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Star Drop Technologies

There are several technologies available for building “star drops” or custom logos or pictures using the same ideas. The following is a brief summary of several methodologies and products-ranging from cheap but cheesy to ultra modern and surprisingly affordable.

Oh Christmas Tree, Oh...

The simplest method to create either a traditional star drop or a specific logo or picture involves a black fabric drop, lots of Christmas tree lights, and lots of time. Different effects can be achieved using colored lights, separately dimmed circuits, twinkling circuits, and so on. Such a star drop can be controlled by a switch, by house-hold style dimmers, or through theatrical dimmers by DMX with other lighting. With time and careful selection of the right lighting components, many complicated chase effects can be created. Other than the time involved, the greatest disadvantage of this cheap design is the limited output of available components.

It's Important To Get Plenty Of Fiber Optic In Your Diet...

The standard in the entertainment industry for quite some time has been fiber optic star drops. These use one or more fiber optic power unit, which may be equipped with a color wheel and or a “twinkling” wheel. 0.75mm tipped fiber optic strands are custom sewn into a large fabric drop, either creating a star scape or some specific logo or picture. By using multiple power units, different sections may be dimmable, may have different colors, etc. And complicated effect that could be created with Christmas tree lights could also be created with fiber optics, generally with much greater light output.

Limited light output is a continuing disadvantage. When used near stage lights, fiber optics may not be able to be picked up by video equipment specifically. Cost is also a concern: because of their complexity, fiber optic drops are generally custom manufactured by one of a few suppliers (Rosebrand is a good example) at high price. Some relevant price information for fiber optics and LEDs is shown later.

Blue... Green... If Only We Could Turn LEDs to Gold...

The most modern star drop methodology involves the use of light emitting diodes. One example is the “ShowLED” system. A control unit that controls up to 256 separate LEDs is controlled by 8 DMX channels. This control unit can be set to different preset chase patterns, or parameters like speed, number of channels on simultaneously, and so on can be controlled.

The ShowLED lighting system includes two other components: strings of LEDs, spaced ~4' apart, and grommet/Velcro washer. Strings are available in 64' and 81' lengths, with 12 and 16

LEDs respectively. Construction is simple: grommet/washers are placed wherever necessary in a backdrop, and LEDs are velcroed into place. The upstage washer components are color coded for easy layout of multiple circuit patterns.

LED star drop systems have significant advantages over fiber optics. Specifically, LEDs are the only system producing light bright enough to be picked up on video in many performance environments. Although LEDs are now commercially available in a range of colors, they still exist in a relatively limited palette, and LEDs generally available for use in systems such as ShowLED are currently only blue/white (due to high light output).

Cost comparisons of the primary components of ShowLED and Rosebrand’s Martin brand fiber optic systems are shown below.

	Fiber Optic		Show LED
Power/Control (1200 fibers)	\$385-\$1,400	Control	\$585
Drop (depending on # of channels)	\$7-\$10/sqft	LED strips	\$55/12 LEDs \$75/ 16 LEDs
		Washers	\$20/36 washers