

BASIC PORTRAIT LIGHTING



By
Don Mohler
General Electric



Fill Light



Key Light



Background
Light



Fill Plus Key



Key Plus
Background



As an Option
Add
Backlighting



Triangle
Lighting with
Three or Four
Lamps in or out
of Studio

All Three Lights

GOOD standard portrait lighting is quick, simple and foolproof. In or out of the studio. Basic as daylight. Get enough light. Diffuse it. Balance it. Expose fully. That's all. Nail down the lights. Put your subject on a fixed spot. Standardize. Make good pictures quick and do it every time.

First make room to work in. Not a lot of room, but enough. Cramped space forces you to work too close with the camera, too close with the lights. You'll be fighting short perspective, hot-spot lighting, and touchy exposure. You'll work long and hard to get a decent result in the camera first, and then in the darkroom later.

No need to if you have room to get the camera back six to eight feet, room to get your lights six to ten feet away, and room for a light between your subject and the background.

A low ceiling is a handicap too. Won't let you get your key light up high enough, particularly on a standing shot. You want a ten- or twelve-foot one, if you can get it.

TRIANGLE LIGHTING with small portable undiffused lamps such as strobes, extension flash or reflector photofloods, gives standard uniform results in any location. For simplicity and ease in carrying and using equipment, it is simpler not to include diffusers. Raw small-source light is a bit more brilliant, a bit harder than you would use in a permanent setup.

It's a particularly excellent formula for production line portraiture as in school photography. It comes close to studio lighting in quality. The basic elements of fill light, key light, back light and background light are identical in Triangle Lighting and in the Universal Portrait Lighting System. The Universal System was worked out by Eastman Kodak at their Professional Service Center and first published in their Studio Light Newsletter in 1964.

Triangle Lighting originated with General Electric over ten years ago and has been continuously

published and used since.

With either formula or system, exposure is always based on the fill light. The key light then controls contrast. Exposure, whether by guide number, by chart or meter is always the same if the fill light is used always the same standard distance from the subject, as it should be.

If the location forces you to work closer, or if you must work back to include more, set up the fill light. Measure or calculate the minimum basic exposure. Then set the key light, back light and background light accordingly.

For artistic effect or to suit the key lighting to the individuality of the subject, the key light may be moved forward or back, up or down, turned toward or away from the background slightly. Just be sure to keep the lamp-to-subject distance always the same.

TRIANGLE LIGHTING uses three or four identical lamps in identical reflectors.

The fill light is right at the camera as close to the lens as possible and on the opposite side of the camera from the key light.

Measure the distance from the fill light to the subject. Then measure an equal distance at right angles from the subject to a marker spot X. Halfway between this spot and the fill light place the key light. Raise it overhead and aimed down.

Place the back light diagonally opposite the Key. The background light should be aimed at the area just past the subject's far shoulder.

The effect of each of these lights individually and in combination can be seen on the front cover.

Note that the fill light floods the entire subject and scene. Used level with the camera lens it throws a head shadow on the back-

ground. The key light will spill over and partly wash this out.

The background light will wash it out completely.

The key light shows texture, gives modelling, form, and depth.

The whole four-lamp triangle need not always be used. For two-lamp simplicity and variety the fill and key together are interesting and attractive. So too is the simple combination of fill light and background light.

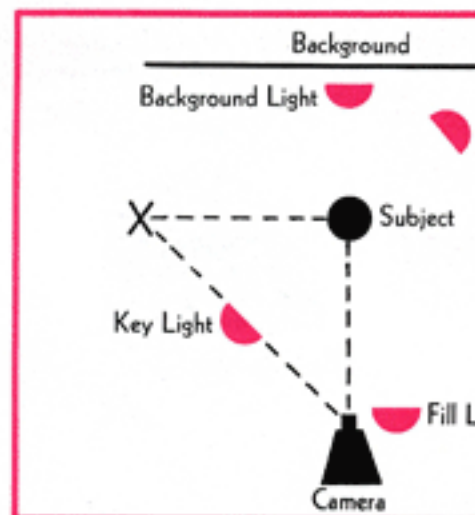
The fill light close to the camera lens can cause annoying reflections from eye glasses if the subject's head is faced straight back toward the camera. Have it turned to an angle. Or substitute glasses frames with no glass.



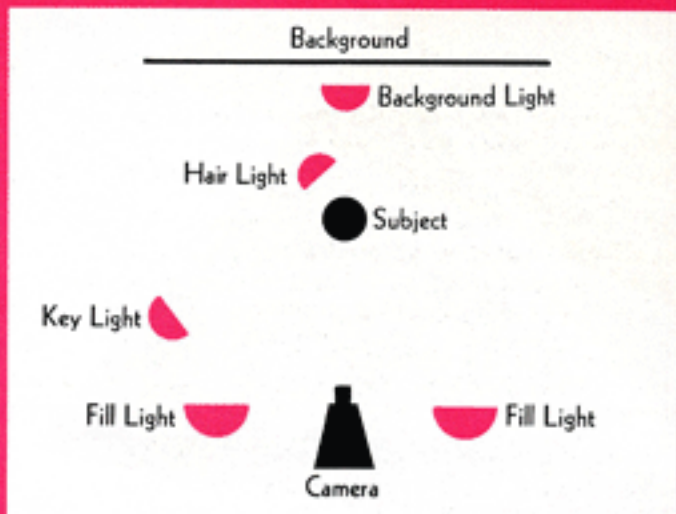
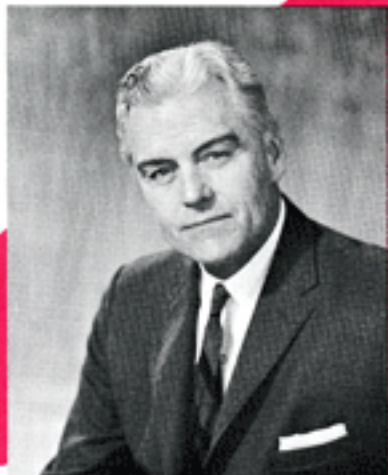
Get variety from slight changes in pose and expression.



Use the triangle for studio lighting on location.



Universal Lighting gives good detail in highlights, shadows, flesh tones.



The universal portrait lighting system for studio and permanent set-up.

UNIVERSAL SYSTEM

Remember the beautiful portraits that were made in the days when a studio skylight provided highly diffused natural lighting? When artificial lights came into existence, one way that photographers used to duplicate the skylight effect was by building large trough lights. The troughs, mounted from the ceiling and extending from one side of the studio to the other, contained a strip of bulbs mounted about two feet apart.

Today, of course, photographers have the option of using either incandescent bulbs, electronic flash or both in the trough. The illumination from the trough must be broad, soft, and highly diffused, containing no specular light. The bulbs should be placed so that all their light is reflected from the trough to the subject; they are shielded so that their direct rays do not reach the sitter.

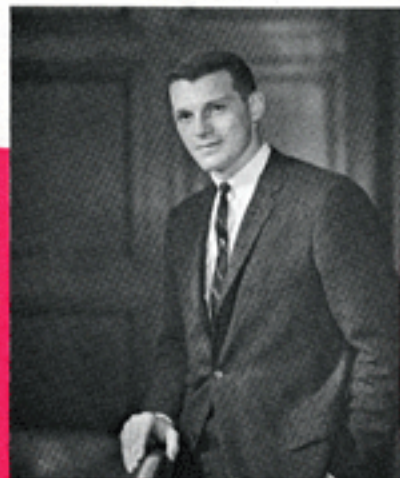
A practical (and less expensive) way of pro-

viding over-all lighting is to line up several small diffused-light units across the end of the studio. The minimum is one light in fixed position on each side of the camera. For superior results, place two or three lights (either tungsten or electronic flash) on both sides of the camera. These flood the entire studio with flat, highly diffused, non-directional illumination.

The proper exposure is established by making an exposure series from two stops under to two stops over the meter reading. Process the film for the manufacturer's recommended time, then select the lightest negative which has detail in the darkest part of the subject. The exposure used in making it becomes the basic

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Triangle lighting is quickly set up using small portable equipment.



Lighting ratio is about three to one, can be varied for effect.

Universal Lighting—Continued

exposure for all portraits, regardless of the color of the subject's clothes or skin.

Next, place a diffused portrait light — the "key light" — about 4 to 6 feet from the subject. The exact distance is determined by the desired lighting ratio, which is normally about 3-to-1. In this case, the illumination supplied by the key light (measured by an incident light meter) will be twice as bright as the basic lighting.

After determining the distance of the key light from the subject, tie a string to the lamp and use it to keep the lamp-to-subject distance constant. The key light will be far enough from the subject so that its illumination falls evenly on the face and figure, thus maintaining uniform subject contrast. Varied aesthetic effects result from placing the key light in different positions. The exposure and lighting ratio, however, remain the same because the

distance from lamp to subject is constant.

If different lighting ratios are wanted, three strings (of different lengths and colors) can be attached to the key light. The longest string would provide a low contrast ratio for high-key lighting; the medium-length string (average contrast ratio) is for all-around use. The shortest string would provide a more contrasty lighting ratio. Note that in all cases, the exposure remains the same.

This system is equally applicable to color portraits, but the basic exposure would be different. Obviously the method is not intended for use when highly individual lighting effects are required. Its worth is proved in situations where large numbers of photographs must be made quickly and efficiently. The uniformity of the negatives it produces lowers darkroom printing costs and thus results in a most profitable use of your time.

KILL THE FILL when the portrait session is completed and take a little time to make a few more by the remaining lights. No change in exposure.

Shadows will go black under brows, nose and chin.

With men this lighting gives a rugged character.

With young women it heightens femininity and glamour.

It is not suitable for general use or for all ages, complexions and features. But for variety it's always worth a quick try.

Being a bit unusual it sometimes succeeds very well.



ABOUT LAMPS

Insist on G-E. The difference is worth it. The G-E stamp of quality on a lamp is your best guarantee of extra value in total light, the right color of light, long life and precise uniformity in construction and performance.

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The right lamp for the purpose and the best lamp of its type means peak performance every time from G-E's complete line of photo flash, photo flood, studio, darkroom, and enlarger lamps, laboratory types, and lamps for projectors and viewers.

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