

SELLING THE SEASON - PROMOTIONS THAT WORK

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SIZE DOESN'T MATTER



PHOTO: JEREMY CHERNICK, J&M SPECIAL EFFECTS

FROM FLYING TO FOG, MAKE SPECIAL EFFECTS WORK FOR YOU WHATEVER YOUR STAGE SIZE

BY ALLAN T. DUFFIN

AT THE PUBLIC THEATER IN NEW YORK CITY, THE LABYRINTH THEATER Company is staging a production of “Unconditional,” an ensemble play about racial issues. The play is performed in the round with a maximum audience of 90. Onstage an angry man torments another by forcing the latter to stand on a chair with

a hangman’s noose around his neck. On the floor nearby, a Confederate flag burns brightly in a small trash can.

This was no simulated effect: the fire was real—created by mounting a custom-designed flame tray and a small fog machine inside the trash can. “The actor and I worked together over the tech process to ensure his understanding and control over how to safely light it and treat open flame on the stage,” says Jeremy Chernick, design associate for J&M Special Effects in Brooklyn, New York.

Whether it’s fire, fog, smoke, or water, crafting eye-popping special effects is a challenge for any production, large or small. And fitting SFX into tight or unconventional spaces takes an expert designer who knows where and how to

J&M Special Effects helps the LAByrinth Theater stage the burning of a Confederate flag in a nearby trash can for “Unconditional” in a 90-seat venue

Pyrotek, and its sister company Aqua Visual FX, creates effects of all sizes for a variety of different productions including rain in the new musical “Never Forget,” which premieres at London’s Savoy Theatre in May



PHOTO: CATHERINE ASHMORE

FLAME PHOTO: ISTOCKPHOTO.COM/SEBAATTIN BARVAN

install tools like fans, strobe lights, and even snow machines. Effects can be motorized, pneumatically-driven, and computer-controlled; but in the end, safety and reliability must blend with effective SFX to ensure that the audience believes in the illusion.

Burning a fire in a trash can wasn't the only effect J&M created for "Unconditional." Chernick also had to simulate the hanging of a man onstage. "We used a specially built stunt harness and a noose with hidden support and safety cables hidden inside," he explains. "A special one-foot by ten-foot box truss was installed onto the grid, and we had a highly experienced and trained rigger install all aspects of the effect." Clever lighting to redirect the audience's eye completed the illusion.

OVERCOMING SPACE LIMITATIONS

According to SFX designers, careful planning from the outset is critical. "Often," says Chernick, "special effects are added into a show after all other areas have been designed. This makes for a lot of complicated and ingenious thinking as we often have to work around the set or lighting, instead of the other way around."

Sometimes the simple approach to SFX works best. In the spring of 2006, Peter Wood, a special effects designer from Monrovia, Md., designed the environment for the gothic puppet-driven drama "Victor Frankenstein," performed at the University of Maryland, Baltimore County. Effects included fire and chilled fog that raced across the stage. In building the set and effects for the show, Wood faced a daunting roadblock: the theatre ceiling was only 13 feet high and lacked a fly loft.

In certain scenes, curtains needed to appear in the background to suggest a window. "Since the theatre wasn't equipped with a loft, I suggested we use a motorized system that would roll the curtain up on cue, like an electric window shade," recalls Wood. After researching different motors and control units, "I joked that we should just hack apart one of our DeWalt cordless drills and use its motor and switch." This turned out to be the solution to the problem, as it provided a reliable motor

and a variable-speed switch for controlling the curtain effect.

What if your actors need to float across the stage, as in productions of "Wicked" and "Peter Pan"? Well-established companies like ZFX Flying Effects in Louisville, Ky., and Flying By Foy in Las Vegas, Nev., can adapt their equipment to indoor and outdoor venues and ceilings high or low. "As long as there is a secure structure to which we can attach our systems," says Tracy Nunnally, president of Hall Associates in Dekalb, Ill., "you can fly."

In fact, special effects experts say they can make almost anything happen despite the size or shape of the stage. "The size of the space should not limit what can be done as long as everyone works together," says Chernick.

FINDING AN ALTERNATE SOLUTION

For small budgets in small theatres, workarounds are readily available.

"There are easy and cheaper alternatives to many large effects that smaller production companies may not know about," says Chernick. "This may mean a healthy imagination, or a more theatrical choice as opposed to realism, but there are a lots of possibilities—just ask a professional."

Using water can be a challenging and sometimes messy endeavor. Doug Adams, president of Pyrotek Special Effects, Inc., in Las Vegas, Nev., has created effects for large shows like "Phantom of the Opera," "Cats," and "The Rocky Horror Picture Show." Through another one of his companies, Aqua Visual FX, Adams provides theatres of all sizes with liquid effects via connectable modules that create various lengths of water screens. A surface can be added to project laser graphics and 3-D multimedia images.

"It's a stand-alone item—a water 'billboard' that drops pixilated water



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downward as the system creates shapes, lettering and logos on the water screen,” explains Adams. If a theatre wants to avoid using real water in a production, Adams recommends using a black sharktooth scrim and projecting images on it. “We also create effects on drop curtains,” he adds.

While small performance spaces require creativity and improvisation on the part of the SFX designer, sometimes a stage can be too large. During a production that featured Dr. Seuss musical numbers, “I decided that many scenes would put a black art environment to good use,” says Wood, “but our budget wasn’t big enough to bathe the entire stage in ultraviolet light.” His solution was a black art “window,” approximately eight feet square, which was cut into the set upstage center. Behind this archway was a black curtain; the entire frame was lined with fluorescent ultraviolet lights on the upstage side.

But even in this comparatively generous space, Wood was faced with space restrictions: “When the script called for the Lorax to fly away, we built a large rolling rig and covered it in black cloth, which was invisible to the audience. In this case, the width of the stage was a limitation.”

CHALLENGES, CREATIVITY, AND IMPROVISATION

Programmed effects are even more important in performance spaces that are small or oddly shaped. Linda Batwin, co-creative director for Batwin + Robin Productions in New York, uses 3-D drawings of the theatre along with scenic drawings to get a sense of how the special effects are seen by the

Doug Adams, president of Pyrotek Special Effects, Inc. recommends projecting images on a black sharktooth scrim for theatres who want to avoid the use of real water

audience. By using these tools, “you also get a sense of scale of the screens and the movement,” she explains. In addition, her team uses After Effects animation software to view how the stage movement, set, props, and media work together.

“Doing a mock-up, either full scale or partial scale, is always the way to go,” says Batwin. “It really helps you know what will work and what will not—and then you can go create it.” The production of “Frank Sinatra: His Voice, His World, His Way” at Radio City Music Hall included a live 40-piece orchestra, imagery, film footage, and an ensemble of singers and performers. During the planning stages, Batwin used After Effects to simulate what the show would look like. “It helps for the director, scenic designer, and the media designers to be on the same page,” says Batwin.

Fog machines, a part of the SFX toolbox for decades, can suddenly find themselves less effective than usual when challenged by newer technology. “Many newer buildings use a sophisticated smoke detection system that is particle-based, where sensors in the ductwork detect if many large particles appear in the air—presumably smoke,” says Wood. This improvement in safety can wreak havoc on fog machines, especially in smaller venues where the SFX are closer to the smoke detection system.

As a workaround, Wood uses low-lying and quick-dissipating fog. “Chilled fog hugs the ground because it’s cooler than the room temperature,” he explains, “so by the time it’s warmed up and is rising near the air intake, it has dissipated entirely.” Wood also makes sure to use fog fluid that has been specially formulated to disperse quickly. “I like these solutions because the fog effect appears just as I had envisioned it,” says Wood, “but also caters to the limitations of the venue’s safety systems.”

SAFETY ISSUES IN A SMALL ENVIRONMENT

Trained and licensed professionals in special effects are essential in creating suitable and safe moments for any sized venue, says Chernick. “Often the most spectacular moments occur in the smallest

of spaces.” Adams agrees: “You have to be aware of the trim height of the truss or fly galley, for example when you’re dropping in scenic pieces,” he cautions. “If you’re using pyrotechnics, you have to make sure no sparks go past the dissipation point.”

Adams points to a special effect his company installed on the stage of the Kodak Theatre in Los Angeles for the Academy Awards several years ago. With singers and dancers performing onstage, Adams and his team had to create artificial falling snow and trigger an automobile to explode during the performance. The car was just 15 feet from the audience—barely a comfortable minimum, says Adams. Moreover, lightning-fast scene changes increased the possibility of an accident. “Any materials you use have to be very quick to dissipate, with no fallout residue, and very easy to control,” he says.

After rigorous testing in his Las Vegas headquarters, Adams moved the equipment to Los Angeles, where he reviewed it with

the fire marshal. “We work very closely with the fire marshal,” he says. “We go over everything with the artist and everyone else onstage before we do it. There’s a lot of testing and calculations.”

This attention to safety pays off in the long run. “Make sure you are being safe, legal, and never risking danger,” says Chernick. “I suggest at least working with a professional as a consultant. Never use flame or pyrotechnics without a pyrotechnician or an explicit permit from your local fire department.” In New York City, he says, open-flame permits are required for lighters, matches and cigarettes.

Squeezing special effects into any size venue is an art as well as a science. “Everything is possible,” says Chernick, “but time and careful planning are important.” **db**

To keep the conversation about special effects going, visit the DramaBiz Magazine forums at www.dramabiz.com/forum.



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