

## How to: Quality In-House Digital Photography

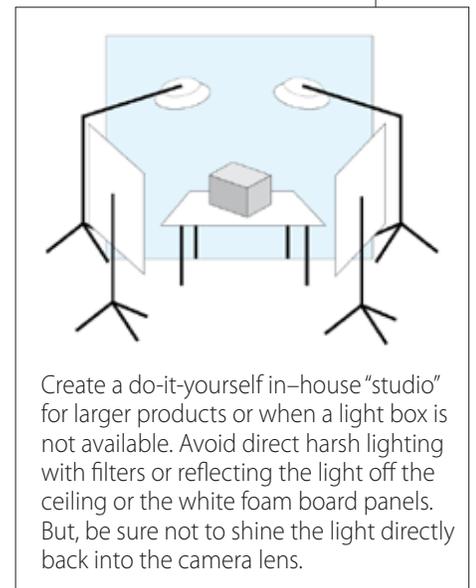
**Easy-to-follow, do-it-yourself guidelines to ensure great photography every time!**

### 1. Use a quality digital camera

- A good quality digital camera or a newer cell phone with suitable resolution and optics is a must. You need to make sure whatever device is used has a high resolution limit (physical image size and pixels.) For example: for printing purposes in magazines, brochures, etc., a 300 pixels/inch resolution is required: a 300 x 300 pixel image is only 1" square; a typical 4" x 6" 300 pixels/inch image for a news release needs to be 1200 pixels x 1800 pixels.
- **Simple rule of thumb if you can't determine actual pixel image size:**
  - **If the photo files size is less than 750kb, it is most likely too small and/or too low resolution for print**
  - **Any photo file size under 100 kb is definitely low-resolution**
- When shooting, always shoot at maximum image size and maximum resolution setting. The image file size you get may be very large (10-20 mb), but that's fine. Take one good shot at as big a size as possible, and then it's on file for use in PR, brochures, trade show booth displays, lobby/conference room displays, etc. Bottom line: you can always make a picture smaller with no problem. But, it's impossible to make a small picture bigger at some future date, because there is a directly proportional reduction in image quality. As size goes up, quality goes down. Therefore, bigger is always better.

### 2. Use a light box whenever possible

- Light boxes are inexpensive and readily available on the internet. It's a small investment that will pay big dividends in time and money saved compensating for or trying to fix bad lighting and reflections after the fact. These compact and portable "studios" provide an easy and ideal environment to take photos of industrial products (black anodized, SS, aluminum brass, bronze, etc. finishes, that always absorb or reflect ambient light and surrounding reflective surfaces in a detrimental fashion.
- Turn off overhead fluorescent lighting in the shooting environment if possible. Low wattage (<100W) ambient incandescent is OK.
- The size of products that can be shot in the light box depends on the light box purchased. Some of these are really small made for people selling their jewelry on ebay, etc. Others can accommodate 2-4 cu.ft or 15-20 cu.ft. Need to shop around a bit to find the right size and accessory lighting to suite the needs of the products being photographed. It's also easy to fabricate a homemade light box with white tag board or foam board.
- If the products are too large to fit in a light box, then having some large 4 x 4 sheets of white foam board on stands to eliminate ambient reflections from the surroundings, and two lights with translucent filters (to eliminate the harshness of the strong direct lighting), can also work instead. With this method, turning off the overhead fluorescent lighting is most important; otherwise everything will have a sickish green, mottled hue. If a clean white backdrop wall is not available, a suitable roll of paper backdrop is preferred to provide the distinctive contrast to make outlining the product in photoshop easier. All these items to build such a photographic set can be purchased from photographic supply websites or brick and mortar graphic art supply stores.



Create a do-it-yourself in-house "studio" for larger products or when a light box is not available. Avoid direct harsh lighting with filters or reflecting the light off the ceiling or the white foam board panels. But, be sure not to shine the light directly back into the camera lens.

### 3. Setting up the shot

- Make sure the entire unit is in the photo frame and nothing is being cropped off.
- If the background in the light box, or wherever the photo is being taken, is going to be cropped out anyway — maximize the product image size in the frame. Again, be sure not to inadvertently crop off a portion of the unit. If the product is only a small area in the center of the frame, once the excessive amount of background is removed, the final image size is going to be much smaller than it could have been. Maximizing the product image size in the frame, will ensure that it's final format will be the maximum size and resolution possible. Again, bigger is best.
- Angles. Some companies are very precise in shooting all their products in a very regimented fashion, at a precise perspective. This is advantageous, when you are trying to build a composite image pulling together numerous individual images into one. On the other hand, this can look too "institutional" depending on the product and the intended purpose. Look at the product(s) and determine which angles/perspectives will showcase the product the best. The nice thing about digital photography is it doesn't cost any more money to take 100 pictures than it cost to take 1, so experimenting, particularly at the beginning, is important to determine what works best. Shooting the product with a 25-30° side angle and some amount of downward angle seems to be the universal default setting. Depending on the product, it's nice to shoot from both sides, so that when you want to combine pics together they will synchronize much more naturally.
- Think about what the final image needs to look like. Make sure the product is clean, no smudges on polished metal surfaces, no severe scratches in paint finishes. Remove labels if desirable. If this isn't possible, perhaps shoot so the label is hidden or obscured and not the focus of attention. Likewise with pigtails, conduit entrances, etc. Remove red connector port protective covers, coil pigtails and hide behind product, trail out of frame, or coil in as attractive arrangement if it can't be removed from the shot. Undesirable items that have to stay in the pic that need to get photoshopped out of the pic, should be considered. Arrange the shot to make these items as easy to edit out as possible.

### 4. Transporting digital images

- Typical image size will be 3 to 10 mb, so sending 10, 20 or more images is not feasible via email attachments. Put all the images in one folder, compress it, and send via the free FTP wetransfer.com website. Simply select the file and enter the email of the person(s) you want to send the pictures to and send. It has a 2 GB file limit, it's free/fast/easy, and the file will be available for download by the recipient(s) for 1 week.