

# Photographing Groups

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With groups the rules-of-thumb of effective portraiture collide head-on with a law of physics, the inverse square law which states that light intensity decreases with the inverse of the square of the distance. In plain English, if the distance to the light doubles the light intensity falls by 1/4 or 2-f/stops.

The primary goals for lighting any portrait are: 1) light in both eyes and the front of the faces, and 2) no distracting shadows on the faces. For a solo portrait or a couple the key light must be put about 45 degrees from the nose to get the light into both of the recessed eye sockets. It also needs to be raised a foot or more above the eye line and bridge on the nose so the nose shadow falls down along the side defining the shade of the nose without creating a distraction. A fill lighting is used near the camera to lighten all the shadows the camera sees.

Directional lighting strategies are problematical for groups because its difficult to get everyone looking the same way relative to a key light placed off to one side. Also if the key light is placed 8 feet from the left edge of a group 4 feet wide the key light on the person standing on the left will be 1-f/stop brighter than the person on the far right. If the group is 8 feet wide the fall-off will be two stops.

If the only goal was to make the lighting even on the group the simple solution would be to place two lights on opposite sides pointing in towards the edges. In fact that is exactly how flat artwork should be illuminated to copy it. But faces are not flat and that strategy called "crossed-shadow lighting" will create a muddled mix of blotchy flat highlights and distracting shadows.

## Small and medium groups

A far better strategy is to keep the light directly in front of the faces. For a small group a single flash can be placed directly above the camera on a flash bracket or stand with a diffuser. If two flashes are available they should be arranged high/low on the camera axis with the camera in between them. The higher of the two lights will produce flattering downward modeling of the face with the lower light providing fill. That configuration is called "butterfly" for the shape of the shadow it forms directly beneath the nose. Everyone will be a more similar distance to the light avoiding fall off across the group and all the faces will be in good light, with it in both eyes. Keeping the lighting simple frees you to concentrate on posing, eliminating distractions from the faces, and the expressions on the faces. That makes butterfly a good lighting strategy for any situation where the pose of the subject can't be controlled, like photos of very young children

## Posing

It will be easier to build an eye pleasing composition if you have a geometric pattern for the overall look of the group in mind beforehand. V, ^, W, M shapes all lend themselves to groups. Start by posing the core of the group - oldest generation - in the middle as you would for a nice looking shot of them alone. Then add kids, keeping the relative heights in line with there ages. When small kids are involved start with the parents seated so the heads don't get too far apart.

***If you pose each person (or couple / family if multi-generational) in a way that if they were taken out of the group and viewed separately the pose would look good, the entire group together will look good.***

In a small group shot with the closeness and angles of the heads relative to each other signal its "body language". Heads need to be closer together in the photo than normal to look normal due to the artificial border imposed but the shape of the photo. Keeping the heads close together and evenly spaced creates a nice smooth cadence when the viewer goes from face-to-face. If heads get too far apart or unevenly spaced the photo will look like individual portraits in the same frame, not a connected unit.

Having everyone turn to the center of the group, point their front foot towards the camera, and then shift all of their weight to the back hip (or butt cheek if seated) will angle all the shoulders and heads towards the center. People will naturally tilt their heads back to horizontal, but horizontal eye lines in a photo look very static so its necessary to watch and coach the group to keep the heads tilted inward to give the group a unified look.

The natural inclination in a small family group will be for everyone to put a hand on everyone else's shoulder. I consider everything other than the faces in a portrait to be a potential distract from the faces. The more skin toned objects other than the faces in the photo the more difficult it will be to find and stay focused one the faces, thus 10 hands competing for attention with 5 faces is not the recipe for an effective group portrait. To make the faces contrast most strongly hide as many hands as possible. Instead of Mom holding Jr. with fat ham shaped hand around his waist facing the camera have her grab a handful of the back of Jr's jumper. Put the back (inside relative to center) hand down to the side and loop the outside hand into a pocket or onto the hip to get a bit of bend it the elbow on the outside. Stop, look for distractions from the faces, and try to eliminate them.

## Clothing and background

The key to any effective photo is contrasting what is most important from all the potential distractions. In a portrait the biggest potential distractions from the faces are the clothing and background. To make the faces contrast it is necessary to coordinate the color and tone of the background together so both are different than the skin-tone of the faces. For family groups matching outfits, or at least outfits similar in color and tone are best. In a studio setting the photographer and pick the background which will best match the clothing. Outdoors background selection is even more important because there are more potential distractions. In general dark clothing will require a dark background to make the faces contrast and light clothing requires a light one to prevent the clothing from overpowering the faces.

Often there is no control over the clothing, but the photographer can control where the most distracting clothing is placed in the photo. Putting the people with the most distracting clothing in the middle rather than the ends of the group works to pull the eye of the viewer into rather than out of the center.

## Larger groups

For the purposes of this tutorial I consider a "large" group to be one which is too wide or deep to be adequately illuminated with a single or

pair of lights near the camera axis. There are strategies which can be employed to make the light of a single source more even on the subjects of a group. Those same strategies also apply to larger groups illuminated with multiple lights:

**1) Arrange the subjects in an arc relative to the light and camera:** If a large group is lined up in straight line relative to the camera and lights those directly in front of the camera and light wind up much closer than those on the ends. If a string was placed between the camera and light and swung in an arc it will wind up several feet in front of the people standing on the ends of the group. In the photo those people will appear darker and smaller than those in the middle due to the light fall-off and near/far lens perspective. But if the group is arranged so the nose of everyone in the front row of the group touches the end of the string they will all have the exact same light and be the same distance from the lens and the size distortion and uneven lighting will be eliminated.

**2) Raise the lights and the camera position:** Bring a ladder to all group photo shoots. Raising the camera and lights is a strategy to deal with fall-off and size distortion which occurs front to back in large multi-row groups. When the camera is raised above eye level the distance between the front and back rows becomes more equal relative to the camera. If the people look up towards the camera the angle of the faces relative to the camera remains the same as ground level. The angle of the torso relative to the camera changes also, foreshortening them. That is actually a good thing in a large group shot because it fills the photo with faces rather than the bodies of the people in the front row and the distracting wall behind the people in the last one. When the faces are tilted up the lights must also be raised to maintain the desired downward angle for the light on the faces. Getting the faces looking up and the lighting above them helps to solve the front-to-back light fall off problem. The faces wind up closer together relative to the light, and the lights can be more effectively "feathered" or aimed more towards the back to compensate for the fall-off.

### **Adding more lights**

When the combination of the above two techniques exceed the range of a single light or pair of lights in butterfly configuration on the camera axis its necessary to spread multiple lights across the group. Again the inverse-square fall off is a factor in determining where to put the lights.

The goal is to get even light on the front of every face and that requires the lights to be kept directly in front of the faces. Since each light will fall off more on the edges than the center relative to the group the best strategy for lighting a wide group is to arrange the lights so their patterns overlap each other. That way the sum of the two overlapping lights will equal the brighter light from the shorter distance in the center. Placing two lights on either side of the camera about 1/3 of the way in from the outer edge of the group is a good starting point for making the light even across the group. If the group exceeds what two lights can cover add more lights with similar spacing. Check the evenness of the lighting with an incident meter and test shots.

### **Posing very large groups**

It's possible to turn an unruly mob or team into a cohesive looking group photo in about 30 seconds:

- 1) First arrange the front row in a chevron or arc pattern relative to the camera
- 2) Stand in the middle and split the group in half and instruct everyone to turn their bodies to face the middle and point their front feet at the camera,
- 3) Have everyone shift their weight to the back foot.

Standing with your back to the group and demonstrating for each side helps people understand the instructions. If they follow the simple 1-2-3 instruction the group will appear uniformly posed with all of the shoulder lines and heads tilting towards the center. Climb up the ladder, have everyone look up at the camera, and shoot. A ladder is the most important piece of equipment for large groups.

The same sub-group and geometric pattern strategy used for a multigenerational family shot can be applied to a large group shot of a company staff, or other large group. First decide on an overall geometric shape for the group, then pose the each sub-group cohesively to fit within it, making sure the spacing will provide good overall flow and there's enough non-distracting negative space around the overall group to frame it and pull the viewer of the photo into it. Use the arc strategy to keep the sub-groups the same distance from the camera to avoid near/far size distortion, DOF problems and to keep the lighting even. Large complex shots like that are best tackled outdoors in natural lighting with flash used as needed for fill.