

Taming the Harsh Elements of Softlight

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Ever since I first picked up a 35 mm still camera in my late teens, I have been passionately attracted to the look of strong, directional softlight. In junior high school, I became involved with stage lighting, with its hard-edged ellipsoidal light, Fresnel spots and broad shadowless washes from banks of floodlights.

When I switched to television, the softlights I encountered were employed to fill hard shadows from Fresnel keylights or create that abstract shadow-free studio look that characterized so much of the wham-bam-thank-you-ma'am era of live television.

I finally found the light source I was looking for when I stumbled across heavily diffused nine-light minibrutes (molefays) used in TV commercials. When used for close-ups and talking heads, the minibrute has all the subtlety and finesse of football stadium lighting. However, two or more layers of tough-spun diffusion clipped to the barndoors turn this luminaire into a softlight that retains some of the directional characteristics of the PAR 36 medium flood lamps inside. If you keep the minibrute more than six feet from the subject (so the light doesn't wrap too far), it has many characteristics of indirect daylight.

Although I had found a source with naturalistic soft-edged shadows that was directional and sufficiently punchy to use as a keylight, my troubles were just beginning. Aside from being horrendously inefficient and bulky, the spill light from the diffuser simply blasts everywhere, hitting everything from the walls of the set to the glass on the Autocue and lenses of the cameras. Serious spill control is required if you want to light anything more than an isolated talking head or a simple product shoot.

French flags, cutters, C-stands draped with black tabs--indeed, the entire repertoire of beam control grippery is necessary if you want to make softlight sufficiently directional to light multicamera production. Fortunately, I once worked with a young and adventurous producer on a children's fantasy drama series and was given the chance to experiment with the softkeyed look. I was also fortunate in being able to convince the set designer to paint the walls of the sets in very dark tones to hide the spill light and give the scenes more atmosphere (just like the perps' apartments and crime scenes in "Hill Street Blues").



*(click thumbnail)
Lights outfitted with
Lighttools Soft Egg Crates
fabric grids.*

Despite all the support and cooperation extended by the entire production team, it really was just too hard to shoot. I thought that I had a good grasp of the intricate dance that is the cameras, mic booms, lighting stands, props, script assistants and floor crew moving around each other on a drama set. However, adding flags and C-stands and black drapery became disruptive. This, in turn, became exceedingly stressful for me, as I was anxious to make different-looking pictures without impacting on the usual tight scheduling constraints.

In effect, I was trying to get the look of naturalistic film lighting out of a three-camera studio production that required us to fill about 35 minutes of airtime each shooting day, complete with wizards, pyrotechnic effects and a few Muppet-like creatures. In the end, the pictures were noticeably different in the way that I was aiming for, although due to the inevitable three-camera compromises, not quite as contrasty as I had hoped. One thing that did become very clear to me was that directional softlight is difficult to manage in a cost-effective way.

In the world of film production, this has been acknowledged for many years and accounted for in the budgets and schedules of directors of photography (DPs) who want to use directional softlight. Given the wider contrast range of film, it was inevitable that DPs would choose to shoot some films using more naturalistic light sources than brute arcs.

Many DPs achieve this through the use of frames covered with diffusion material. The frame is lit from behind by something very bright, like one to three HMI heads or a handful of 24 kW Dinos (very large maxibrutes).

These large-area soft sources produce light that is effectively identical in shadow and directional quality to diffuse daylight. Like any other softlight, they spill absolutely everywhere and hence are accompanied by truckloads of grip equipment and busloads of crew. Tools to control the spill include skirts, flags and black drapes all over the place. Such setups require time, patience, skill and budget.

The softlights that we use for fill in the studio frequently have metal grids (often known as egg crates) to limit spill, but such devices are often bulky, heavy to move and have fairly limited effectiveness. However, the principle behind them is sound, and it has been picked up and improved upon by a number of luminaire manufacturers for newer, lightbox-style softlights pioneered by Chimera. Most makers of these softlights offer either a lightweight plastic grid (for low wattages only) or a flame-resistant cloth grid as a standard accessory.

CLOTH GRIDS

Lighttools in Edmonton, Alberta, Canada has taken the cloth grid further than just about anyone. The company developed a patented technique that requires very little sewing for making flame-resistant cloth grids. This has kept its price down to merely expensive, rather than totally unattainable. The lightweight fabric, compared with metal, has allowed them to experiment with much deeper and denser grids for softlights than has previously been tried. Lighttools has developed its "Soft Egg Crate" grids to give predictable beam angles of 30, 40 and 50 degrees for just about any softlight source, from a tiny portable RifaLite to a 20-by-20-foot overhead frame. The company even made entire walls of Soft Egg Crates for the Ifra Newsplex at the University of South Carolina.

Just think about it. Like the Fresnel spot, the ellipsoidal and the beamlight, the softlight can now be treated as a directional light source with a controllable beam. You can hit the talent with softlight without even grazing the set behind them, endangering the chroma-key setup or causing lens flare on every camera in the building. This changes the fundamental nature of softlight.

DPs who use Soft Egg Crates over large softlight sources can dispense with the majority of complex grip gear, while using softlight in ways that were not previously conceivable for television production.

I'm just waiting for the opportunity to revisit the three-camera studio drama now that I really can have directional softlight.