an enclosure provides from solid objects, liquids and impact afforded by electrical equipment and enclosures.

The system is recognized in most European countries and is set out in a number of British and European standards. These include Classification of Degrees of Protection Provided by Enclosures, BS (British Standards) 5490:1977; IEC (International Electrotechnical Commission) 529:1976.

### Protection Against Liquids



IP Rating Range:  
0 to 8 - No protection to protected against long term immersion under pressure

Renkus-Heinz IP Rating  
**4** Protected against water sprayed from all directions (limited egress permitted)

Renkus-Heinz weather resistant loudspeakers qualify for an IP-54 classification under the IEC rating system.

The IEC standard does not include any classifications for resistance to the sun's ultra-violet rays or to other climatic conditions, such as salt spray. The materials and treatments used in Renkus-Heinz weather resistant loudspeakers were chosen to easily pass 96 hour salt spray and 120 hour UV tests.

## Architects and Engineers Specifications

### Use for Hardwood Enclosures

The loudspeaker shall be designed for permanent installation outdoors or in high humidity environments.

The enclosure shall be fabricated from multi-ply hardwood and shall be encased in a protective coating of (fiberglass/gelcoat) (TuffTex). The outer grille shall be fabricated from 16 ga or heavier perforated steel, suitable finished to resist oxidation and rust. The intermediate grille shall be at least 1/4" thick retriulated foam capable of withstanding 120 hours of UV (ultra-violet) testing. The inner protective screen shall be fiberglass.

All hardware shall be stainless steel; other metal parts shall be either plated or otherwise treated to withstand a 48 hour salt spray test. Neutrik SpeakOn or other water-tight connectors or "pigtailes" shall be provided for all external connections to prevent the entrance of moisture into the cabinet. The transducers shall be protected from the elements by a three-layer grille and treated to prevent the formation of rust. All loudspeaker cones shall be treated to reduce moisture absorption.

### Use for ICONYX IC-R Steerable Line Arrays

The steerable line array shall be designed for permanent installation outdoors or in high humidity environments.

The enclosure shall be fabricated of painted extruded aluminum. The outer grille shall be fabricated from 16 ga or heavier perforated steel, suitable finished to resist oxidation and rust. The intermediate protective screen shall be fiberglass and the inner grille perforated steel.

All hardware shall be stainless steel; other metal parts shall be either plated or otherwise treated to withstand a 48 hour salt spray test. A weather tight cover plate with knock-outs for cable glands is provided to allow weather proof connections.

The transducers shall be protected from the elements by a three-layer grille and treated to prevent the formation of rust. All loudspeaker cones shall be treated to reduce moisture absorption.

## Additional Information

The WR Option is not available on all Renkus-Heinz loudspeakers. Contact our sales engineering group or use our Online System Configurator (Customize Order feature) at [www.renkus-heinz.com](http://www.renkus-heinz.com) to determine availability. The Configurator takes the guesswork out of designing or ordering our products. It walks you through each design choice, clarifying options that are available and ensuring that when you are done the resultant design is complete and accurate.

The life expectancy of weather resistant loudspeaker can be extended by following a few simple rules:

1. Angling the loudspeaker down at least 15 degrees from vertical.
2. Following a regular (at least yearly) preventive maintenance schedule and repairing any exterior damage, retreating all woofer cones with moisture retardent, checking for signs of rust, etc.
3. Leaving self-powered models "on" continually in high humidity areas.
4. Providing additional protection (rain hoods, for example) in areas where extreme weather conditions are common.



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