PRIMARY LIGHTING PATTERNS OF CLASSIC PORTRAITURE

http://www.portraitlighting.net/patternsb.htm

http://www.digital-photo-secrets.com/tip/2627/front-light-vs-side-light-vs-back-light/

This section contains examples and brief descriptions of the lighting patterns of portraiture. There is nothing sacred about these patterns, rather they are universally acknowledged benchmarks in a continuum of possibilities.

The lighting pattern describes a relationship between the light source and the "mask" of the face. It has nothing to do with the position of the face relative to the camera. As such, the lighting patterns are shown in this section as frontal views. If the face is rotated away from the frontal view, the light source has to rotate with the face to maintain the lighting pattern.

LIGHT SOURCE POSITIONING

As mentioned above, the lighting patterns are defined relative to the frontal view of the face.

THE PATTERN

FRONT

Front lighting illuminates the portion of the subject facing the camera. Your camera's flash is the most common type of front lighting.

Frontal lighting illuminates the front of the face, and depending on the size of the light source, the sides to some degree.

Positives:
- Provides the most information to the camera by lighting the entire scene.
- Easiest type of light to deal with photographically because there are fewer shadows to confuse the camera's light meter.
- Give more predictable results by lighting the entire subject straight on.
- Fewer shadows make for less dramatic but more predictable images.
- Good for lighting groups
- Reduces wrinkles in skin & fabric
- It lacks depth and is flat.
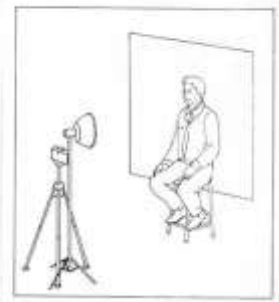
Negatives:

- Can be a bit boring—pictures lack volume and depth.
- Textures and details are minimized. Scenes appear flat with few shadows.
- Flash pictures may result in very bright subject areas and very dark backgrounds, if the background is beyond flash range.
- Front lighting is not very creative.
- It's less dramatic and kind of boring.
- It lacks depth – it's flat. Flat lighting is fat lighting. Unless you raise the light it's not very flattering or slimming.
- It's not very good at showing contour and depth.
- You have to be careful if you use an on camera flash. It can lead to some inconsistent artificial lighting.

Butterfly/Paramount Lighting Pattern

Butterfly lighting, also known as Paramount lighting, became a staple pattern for the Hollywood photographers of the 1930s.

This is a light in front of the subject and raised high enough (typically 25-70 degrees) to create the classic butterfly-shaped symmetrical shadow under the nose. Be sure that the light source above is the face and in line with the direction in which the face is pointing.

Positives:
- It minimizes the appearance of winkles and lines in the face and in fabrics.
- The butterfly pattern can be quite useful for a variety of faces, but is at its best on lean subjects with high and pronounced cheekbones.

Negatives:
- CAUTION: Don't let the shadow under the nose merge with their upper lip, particularly if the model will be smiling. If that happens, lower the light a bit.
- Lights that are too high also create deep shadows in the eye sockets.
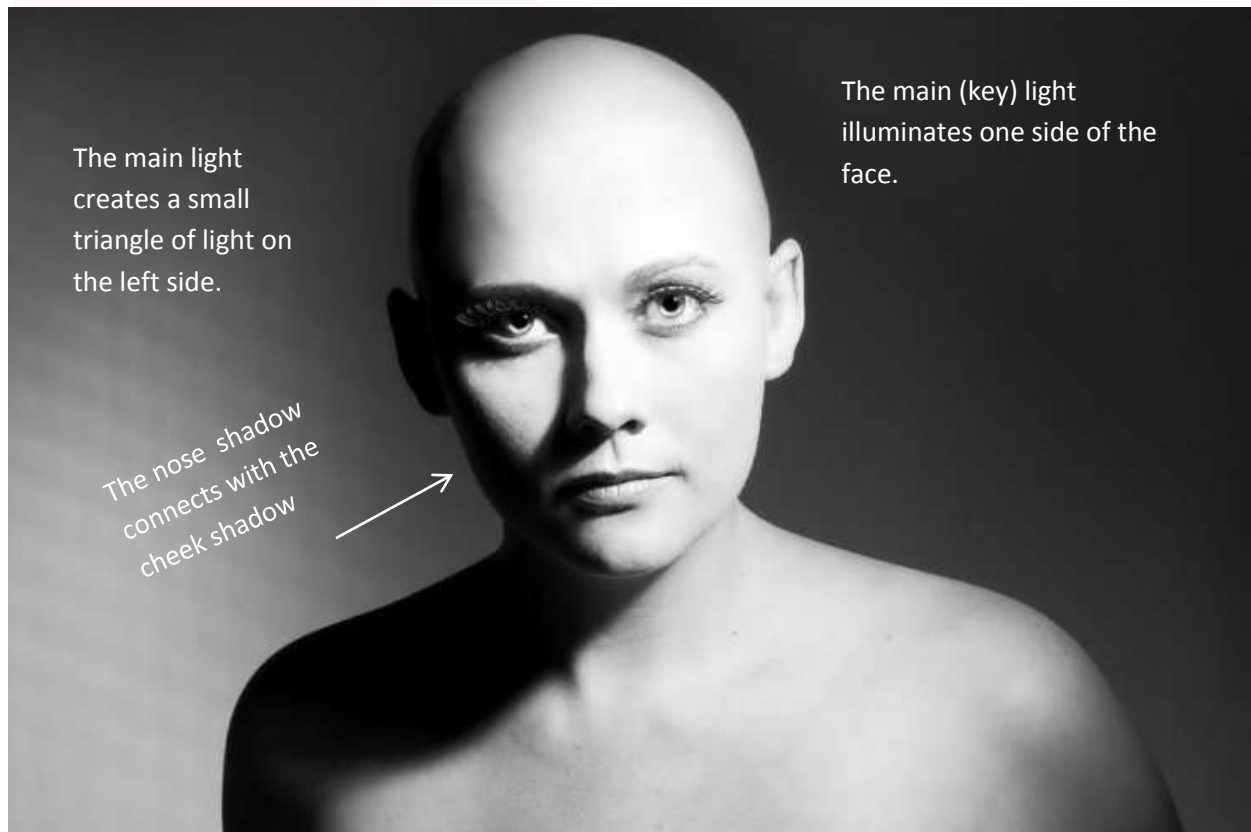

Marlene Detrich by George Hurrell

The studio shot at the right shows the center placement and height of the light and the use of a reflector to open the shadows in the eye sockets and add to the catch light in the eyes.

Rembrandt Lighting Pattern – AKA High Side Lighting

Rembrandt lighting is named after the famous Dutch painter of that name. The lighting is similar to loop lighting, but with the light source moved higher and further left or right of the face. It creates a strong pattern characterized by a small triangle of light that appears under the eye on the shadow side of the face, along with a nose shadow that nearly extends to the corner of the mouth. This is not an all-purpose lighting and is probably best reserved for character studies and moody fashion work.

The main light creates a small triangle of light on the left side.

The main (key) light illuminates one side of the face.

The nose shadow connects with the cheek shadow

SHORT LIGHTING

This is similar to Rembrandt Lighting. In this position the head is turned slightly away from the camera. Lighting is said to be short when the light source illuminates the side of the head not visible to the camera. A rather typical example of short lighting is shown to the right. In this example, the main light was placed to the left of the camera and illuminates the side of the head away from the camera, while also illuminating the face with the a modified loop pattern. It sculpts and accentuates the cheekbones. The nose and cheek shadows don't connect.
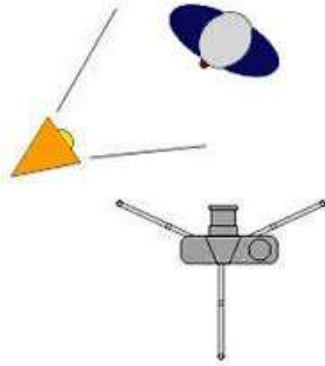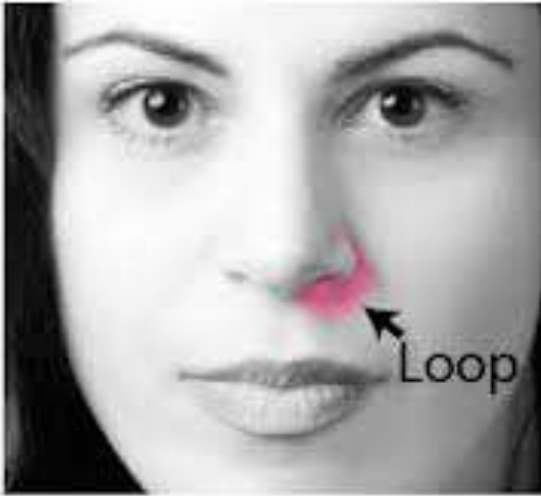
The short-lighting position is probably the most commonly used position. It works well with a variety of faces and is often mentioned as the choice for narrowing the face.

The image at the left is also short lighting and adds the use of a reflector to open up the shadow on the left.
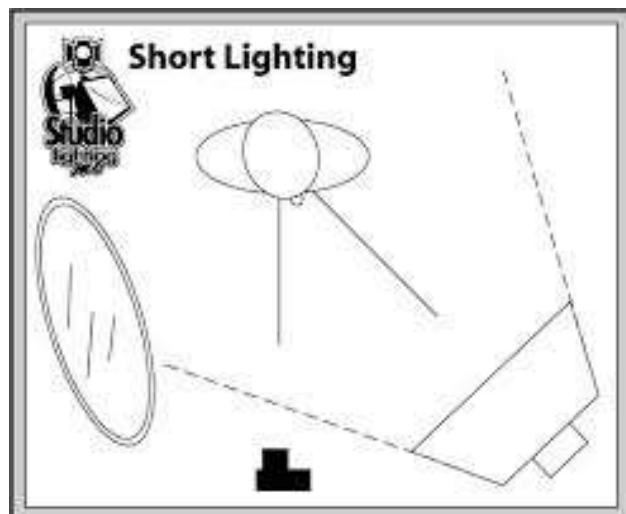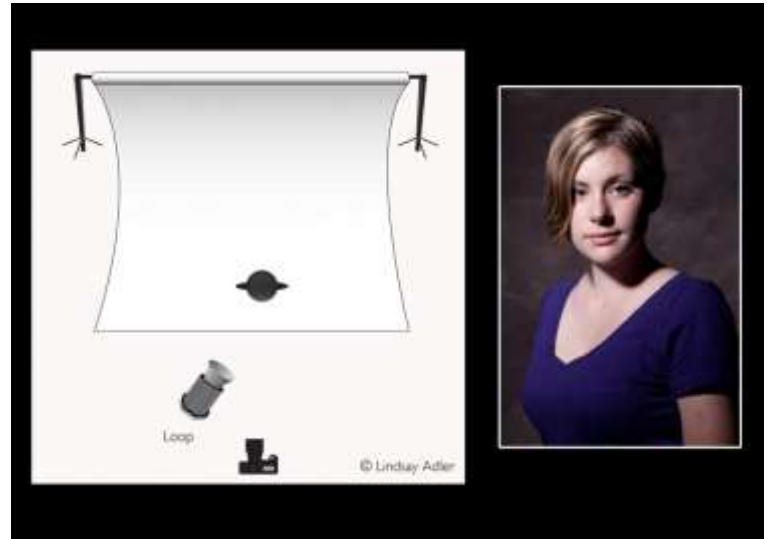
Loop Lighting

Loop lighting, which is named for the loop-shaped shadow that it creates under the nose, is the most frequently-used pattern. Loop lighting is somewhere between Rembrandt and Butterfly lighting.

It is considered to be a relatively flattering and adaptable pattern that lights most of the face while imparting a sense of depth.

It is created by placing the main light above the face (typically 25-60 degrees) and somewhat to the right or left of the direction in which the face is pointing (typically 20-50 degrees).

Loop shadows are produced by placing the light source to the right or left of the direction in which the subject is facing (typically 90-120 degrees). The lighting unit is at or slightly above face level.
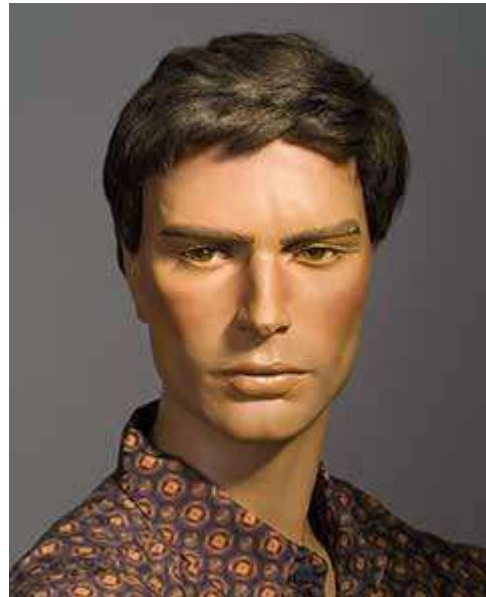
BROAD LIGHTING

Lighting is said to be broad when the light source lights up the side of the face closest to the camera. For this example, the main light was placed to the right of the camera and it illuminates the side of the head facing the camera; a Rembrandt pattern is cast on the face.

It is often said that broad lighting makes a face look fuller, as it illuminates both the side and front of the face. Because the lit side of the face is closer to the viewer, it appears larger.

With appropriate positioning of the face, broad lighting can be used to either broaden or narrow the apparent width of the face. Broad lighting is also useful for eliminating eyeglass glare, as the direct reflections from the light source are directed away from the camera.

Broad Lighting
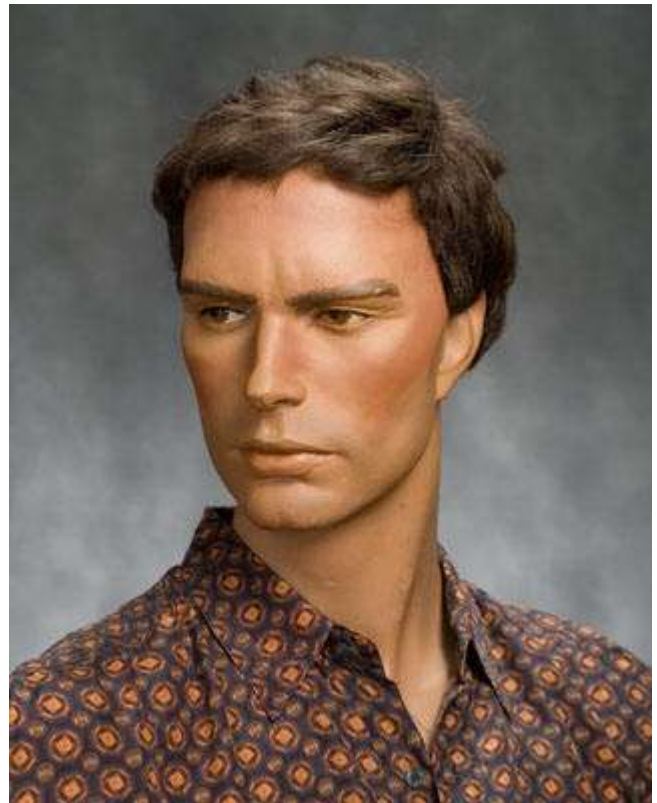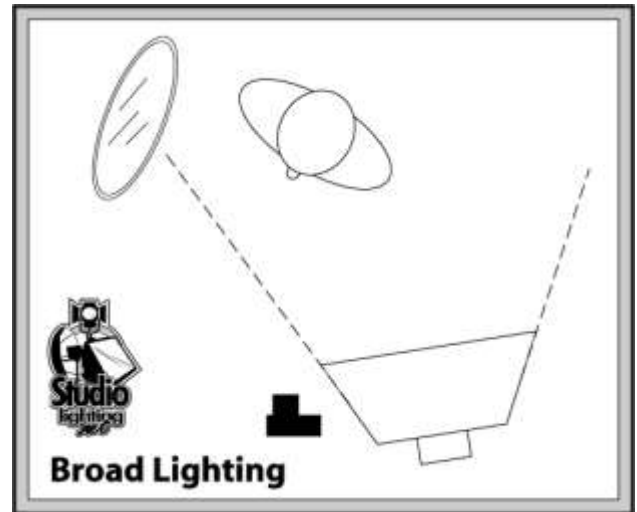
Side or Split Lighting Pattern

Split lighting, though not usually considered a general-purpose lighting, can be quite useful. With split lighting, half of the face is lit and the other half is in shadow. Split lighting is useful for narrowing the face and for cloaking facial imperfections in shadow.
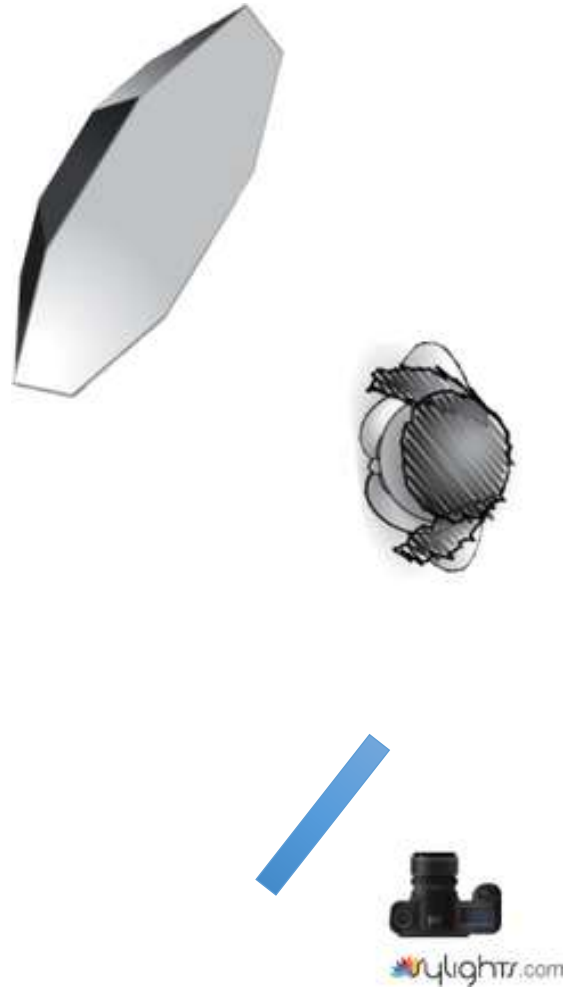
Split lighting can be interesting and dramatic.

The height of the light to the face also impacts the character of the shadow.

The lighting ratio may be extreme with over 4 stops difference between the highlight and shadow side of the face.

Lighting Series: Profile and Split Lighting

© Don Kennedy Photography

Profile Lighting

Profile lighting has the subject facing to the right or left. The light is then placed facing the subject and slightly behind them to create shadows in the foreground.

You have to be careful to use a gobo or flag between the camera and the light so that light from the strobe doesn't come into the lens the exposure for your camera.

Silhouette Lighting

In this situation, you are lighting the background and not the main subject. You are looking for a bright white background and your subject is totally dark.

Silhouette shots in the studio are the easiest to control as long as you've got the right equipment. Usually, you want to engineer your background to be fairly solid and simple to maximize the contrast of the silhouette. So grab a light colored, solid backdrop and hit it with your studio lights. Place these behind your subject but out of the frame.

If you want to control the tone and impression of the image beyond the shape of the subject, try using bright colors in the background.
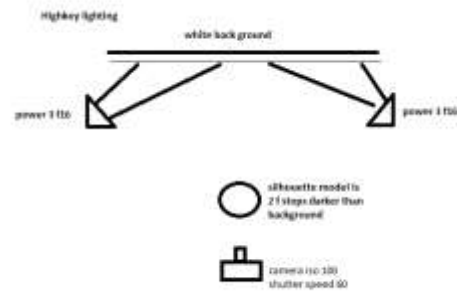
For a white background point your lights at the background and get the exposure right for a background that is brighter than the main subject. You are underexposing the main subject while correctly or slightly over-exposing the background.

You need your subject to be far enough forward so that little to no light spills onto the subject.

There should be a minimum of 2 stops difference between the background and the main subject. You may need to achieve a lighting ratio of as much as 1:32 with 5 stops difference depending on the subject and studio.

If you are not in the studio, just expose for the background and let the foreground go dark.

LIGHTING RATIOS

Lighting Ratios express the difference between the highlight and shadow side of your subject. The greater the ratio, the darker the shadows will be.

Ratio	X more Light	Stops Diff.	Effect
1:1 Ratio	Equal on Each Side	0	Even, flat lighting
2:1 Ratio	2 x More light	1 Stop	Mild Shadow
3:1 Ratio	1.5 x More Light	1.5 Stops	Common for Portraiture
4;1 Ratio	4 x More Light	2 Stops	Darker Shadow
8:1 Ratio	8 x More Light	3 Stops	Shadow Darker Still
16:1 Ratio	16 x More Light	4 Stops	Shadow detail barely visible
32:1 Ratio	32 x More Light	5 Stops	Little to no Shadow detail
64:1 Ratio	64 x More Light	6 Stops	No shadow detail

Ratio	Stops Difference	Highlight Side	Shadow Side
1:1	0	f/8	f/8
2:1	1	f/11	f/8
3:1	1.5	f/11.5	f/8
4:1	2	f/16	f/8
8:1	3	f/22	f/8
16:1	4	f/22	f/5.6
32:1	5	f/22	f/4
64:1	6	f/22	f/2.8

LIGHTING RATIO EXAMPLES

2:1   3:1   4:1   5:1   No Fill

1:1 Ratio   2:1 Ratio   3:1 Ratio

- Highlight Side: The main or key light sets the location of bright areas and the position of your dominant shadows. Set your camera f/stop based on the reading for the main or key light.

- Shadow Side: The fill light or the use of a reflector changes the density of the shadow. The brighter the fill light, the lower the ratio and less depth you have to your shadows. Measure the light on the shadow side of the face to see how many stops difference between the highlight and shadow side of the face. That determines your ratio.

Ratio	Stops Difference	Highlight Side	Shadow Side
2:1	1	f/11	f/8
3:1	1.5	f/11.5	f/8