



Photos: Weather-resistant outdoor mounting solutions to entertain and inform guests during wait times in ride queues

Reflect and Premier Mounts Monetize Waiting Spaces for Cedar Fair

Client: Cedar Fair Amusement and Water Park Operations Company

Synopsis: Cedar Fair sought to make profitable use of ride queue spaces, and Partnered with Reflect Systems and Premier Mounts to integrate digital signage that would display advertisements, entertain guests, and promote under-served venues throughout 11 amusement parks nationwide

Custom Mounts Allow for Economical Installation

When amusement and water park operations company, Cedar Fair (NYSE:FUN), wanted to make profitable use of its ride queue spaces, they turned to Reflect Systems, a national, full-service provider of out-of-home digital media solutions. A preliminary consultation with Reflect revealed that Cedar Fair could monetize its queue areas by displaying a stream of advertising and park-related promotions to guests waiting for rides. In addition to generating revenue, a pervasive digital signage program would entertain guests during wait times and enable park managers to promote under-served venues in real time. As Reflect worked with Cedar Fair to map out this ambitious signage program, it became evident that they would require a custom mounting solution for the hundreds of 50" LCD displays that would be installed on site.

Mounting on Poles and Other Challenges

Cedar Fair's ride queue areas presented a number of display mounting challenges. Virtually all of the displays would be hung on 3.5" or 4" cylindrical steel poles. Viewing

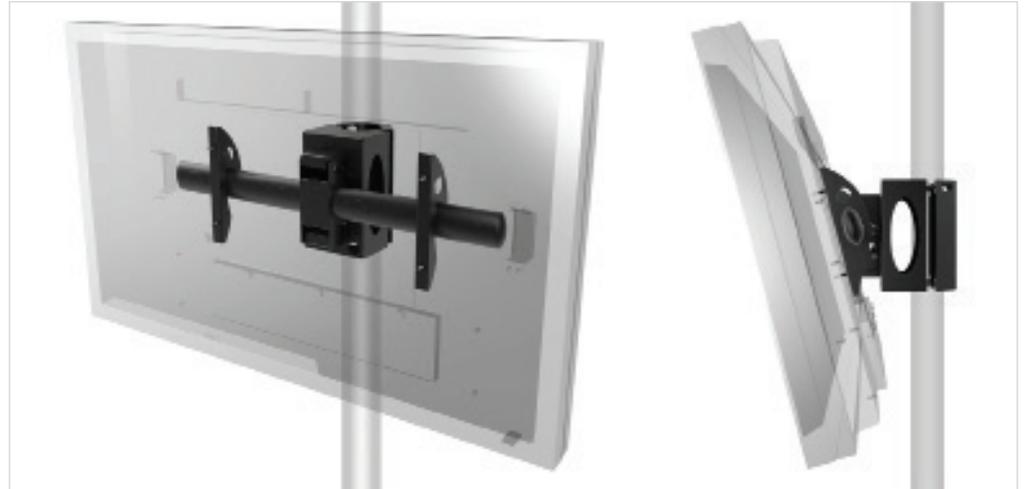
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Project Highlights

- 300+ display digital signage project
- Installed at 11 amusement parks and water parks
- One and two-sided, pole-based mounting of 300+ LCD displays, tested to 110 lb.
- Custom manufactured unique clamping mechanism to clamp mount onto both 3.5" and 4" steel poles
- Custom integrated shade hoods to use in bright sunlight
- 40", 46", 55" and 75" SunBrite commercial LCD displays

angles varied by site. Unlike the relatively controlled environment of a retail store, airport, or office building, amusement parks present a range of unusual vantage points, closer proximity to the displays themselves, and differing heights of the viewers. In some cases, there would be two displays back-to-back on a pole. Elsewhere, there would be one display per pole. The displays were all outdoors, which meant that the mounts would have to be corrosion-resistant with an outdoor rated, UV-resistant protective finish for outdoor durability.



Designing the Right Mount

Photos: The unique clamping mechanism allowed displays to mount to both 3.5" and 4" steel poles, with tilt options to best suit viewing angles in each ride queue

No commercially available, off-the-shelf mount could handle all of Cedar Fair's specifications. Reflect asked Premier Mounts to review the Cedar Fair project plan and make recommendations for the right kind of mount. Premier's engineering team met with Reflect and toured several of Cedar Fair's sites to determine the best approach for mounting the LCD screens. Through an iterative process that involved several generations of drawings and 3D renderings, Premier Mounts engineered and fabricated a prototype that can be put through testing in a variety of outdoor environments that suited each of the geographies of the nationwide amusement parks.

Using a combination of pre-existing stock components and new, specially designed elements, Premier Mounts created a mount that was ideally suited to Cedar Fair's exterior spaces. It has a unique clamping mechanism to ensure that the mount will fit properly on the steel poles and present a low risk of becoming detached. The mount was designed with a unique ability to tilt and rotate to accommodate the myriad close up angles that exist in an amusement park. It also features an integrated shade hood that can be used in bright sun scenarios. The mount can be doubled up easily for poles where Cedar Fair wanted to mount two 110-pound displays back to back. Overall, from initial design meeting to delivery of 300+ finished mounts, the project took about 60 days.

"What we liked about Premier Mounts was their commitment to working with us across the total lifecycle of the project. We need that kind of partner, especially for the large-scale systems we put into place. The mount is a deceptively small part of the whole package, but it's actually essential for success in technical and business terms."

*Rusty Wagner,
Sr. VP of Sales,
Reflect Systems*

Photos: The custom-manufactured unique clamping mechanism clamps onto both 3.5" and 4" steel poles in either single-sided or dual-sided applications

Long-term outdoor durability was an essential factor in delivering an acceptable mount to Cedar Fair. Premier Mounts approached this requirement with several proven methodologies designed to test the long-term electrochemical properties of the prototype material. "An outdoor mounting solution that develops rust is a big problem," said Rich Pierro, co-CEO, Premier Mounts, "A mount that isn't coated properly can corrode and decay, which creates liability that you don't see until it's too late. We test our products to Underwriters Laboratories (UL) standards, but then go beyond them with four times the recommended weight capacity to ensure that they deliver the best quality, using only the strongest weather-resistant materials in outdoor environments where the elements attack metal."



Installation: Taking a Holistic View of the Business Case

Premier Mounts understands that its client relationship does not begin and end with the delivery of a mount. As part of the Cedar Fair project, Premier Mounts went on-site with Reflect and offered recommendations throughout the process, from concept stage to installation. This extra effort had two objectives: On one level, it was important to make sure that the mounts were installed correctly. Perhaps even more importantly, Premier Mounts acted as a partner to Reflect and Cedar Fair by ensuring that we developed a mounting solution that reduced overall time to install. Installers were able to use the pre-designed rapid box-to-pole pre-assembly to significantly reduce the installation time, which led to reduced installation labor and equipment rentals (e.g. booms), resulting in minimizing the Total Cost of Ownership for the project. Due to Premier Mounts' early consultation and expert design, the client experienced a true partnership rather than just being treated as a vendor.

Case Study

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Custom Solution at a Glance

Benefits: Pre-assembled to allow rapid box-to-pole mounting for over 300 flat panel mounts

Features: Custom designed unique clamping mechanism allows for mounting to both 3.5” and 4” steel poles

Specs: Tested to 110 lb. for 40”, 46”, 55” and 75” Sunbrite commercial LCD displays



Photos: Custom mounting solutions were built for 300+ LCD displays throughout 11 amusement parks across the country

A Smooth Path to Monetization of Space

Thanks to a Premier Partnership, Reflect rolled out its digital signage for Cedar Fair on time and within budget. The client is now able to monetize and entertain in public spaces where previously guests had simply waited for rides, with Premier Mounts playing a key role in the success of this digital signage program. “We don’t just design solutions for displays,” said Pierro, “We design solutions to maximize our client’s business. When they win, we win, and our goal is to make certain that we provide a true partnership in order to guarantee their success.” ■