



Brightening Your Day in Dark Times: NEC laser projectors light up the Wenham Museum in Massachusetts

The Challenge

There were few industries in the spring of 2020 that weren't impacted by the Coronavirus pandemic. With many jurisdictions placing limits on public gatherings, organizations in the events business found many of the events they were scheduled to serve were cancelled, and were forced to make big changes.

LuminArtz, an organization celebrating local and regional creatives through the art of projection, refused to let the Coronavirus situation get them down. Instead, they turned their focus to a series of projects with a theme of giving back to the community, to celebrate local history and culture through their work.

One such project took place at the Wenham Museum, located on Boston's North Shore. The non-profit museum is well known for its collection of trains, toys, and beautiful historical photography of inhabitants from the area. LuminArtz needed to work with local artists to create exhibits that would honor the chosen site, overcome the technical challenges presented by the location, and create a plan that would maximize the project's exposure without creating an unsafe situation where too many people would stop and gather to watch the exhibit in person.

The Challenge:

Develop an artistic installation honoring and bringing joy to a local community, all while maintaining safety during the coronavirus pandemic.

Solution:

- (3) NEC [NP-PA1004UL](#) 10,000 lumen laser projectors with 4K support, each equipped with an [NP31ZL](#) 0.75 - 0.93:1 zoom lens.

Result:

A beautiful projection on the exterior of the Wenham Museum, featuring imagery that honors the museum's themes of trains, railroads, and historical images of area residents.

In the face of the Coronavirus pandemic, one company set out to use projectors as art to provide a ray of joy to the community. This case study focuses on the [Wenham Museum](#) project, part of the "[Light up the Night](#)" limited series of projection installations by [LuminArtz](#) and [Communications, Ink](#).



The Installation

LuminArtz first needed to go about finding an artist to create the appropriate content for the exhibit. Fortunately, they already had a standing connection to local video artist and technologist [Pamela Hersch](#). Hersch had participated as an “illuminist,” or exhibitor, in LuminArtz’s [ILLUMINUS](#), a free nighttime contemporary arts festival in Boston.. Her skills and technical aptitude made her the perfect candidate to manage the technical aspects of the project.

The Wenham Museum provided an ideal backdrop for LuminArtz’s project. Its white color and relatively smooth façade made for an ideal projection surface, but first LuminArtz had to select which projector to use for the project. Fortunately, with their partners [Studio HHH](#), they had recently purchased several of NEC’s brand-new PA1004UL laser projectors and had them available for this project.

While each projector provided a powerful 10,000 lumens, the exterior nature of the project required an even higher level of brightness. To achieve this, Hersch arranged three PA1004ULs in a stacking configuration, meaning that all of the projectors could focus on the same area to increase the brightness of the image. The physical shape of the PA1004UL conveniently has pads on its topside, allowing for additional units to be stacked on top of each other to achieve the image effect. Hersch took advantage of the projector’s connectivity options by feeding the image input into the bottom unit’s HDMI IN port, and connecting the bottom unit’s HDMI OUT port to the next unit’s HDMI IN port, and so on.

After carefully leveling the projectors, Hersch calibrated the NP31ZL lenses that LuminArtz had selected for the project. She used the projector’s built-in grid test pattern to adjust the focus, then zoom, and finally lens shift for each unit. For the Wenham Museum project, she needed to make further refinement to the alignment by using the cornerstone function, allowing her to move each corner independently.

Once the projectors were physically set up, she used projection mapping software to project plain white light onto the surface of the museum. This made it easy for her to trace the outline of the building and mask out where they didn’t want light to be cast. Through some brief experimentation, she found that, while shrubs around the building did not interfere too much with the image, she wanted to mask out the windows.

The Results

The installation had to be done swiftly to avoid drawing a crowd, as LuminArtz wanted to maintain sanitary conditions during the pandemic. To ensure that the exhibit could reach a broad audience, Lyn Burke, Director of Luminartz live streamed a video of the content playing, along with a commentary to accompany the visuals, on [Facebook Events](#) and Instagram. Communications, Ink played an instrumental role in setting up the Facebook Event and facilitating the social media aspect of the project.



The program lasted for approximately half an hour, providing stunning visuals celebrating childhood, connecting generations, and honoring heritage. It included both historical video and still images of the museum's subjects, including images of trains, railroads, and residents from around the area.

As part of LuminArtz's "Light up the Night," the Wenham Museum project will be consolidated with other exhibits in the series to be featured as a single collection at a future date. LuminArtz's will also edit their recording of the event and grant ownership to the Wenham Museum for use in their own promotional material.

"The installation at the Wenham Museum was an essential part of the "Light up the Night" series. The NEC PA1004ULs were so easy to set up and use that we were able to get in, set them up, run the exhibition, and pack it in in an evening. We didn't even have to worry about projector enclosures."

— **Lyn Burke,**
Director of LuminArtz