

Product Of The Month

By Michael S. Eddy

Lex Products PowerRACK™

It is always interesting to see new products created after entertainment technology companies merge. In 2006, when Lex Products acquired Electrol Engineering, it was a safe bet that good things might follow. This is a case where the strengths of the two firms—rolling rack design from Electrol and power distribution products from Lex—have produced a range of new products including a compact, flexible, and powerful power distribution rack, the PowerRACK™. Taking advantage of its KMP Division, which handles metal work, Lex has created very useful products for a variety of markets. For example, Lex-Electrol's dx Series Touring Dimmers fit into the racks, creating a combination of dimming and power units within a unique and durable rolling rack design.

The Lex PowerRACK™ is a roadworthy rolling rack consisting of a continuously welded, extruded aluminum frame that provides strength, along with durable high-impact thermoplastic side and top panels, a combination resulting in a lightweight unit resistant to impact and corrosion. Users can mix and match the distribution panel components for customized needs.



Custom 20 RU rack with locking receptacles.

What It Does

Michele Yindrick, Product Manager for Lex Products Corp., points out that the PowerRACK™ “is rolling power distribution for stage and studio applications.” She also notes that many features are the direct result of consumer input. In fact, customer input is really part of the product-specifying process, since a number of optional modules can help users build just the right

Clearwing Productions
custom 125/208 VAC, LSC
19-pin receptacles.



rack for the application. In a time when customization is on the wane, it is unusual to find a company that offers enough options to meet so many needs and, when possible, provides non-catalog options.

The UL-listed PowerRACK™ accommodates 19"-wide rackmount components. All racks are 24" wide, either 26" or 30" deep, and can vary from 16" (4 Rack Units) to 58" (28RU) high.

Users choose from a variety of panels for the rack, including power input panels, branch circuit breaker panels, output panels with or without branch breakers, and digital meter and accessory panels. LED indicators are included on all power input and output panels. There are also main breaker panels, even with phase-switchable modules that allow on-the-fly switching of mains power distribution. The phase-switchable modules include an interlock that positively selects either single- or three-phase operation. The component panels use 100% rated, electronic main and magnetic branch circuit breakers. Users can even add dx Digital Dimmers and patch modules to the rack for a combination dimming and distro rack.

To lay out a unit to spec, a visit the Lex website is in order (www.LexProducts.com/Catalog/PowerRack.aspx), where users can configure a custom rack online. Starting from the bottom, fill in the panels on each side to achieve the desired configuration. Make input panel choices, then the main breaker, if desired, pick the output panels, and choose accessories. Lex is currently improving this online configuration interface to be more user-friendly and to add ordering capabilities.

Rental houses and touring companies will appreciate the design and engineering considerations that went into these rack products. When designing the rack itself, Lex drew on its experience engineering products for military markets that require rigorous testing for extreme use and conditions. The

rack framework is constructed of high-strength, welded 5052-H32 aluminum components with a black anodized finish. Exterior panels are durable ½" and ¾" HDPE, a high impact thermoplastic. "This design provides superior strength and rigidity to the more commonly used plywood construction, as well as a considerable weight reduction," explains Pete Tillinghast, Lex mechanical engineer. Engineered into the existing rack frame, Lex added a shock-mount system that provides extra stability in both the X and Y axes, so they can bounce and take side hits with greater resistance. The PowerRACK™ uses 250lb.-rated, ball bearing-type 3½" casters for smooth mobility that fit into recessed cups when racks are stacked.

The removable front and back rack panels sport unique integrated latching devices that open with minimal effort and provide a secure fit within the rack framework when closed. The spring-loaded latches mount flush with the panels, and no counterpart latch hardware is required on the rack frame. This design eliminates what is a major cause of breakage, snags, and bruises on many touring racks. The exterior HDPE top or side panels can be custom designed with company logos added. For two-color logos, recessed, laser-engraved panels can be applied to the rack. "The custom, state-of-the-art laser engraving is done in-house. You have the option to add custom circuit numbering or logos to the interior rack panels," says Yindrick. "All the panels have standard engraving for sequential device numbering, power ratings, and safety notices."

How It Came To Be

Bruce Allen, President of Lex Products, notes that user demand is really what drove the development of the PowerRACK™. "Lex had been designing and manufacturing power distribution for over ten years, and customers wanted more options," he says. "With the acquisition of Electrol Engineering Corp., the expertise for rolling rack distribution was already there. With the KMP Division for metal fabrication a few blocks away, we realized, 'Why buy racks when you can build them better?'"

What's Next

"We have fully implemented features as planned and are now concentrating on stock for improving lead times," says Yindrick. "We have really had to step up our metal products fabrication department to keep up with demands, and that is a good thing!"

What End-Users Have To Say

Randy Mullican, Operations Manager for Main Light Industries (www.mainlight.com) speaks about why Main Light chose the Lex PowerRACK™. "We liked the outer rack design," he says. "It was similar in design to the ETC touring rack with a metal frame and plastic solid surface sides." When pressed for the one feature that he really likes, Mullican responds that it would be "the meter bridge that displays both amperage and voltage without having to press any buttons. I love this feature to check on voltage coming in and the load we are pulling."

For Chris McMeen, Vice President of Sales with Scharff Weisberg Lighting (www.swinyc.com), the design and ruggedness drew his attention. "I have worked with Lex for many years," he says. "The products have always been solid, but I didn't like the rubber housing for over 24-way distros. I liked the layout and the durability of this product when I saw it at LDI." The one feature McMeen really likes is that it's "stackable—since dimmer beach is often a mess of distro and cable, the fact that it's stackable allows it to fit in with dimmer racks with the same configuration. Also, I like that the power in the back breaks out in the front." McMeen does have a wish list for the engineers at Lex to consider. He would like to see the rack get "lighter and smaller, of course, just like everything, but without a loss to durability of the product." He adds that he "loves it, but wishes that they could build them faster."

Aaron Hubbard is the Lighting Operations Manager with Milwaukee, WI-based Clearwing Productions, Inc. (www.clearwing.com). He chose the Lex PowerRACK™ "after the uphill climb with another vendor a few years back of designing custom-made distribution racks," he says. "Once they were built, we found out the design did not work as well as planned in real-world use. We needed another solution to fulfill our ongoing growth. Lex was able to customize not only input/output connector configurations but allowed us to maintain interchangeable cross-manufacture inventory by building the PowerRACK™ with required wiring specifications. Both the overall quality and lightweight are welcome features to Hubbard."

For further information, please see www.lexproducts.com. **LD**

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