theatre crafts

OCTOBER 1980 $2.50

Creating a water sparkle effect

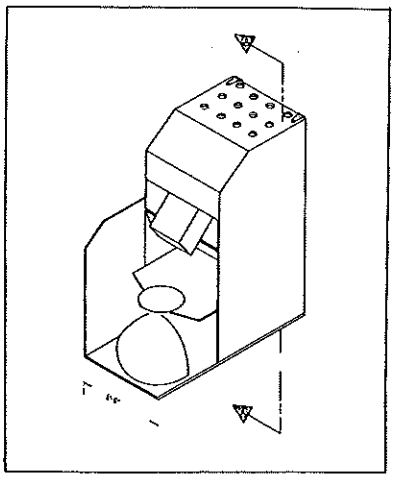
by David Pecoraro and Nick Nichols

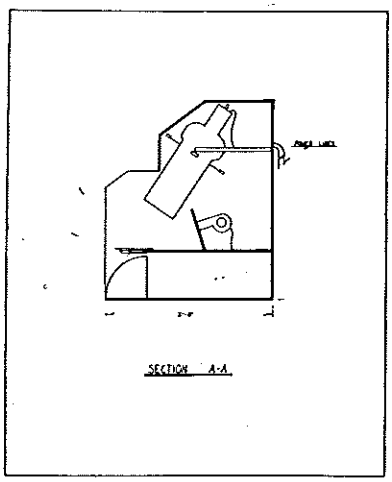
A lighting director will occasionally encounter a production with a given location near water—such as a dock, by a canal, or on a beach. Perhaps the basic lighting element common to each of these locations is the reflected light off moving water. However, this rippling reflection—or water sparkle effect—is often overlooked or deemed too complex for smaller theatres to achieve.

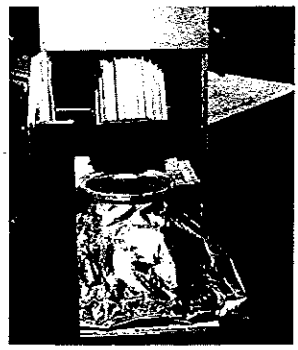
Actually, this effect is simple to produce and well within the capabilities of even the most modestly equipped theatres. An individual can easily construct a water sparkle projection box with conventional stage lighting equipment that will realistically simulate light reflecting off moving water.

To construct a water sparkle projection box, one needs: lumber for the

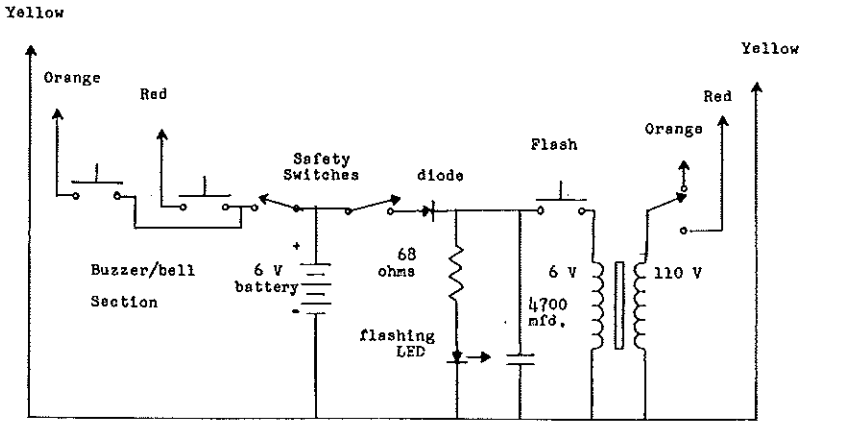
(Continued on page 72)

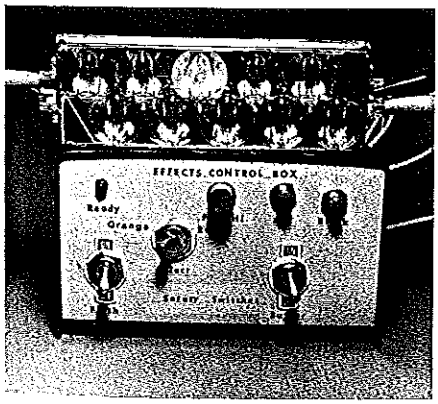


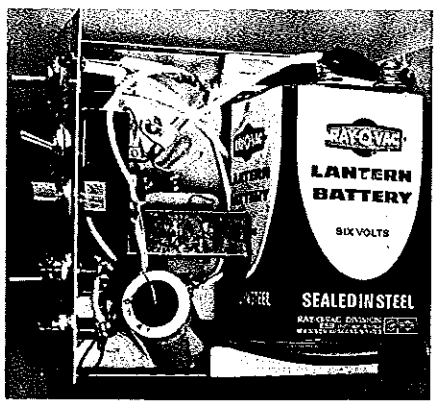




The water sparkle projection box consists of a clear Pyrex pan of water above a Rosco shrink mirror which has been molded to a half sphere (left). The ellipsoidal reflector spotlight and small fan (diagram, above) complete the system. Holes at the top of the box allow for proper instrument ventilation.







Flash control box

by Arthur T. Tees

The stage technician must often provide sudden flashes of light, especially for children's shows. Traditionally, the flashes have been supplied by flash pots containing flash powder ignited by a fuse or by a thin, overloaded wire. Since such pots must be reloaded after each use, the number of flashes in the scene determined the number of pots to be used.

What is needed is a reliable, repeatable flash unit. Fortunately, such a device—the flip-flash—already exists and needs only minor modification plus a control unit to be used on stage. The flip-flash (an eight to ten flash unit designed for inexpensive

(Continued on page 73)

The special effects flash control box (control panel, far left, and wiring diagram, top) incorporates a 6-volt lantern battery, a 110/6-volt transformer, a capacitor, and associated switches (left). Flexible, 3-conductor intercom cables with insulated alligator clips connect the metal control box to the terminals of the flip-flash unit.

spirits, was also quite different. Usually she is a horrible old woman, or someone who is hunchbacked or deformed in some way. Alsonso didn't want this at all. She told me, 'I don't want children who see this to associate evil with old age. I also don't want to offend older people. Nor do I want to relate evil to physical handicaps.'

"Choreographers think of me as the man who does the spectacular costumes for operas and ballets," Varona remarks. "They don't know that I can do quite simple costumes. And I'd like to do that for a change. Since I left Argentina, I've not done a simple ballet, one in colored tights. Not in years! But even when I do spectacular costumes, I have a lot of opportunity to be free in my design concepts. And if there is going to be a lot of contact among the dancers, especially in partnering, I'm careful to limit what I put on the basic costume, in the way of decoration. It's a common procedure, but I find fabric painting very effective for creating the illusion of added decoration, without complicating the costume or making it difficult for other dancers to touch."

Varona is anxious to design for the legitimate stage again. He likes the challenge, particularly of avant garde scripts. But he has been so busy working for opera and ballet companies, in the past decade, that he has had no time. Now he intends to make time, if the right play, the right theatre, and the right director come his way.

The main thrust of his work, however, will remain in opera and ballet. For a designer, Varona says, there are significant differences between the genres to consider. "Opera is more complex in the technical aspects. You can build solid, three-dimensional sets. The costumes also tend to be heavier—they often relate to more elaborate period styles. For dance, though, the body is very important. You cannot add too many things to the costume, or you won't be able to see the dancer.

"The dance stage has to be quite empty as well. In that way, designing for dance is simpler than opera. Technically, it has to be. You fly everything you can—get it up overhead and out of the way when it's not needed. You want an environmental shell—painted drops, maybe, but often all you need are black drapes, lights, and a bare stage. That very spareness is a challenge.

"In dance, you have to make a design statement, with very limited means. The problem is that it can be sometimes very boring. You don't want it to be boring, of course, but at the same time the design must not be so interesting that people watch your sets and costumes more than they do the dancers and the movement," says Varona. "You have to aim for a point in between."

WATER SPARKLE (Con't. from page 35)

box, an ellipsoidal reflector spotlight, Rosco shrink mirror, fiber glass resin, a small fan, a household dimmer, and a clear Pyrex pan.

The system of the water sparkle projection box is very simple. A light source (in this case an ellipsoidal reflector spotlight) projects a beam of light through a body of water in a clear pyrex pan while the water is agitated by a fan blowing air across the surface. The light passes through the water, through the bottom of the pan, bounces off the Rosco shrink mirror beneath the pan, and projects a pattern of rippling light, as if off water. The fiberglass shape, over which the Rosco shrink mirror is form fitted, determines the direction and spread of the projection. A half-dome shape works best for a maximum spread with a minimum distance.

Also, the best way to introduce color into the effect is to dye the water rather than gel the instrument. By using dye in the water instead of a gel, less intensity is lost and a brighter projection is achieved.

The construction and configuration of the box itself is arbitrary and should be determined by specific production needs. The box must, however, be large enough to hold an ellipsoidal reflector spotlight plus allow enough room for adequate ventilation.

The box must have a cut-away shelf to securely hold the Pyrex pan, half-filled with dyed water, beneath the lens of the spotlight. The fan should fit comfortably in the space between the spotlight and the pan, permitting it to blow easily across the water surface.

Finally, the pan must be positioned high enough to permit the fiberglass form with the attached Rosco shrink mirror to sit beneath the pan.

Anytime a lighting instrument is enclosed, special care must be taken to eliminate excessive heat build-up. In our use of the water sparkle projection box, heat build-up was no problem. However, several trial runs with the device should be made. If overheating

is a problem, a second fan for instrument ventilation should be used. In either case, holes drilled in the top of the box will allow for heat escape.

Also, by design, the unit lends itself most successfully to the smaller, black-box type of theatre. One or two units in such a performance space can usually be positioned to give an even stage wash. In larger proscenium theatres, several units are needed and unobtrusive positioning often becomes a problem.

Two separate power lines feed into the projection box. One for the spotlight and another for the fan. Both, hopefully, are dimmable. The spotlight in our unit ran off a dimmable circut and the fan was controlled by a regular 100-volt household dimmer. The speed of the fan must be variable so that the speed of the ripples can be manipulated. The most realistic results were attained with a slow running fan.

As an added precaution, the power lines are run in from the top of the box. This was done so that, in case of water spill, no electrical lines would be involved. Also, an abestos skirt was draped from the top of the color frame of the instrument to the front rim of the Pyrex pan. This eliminated unwanted light reflecting directly off the surface of the water. A 1000-watt quartz-halogen lamp was used in the spotlight.

This light source, combined with the gently blowing fan and the spread received from the shrink mirror over the fiber glass half-dome shape, produced a very realistic and lovely water sparkle, adding much to the visual aspect of our production.

David Pecoraro and Nick Nichols are graduate students in lighting design in the professional training program at Temple University.

FLASH CONTROL (Con't. from page 35)

pocket cameras) is compact, sturdy, and safe in a non-explosive atmosphere. It provides automatic sequencing through half of its flashes; a flip of a switch on the control unit makes possible the firing of the other half. Flip-flash units sell for $1 to $2 each. I have designed and built a control unit that can be constructed for about $30.

The self-contained control unit consists of a 6-volt lantern battery, a 110/6-volt transformer, a capacitor, and associated switches—all houses in a metal box. A flexible 3-conductor intercom cable with insulated alligator clips