

Philip Tory's

Photography Tips for Technical Writers



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I have been a good amateur photographer for over 30 years, and I use my skills to take photographs of equipment and machinery, for use in Technical Manuals for my clients.

Camera

- A mobile phone camera is OK for “snaps”, but you need something decent for that professional look.
- If you take photos for business use, it is worth buying a proper camera with an optical zoom lens. It doesn't have to be top-of-the-range model — even an entry-level Digital SLR will do nicely, these days.
Which one should you buy? Have a look in a “Which” report at your library for their excellent comparison tests and ratings.
- Don't be overly impressed by “20 megapixels” etc. Unless you are printing very large, poster-sized pictures, it's a waste of money. And unless you are spending a lot on the lens quality, all you get is highly-defined, blurred edges.

Lighting

- Buy a decent flashgun to go with the camera. Find one with a swivel-and-tilt flash head, and an automatic exposure feature that delivers the right amount of light to the subject, to reduce over- or under-exposure. Don't rely on the camera's built-in flash — you can get reflection problems.
- It can be handy to buy a flashgun that has a light trigger, so that you can use the direct flash from the camera to trigger your separate flash gun for bounce flash. No wires!
- If the subject surface is shiny (reflective), hold the flashgun to one side, so that reflections of the flash don't appear in the picture. This one didn't:



This example has wide-angle lens distortion and flash reflection problems.

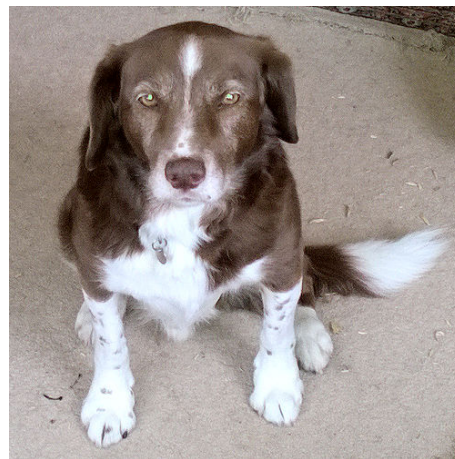
- If you are taking a photo through a transparent cover or window, beware of surface reflections of bright object such as a window or strip lights.
- Take several photos with different flash / bounce configurations. You cannot see which is the best photo until you view them on your computer later.
- As well as flash photos, it's worth taking a non-flash picture or two. Sometimes natural light works very well.
- You can enhance image brightness and contrast using a graphics software application such as Photoshop (expensive), Paint Shop Pro (mid-price), GIMP or Picasa (free). These can adjust contrast, brightness, colour bias, sharpness, etc., and crop the image to show just the part that you want to include in your manual.
- Try **bounced flash**.
Point the flashgun at any convenient large, light-coloured area, such as a wall or the ceiling. If your camera has a built-in flashgun, these are usually low-powered devices, so it will give you some direct-light shadows, softened by the diffuse light off the wall / ceiling. Or ask someone to hold up a large sheet of white card / fabric to one side, and bounce the flash off that.

Perspective Distortion

- Use a tripod for the camera. You can take a steadier shot, and you can take time to make sure the camera is upright to the equipment, and not tilted over a bit.
- If possible, move back from the equipment, and then zoom the lens in. This gives a much better perspective, and avoids **perspective distortion**: this means that, if you are too close, the straight sides of a rectangular object can appear to bend outwards, and/or the nearest object bulges towards you. Here's a domestic example:



Too close!



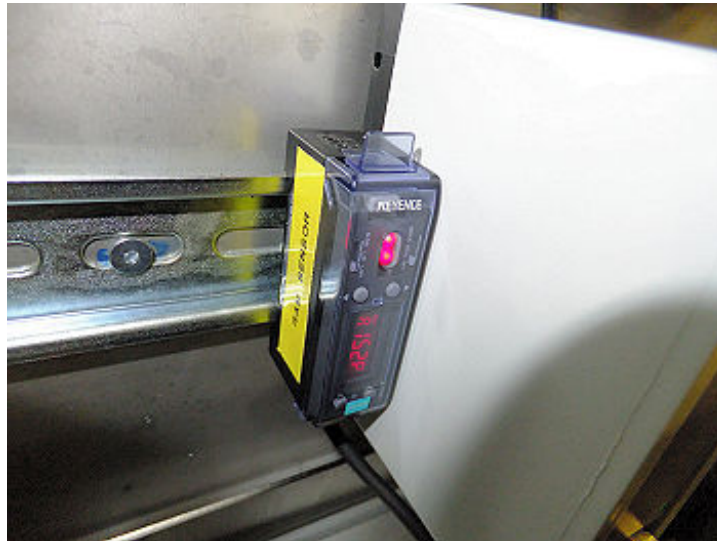
Move back and zoom in.

Relevance

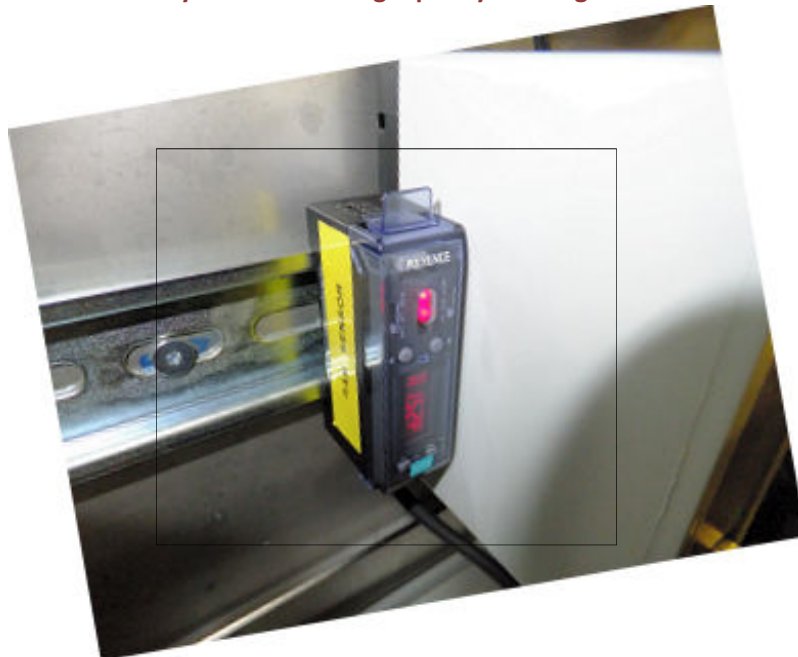
- Think User! Make sure the photo, the angle and the distance are **relevant** to the subject matter of the manual section where you will place the picture.

Taking the Photos

- Remember: if possible, use a tripod.
- Check the alignment of the camera. Is it horizontal? Are the verticals in the viewfinder as close to vertical as you can get? This one wasn't:



In this example, as well as wide-angle distortion, the upright corner at the back is 10 degrees off vertical. Although it is possible to rotate the image in a graphics package, you can lose image quality in doing so:



After processing, the subject is rotated to true vertical, but the image may not be as sharp. You can then crop the unwanted areas to the required rectangle (example shown).

What photos do you need to take?

While you're taking pictures, think about what views would help a New User of the equipment. For example, should you show where someone might need:

- To access via covers or doors?
- To adjust something? (e.g. the belt tension? Levelling the feet? Adjustment screws inside?)
- To move the equipment?

- To connect or disconnect something?
 - To change something (e.g. fuses, print cartridges, processing chemicals)?
 - To reset something (e.g. circuit breaker)?
 - To unscrew something (e.g. to clear a part jammed in the widget slot)?
 - To plug a cable in?
 - To identify which part is located where?
- Sometimes you may need to photograph a computer monitor screen to show the displayed image, in cases where you cannot capture a screenshot electronically. Therefore:
 - Use a tripod.
 - Move the tripod back a bit and zoom in so that the image almost fills the viewfinder.
 - Make sure the image is upright and square-on to the screen, to avoid rotation or a tilted perspective effect.
 - Switch the flash OFF and use the camera's automatic exposure feature.
 - If possible, have low background lighting in the room, to avoid reflections off the screen, but with enough light to show the frame of the monitor.
 - If part of the equipment is difficult to access, or it isn't clear which "widget retractor" to adjust, ask a colleague to put their hand on it, or point to it, or show a spanner or screwdriver on the adjustment screw, to make it clear to the user. You'll see some excellent examples in the "Haynes Owner's Workshop Manuals"; (I trained one of the HaynesPro senior UK editors in my Technical Writing Course).

Background

- A dark or muddled background can make it hard to see the exact outline of the equipment.
- If possible, place the equipment so that the area behind it (e.g. a wall) is plain and light-coloured. This helps to give a clear outline to the equipment. In some graphics processing applications, you can remove the background altogether, leaving it white.
- Some companies have a photo corner or booth, where they have painted the floor, walls and ceiling white, for good, all-round illumination. You could use white muslin on a frame to diffuse or reflect light, if you don't have walls nearby.
- If your product is white, take photos against a mid-coloured or light grey background. White equipment against a white background doesn't show the product outline very well.

Enjoy your photography!

Philip Tory

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