

Spotlight on L

I remember, back in 1971, waiting in line for hours in front of Carnegie Hall to buy a ticket for a Pink Floyd show. Once inside, I noticed that there were speakers everywhere including among the seats in the audience. When I looked at the stage, I saw what looked like unusual towers, a type of staging I had never seen before. My adrenaline was soaring, anticipating the start of the show. Suddenly, the sound of a human heartbeat started thumping and getting faster and faster out of the speakers placed amidst the audience. Then it became one with the beginning of the song "One of These Days". At the same time, the strange towers rose as police car lights, beams and smoke poured over the stage. The band came in with the start of the song and a loud burst of pyrotechnics nearly knocked me out of my seat. I had just experienced my first real contact with an absolutely amazing production.

That was my first inspiration to become involved with the production aspect of concerts and needless to say, since then, concerts have changed dramatically. Gels have become dichroic filters, stationary lamps now move, spin and strobe, the price of the technology has tripled to staggering proportions and only a handful of people can afford to compete in this very expensive game of high-tech production. The ticket price I paid back in 1971 (\$15) seems like pocket change compared to ticket prices today (\$65 and up). In order to make the

price seem reasonable, the production end of a show has to be magnified... and that's where a lighting designer comes into play.

General Designing Tips

Although I have spent most of my time designing lights and shows for concert tours, I have also been involved in creating for films, video, clubs, trade shows, fund raisers and theatre. Everyone has their own method for designing. I'd like to share a few of mine with you.

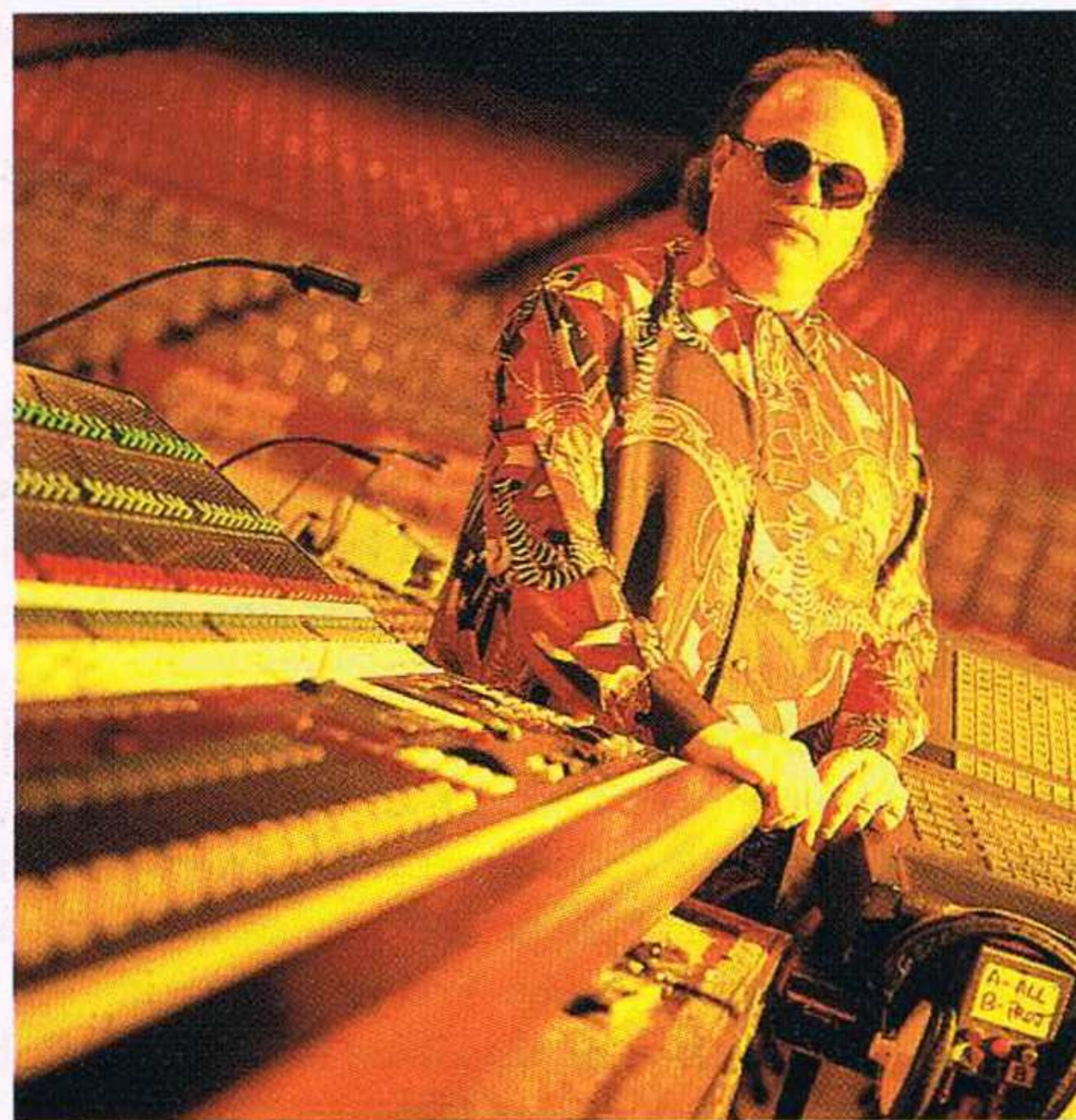
A Lighting Designer can make or break a performance. Creating a show can be done in many different ways and each designer has his/her own creative signature. As a designer, you must first put yourself in the seat of a ticket-holder. I will never forget that old Pink Floyd show and the excitement that left me speechless. I try to recreate that excitement by creating and choreographing new *lighting effects* to each song, bringing them to life with colour and dramatic aura. I like using the atmosphere as my drawing board, filling the air with smoke and using saturated colours to accent the artist's mood. Doing this often helps to create an amazing surrealistic aura throughout the venue.

The use of *props*, *scenery* and *soft goods* can also change the look of a show from a futuristic setting to a theatrical presentation, depending on how you use them.

Multimedia effects can bring certain shows to life. Sometimes I feel there is a need for this along with the lighting. A good example of this would be the use of video walls as scenery with lighting surrounding them as an intertwined laser effect creates the illusion that the video walls are floating in the air. Combining these effects, the world of endless creativity is at your fingertips.

Pyrotechnics have also been an integral part of many productions. Shows from the "Phantom of the Opera" to "Miss Saigon" and "Tommy" all use this effect now. Pyro, as frightening as it sounds, can be as sub-

by Howard Ungerleider





ighting Design

tle as a light mist drifting over a man-made lake or utilized to simulate a dream sequence in time. It can also be used as fire in many different show applications; but when you need power, surprise or visual stimulation, it can take on the form of an industrial explosion, a distress signal flare from a lost ship at sea or a variety of fireworks both in and out of doors.

Once I have chosen the effects, I like to design around the *lyrics* of the songs. Listening to lyrics can help to create landscapes that perhaps even the musician may not have imagined. Two or more creative heads are better than one. The *flow* of lighting and all the effects used is very important since some performances can last up to three hours or more. As a designer, you must learn to hold back on your effects and use them sparingly. Many of my lighting and visual effects are used only once per performance. This gives you the opportunity to improvise and create *on-the-fly* between songs. During a rock show that has 23 songs played over two hours, I will have at least one special effect per song, whether it be lighting, lasers, pyro or film. These effects will happen at the same place in the same song each night. In between these special effects exists the time I can be the lighting artist, creating at whim using the rest of the lighting system. This means that, although the special effects for each song will always be the same, the rest of each song changes from night to night. Most

designers are not able to do this which is why, together with my own sense of musicianship, it is one of my fortes. I give the audience a fresh show constantly, especially for those who come to more than one show. Most designers rely on a computer to do this for them.

Once I have finished visualizing what I am about to create from the lyrics, I then know how to structure the show. Next, I design the *truss configuration* that will house the lighting and effects coupled together with soft goods (i.e., scrims, legs, curtains). Once the truss structure design is complete and the lamps and effects are drawn in, I then decide on *circuitry* and *colour*. Colour is a very important part of the way I design. I love the use of dramatic saturated colouration. This brings forth feelings in the music and visually emphasizes many of the creative moments. It can also exaggerate the other special effects happening simultaneously. Circuitry is vital in design. Here is where I must decide which lamps will illuminate at the same time pertaining to location in the truss and then, where it will appear on the lighting console. Once this is figured out (which can take many hours), I am then ready to blueprint the system.

Many people use computers to do the blueprinting. I presently work on an Apple computer and all my drawings are done with the ArchiCad program, giving me a three-dimensional look at what I have de-

signed and how it will appear inside the venue.

Rehearsals

All of the above has still only been on paper for about two or three months before rehearsals begin. Rock tours usually allocate between two to three weeks for rehearsals while other kinds of shows can rehearse for months. This depends on the intricacies of the show. During the rehearsal stage, I will go into the arena for 16 hours a day. Groups will often rent the building where the tour will start out for rehearsal. The crew will take two complete days to set up and tech the system and make sure all the bits and pieces are not only working but also structurally sound; then I go to work translating my ideas into the computer lighting consoles. This takes a team of four people including myself. We take a live recording of the artist and spend the next 14 days programming two to three songs per night until the set is complete. Our programming time is usually from 8 p.m. to 11 a.m. This is when the designer has total freedom, since the artist and sound crew rehearse from 12 p.m. to 7 p.m. (when we sleep!).

Once we complete the programming, we run the show over and over until we are familiar with the cues. The team of four consists of one director, one designer, one programmer and one additional board operator to run colour changers and various moving fixtures. On many of my tours, I

Lighting

will be both director and designer, although most tours will have a director and the designer will leave once he/she is confident that the director is fully in control. It takes about two weeks before I am totally satisfied with the format of the show. After about 20 shows, everything is running to perfection. Now that everything is in working order, the tour begins and five shows per week for the next year will be in progress.

Directing the Show

Now the only thing left to do is run the show! This entails, depending on the size of the show, several different areas. Now

that I have all the pieces in place, I am involved for the length of the show (anywhere from two to three hours per night) calling spot cues, laser cues, projector and pyro cues as well as running the console. Let me say that not everyone directs a show the way I do. Many directors like to let a computer take over a great deal of the tedious aspects of the direction; however, I like the direct, *hands-on* approach. I find that I have much more control over the subtlety in timing and can manually make corrections or cover without anyone noticing.

Each of these different areas (i.e., spots, lasers, projectors and pyro) have inherent problems which can arise. Here are some you need to keep in mind:

Spots

Calling spot cues usually involves remembering the names of at least 12 IATSE (International Association of Technical Stage Employees) union workers who change on a nightly basis. So that you are not calling the name of the prior evening's spot operator, it's a good idea to produce a visual spot chart handy at your lighting console. This can sometimes be the most disappointing aspect of the show for a variety of reasons, namely, these individuals do the same job every time for different shows and can be less than enthusiastic about your show or the standards you like to uphold. Novices have trouble with timing and have been known to sometimes pick up the guitar tech for a solo rather than the artists. Seasoned veterans, on the other hand, sometimes like to sit in their chairs expecting two or three cues. Because I sometimes use spots to create part of a look, I may call 30 or more cues they are not expecting. I often hear them say that I've given them a good work-out. Some directors use computer-operated spots controlled from the console. I don't use this method for two reasons. One is that the look becomes very mechanical and does not have the element of subtlety. The other has to do with loss of control when the computer crashes.

Lasers

Lasers pose different kinds of challenges. Of first and foremost importance is laser safety, which is governed by the C.D.R.H. (Canadian Department of Radiological Health) or the B.R.H. (Bureau of Radiological Health, in the U.S.) safety standards. You must have a sound understanding of these standards when you are designing, because it includes where you can and can't direct the beams (i.e., not into the crowd). Once you've designed your effects, you may find that during the show's set changes, mirrors may have been moved. Stage hands can sometimes bump into the mirrors or projection table. A forklift could drive over the hoses cutting off the water supply which automatically shuts down the lasers. If you're doing an outdoor show in colder climates, you may need to worry about your water supply freezing.

Projections (Video and Film)

Aside from the general trauma of a projector breaking down or a film breaking or burning during the show, a consideration you need to think or know about includes utilizing time-code devices. This requires the musicians to wear headsets through which they can hear the monitoring tones (beeps or clicks). This allows the film and music to be in sync. Musicians usually consider this somewhat of a distraction. The alternative is to roll the film on musical cues which entails allowing time for the system to *ramp up*. This takes anywhere between four to eight seconds before cues actually come down. There can also be projectionist errors, the most disconcerting being bad lining up of sync points (you'll

HARRIS
INSTITUTE
FOR THE

DEDICATED TO EXCELLENCE IN
MUSIC INDUSTRY EDUCATION

118 SHERBOURNE STREET, TORONTO, CANADA M5A 2R2
TEL (416) 367-0178 FAX (416) 367-5534

Lighting

recognize this when lips on the screen are ahead or behind what the singer is producing on stage — looking like a badly dubbed foreign film). The most difficult aspects of using film involves keeping the film clean and balancing multiple projector brightness.

Pyro

Pyro can provide you with hundreds of choices ranging from flares, flames, gerbs, rockets, air bursts, low level smoke or cracked oil. It too, like lasers, requires special safety measures. In Canada, you require a safety officer and a licensed pyrotechnician. Pyro is governed by strict fire

codes which are different in certain cities and states. California probably has the most stringent set of standards. It involves a three-year apprenticeship under a licensed motion picture pyrotechnician, letters of recommendation and sponsorship by five California technicians who use pyro on a weekly basis. James Hetfield of Metallica was recently seriously burned due to lack of awareness on both the part of the pyrotechnician and the artist. On Rush's "Counterparts" tour, an effect was cancelled by my safety officer after my calling a cue because Alex Lifeson was in a dangerous spot on stage.

The use of pyrotechnics in a show should be done tastefully. While everyone's

idea of taste can be quite diverse, pyro, in my opinion, should be subtly used to enhance aspects of the show — not distracting. Proper use can make or break a show. Placement and spacing of the effect (or any effect for that matter) should build as the show progresses.

The Console

The type of lighting sources as well as their functions will help direct you as to which console to choose. The Avolite Diamond console, the See Factor Light Coordinator, the Vari*Lite Artisan and the Light and Sound Design Icon Control Desk are just a few from which to choose. Some boards run computerized rigging as well as pars and intelligent lighting. Many of these boards have DMX capabilities which gives the director versatility. The most difficult aspect of directing the show involves pacing and coordination of all the spots, lasers, projectors, pyro and props or extras (i.e., bunnies used in Rush's "Presto" Tour). The most important solution is to maintain your sense of cool, calm and professionalism, especially when your computer board goes down in the middle of a show.

In my shows, I take theatrical-effects lighting and combine it with standard rock-effects lighting. This, together with my avant-garde designed lighting effects results in a three-dimensional magic created by the controlled blending of colour, video/film, pyrotechnics, lasers and the newest dichroic intelligent lighting sources available today.

I've given you a glimpse of some of the essentials in designing lighting. For those of you just starting out, it has proven essential to have a background in electronics and computers. I also suggest that you try to obtain work with a local lighting company so you can obtain hands-on experience. You will probably do better than most if you have all of the above combined with a sense of musicianship and some theatrical training (beyond high school). Above all, have the willpower to tough it out in the beginning (don't let anyone tell you it's easy). You are the one who must make it happen — and that means the show as well as your career.

Each show I create will always be different and challenging but will also have my signature. If you can take what stimulates you (i.e., the changes of the seasons and combining it with natural light changes that happen during the day) add a variety of other stimuli and make it come alive, use technology to your advantage creatively and have a good memory for numbers, you could probably become a successful future lighting designer yourself.

HOWARD UNGERLEIDER HAS DESIGNED SHOWS FOR ROD STEWART, RUSH, DEF LEPPARD, QUEENSRYCHE, TESLA, KIM MITCHELL AND GOWAN. HE ALSO DESIGNS FOR FILMS, VIDEOS, TELEVISION, CORPORATE SHOWS AND ARCHITECTURAL STRUCTURES.

CM

Some call it nostalgic,
Some call it classic...



...We call it Genista.

Its sound is unmistakable - truly timeless. An all-new kit that's designed and built the way you just couldn't find any more - with the legendary warmth and clarity you thought you'd never hear again, and a much sought-after unsupported thin-shell design that you might not expect from Premier. From the finest quality hand-selected Birch

we've crafted the professional kit that does it all. It's the kind of kit you'll hold on to forever.

Go ahead. Sit down and feel comfortable again.

Genista
CLASSIC

Premier Percussion Ltd, Blaby Road, Wigston, Leicestershire, LE18 4DF, England