

# Photographing for the newsletter in a nutshell

## a. communication

- *Name files by article and context.* **a1. file names:** avoid the original camera file names and numbers. Please can you name files you upload starting with the file name of the article it corresponds to (e.g. if we have a file e.g. Stretham.doc, name your pictures StrethamXXX.jpg). Then, if there's more than one, use something that gives the context within the article, e.g. StrethamWindmill.jpg. If there's a lot in a sequence, especially if they're referenced in the word file, use 1, 2, 3, e.g. Stretham2.jpg, or StrethamWindmill3.jpg.
- *Put all the photos in one file.* **a2. uploading and downloading:** if there's several pictures and you upload them to a server to which I don't have ftp access, please can you wrap the high-resolution pictures in a zip file. This means I can get them in one go, and don't have to sit over the computer while it happens. Alternatively we can give you ftp access to a server which I also have ftp access to.

## b. picture quality

- Many picture defects can be corrected in Photoshop, but there are some which it is very hard to do anything about if the original picture is poor. Remember that there's no point in spending time taking pictures if they turn out not to be usable in the end.
- *Large files and more pixels are better.* **b1. resolution:** your camera probably has two controls, one for 'picture quality' or some such words, and one for 'resolution', which is a measure of how many pixels there are in a picture. You always need the highest available resolution (the most pixels) – you can always reduce it afterwards, but you can't get information back that isn't there in the picture. So set your camera to deliver the highest number of pixels it can. The picture quality setting is less of an issue. Some cameras offer 'raw' (highest), tiff (second) and several levels of jpeg (third). We only ever need jpeg, and providing this control on your camera doesn't simultaneously reduce the number of pixels, the medium setting will usually be OK; but if in doubt err on the better/larger settings.
  - *Check camera settings for white balance and saturation.* **b2. colour:** some pictures I receive have a very bluish or purplish cast. This may simply be a poor quality camera, but you may also have set a control away from the default. Things to look for are tarmac which is a bluish colour rather than grey, and pallid flesh tones. If your camera has a 'white balance' control, read the instructions for how it works. This can be corrected later, but with some loss of picture quality, and it is one more thing to have to do.

## c. blurred pictures

There's several possible causes:

- (1) subject out of focus,
- (2) camera or subject movement
- (3) smears on the lens (e.g. rain, finger marks)
- (4) poor lens quality (not much we can do about that directly)

- *Press half way and wait for camera to focus.*

**c1. focus:** it takes a short but significant time to focus a digital camera, but once focused most will retain the setting if the button is held half way down. So - anticipate where your subject will be, focus on that point, and then hold it. While you focus on the centre of the picture, if you keep your finger on the button, you can move the camera after focusing so the subject doesn't need to be central in the picture you take.

- *Focus in advance on where a moving subject will be.*

There's usually a beep or a light or symbol which tells you the camera has focussed.

- *Do actually focus on the subject.*

Not all of the depth of the picture will necessarily be in focus (this is called 'depth of field'), so forgive the obvious - make sure you focus at the distance of the thing you are trying to illustrate.

- *Avoid long exposures (> 1/30 second).*

**c2. exposure time:** the brighter the day (and therefore on automatic – the 'P', for 'program', setting - the camera will select a smaller shutter aperture) the more of the depth of the picture will be in focus. You can control this to some extent on some cameras by choosing the A ('aperture priority') setting and selecting a larger number (the larger the number – or 'f stop' – the smaller the hole).

- *Small apertures (higher f or A numbers) mean longer exposures but more of the scene in focus.*

But this is a trade-off. The larger the number, the less light that gets into the camera and therefore the longer the exposure needed to activate the sensor. Longer exposures risk you moving the camera. (In fact doubling the A or 'f-stop' number – that is, reducing the aperture by one 'stop' - exactly doubles the exposure time needed).

- **Increase ISO number in poor light to get shorter exposure.**
- **Support the camera in low light.**
- **Pocket camera flashes are very weak.**
- **Slow shutter speeds blur movement.**
- **Zoom out, reduce f or A number, increase ISO number.**
- **Set up a shot.**

**c3. camera shake:** for all but specialised shots, the camera needs to be motionless, and the longer the exposure, the more likely you are to move. Most cameras can be set to show you the exposure on the display or in the viewfinder when you press the button half-way, and typically you need 1/30 of a second or less (often this is just shown as '30', in which case, the higher the number the better). As well as making the aperture larger (and therefore limiting the distance over which you focus), most cameras allow you to change the 'ISO' setting. This is a hangover from the days of film when it measured the sensitivity of film. The higher the number, the shorter the exposure you can use (in fact doubling the ISO halves the exposure time). Again, this is a compromise. The down side is that this makes the picture more grainy – coloured dots start to appear all over the picture – so keep ISO at a low number unless you need otherwise.

**c4. really low light and night:** if none of this gets you a short enough exposure, and this will always be the case at night, you need support: a wall, post or something to rest the camera on. Ideally use the timer on the camera to take the picture, otherwise the action of pressing the shutter will shake the camera.

Pocket camera flashes only work up to about 3m (10 feet) at most. Beyond that don't even bother to try – your picture will be almost black. Instead turn the flash off, and sit the camera on something. Artificial light will rarely allow you better than ½ second exposure, so the camera needs to be really still.

**c5. subject movement:** many of our pictures show cyclists, and often they will be moving. If you have a slow shutter speed (1/60 of a second or longer) they will be blurred because they move a significant distance while the shutter is open. Sometimes this is quite effective, and allows a measure of anonymity on the street. Especially at this time of year when light levels are so low, it is hard to do otherwise, as all the settings above aren't enough to overcome it. So if you have the choice, choose a sunny day!

Reduce the movement blur by (a) zooming out (aperture size is limited by how far you zoom in, but see composition below), (b) opening the aperture wide (A setting with smallest number, but remember this requires more careful focusing), (c) increasing the ISO number.

One way to solve this problem is to accost a passing cyclist and ask them to cycle *slowly* where you want them, i.e. set up the shot.

## d. composition

- **Get in close.**

**d1. fill the frame:** try to fill the frame with what you want to illustrate. Lots of sky, grass, and in particular, tarmac isn't interesting. I can crop pictures, but there is a limit, and this often reduces quality. It isn't always possible to get close enough, of course, but think about using islands in the road for example.

- **Put someone in the scene.** **d2. wait for cyclists:** a photo of a suburban street is generally pretty dull. We're a cycling group, so be patient, wait for a cyclist to come along. Or ask someone to be in the picture. Put the cyclist in the foreground, unless you're trying to illustrate a particular point about the cyclist's position. Mostly, photograph from the front. A face is more appealing than a bum shot.
- **Eye-level can be dull.** **d3. think high and low:** you don't have to take a photograph at normal eye level. Think about crouching down so you look up to a shot. This emphasises foreground. Or climb on a bench or a wall to look down on something.
- **Subject in the middle can be dull.** **d4. off-centre:** don't necessarily position your subject in the centre (but do focus and meter first centrally). The 'rule of thirds' is one aesthetic choice – imagine a noughts-and-crosses board in the viewfinder and position the subject on one of the four points where the lines cross. Use lines in the scene (kerbs, shadows, whatever) to lead in from the edges/corners of the picture to point at the subject.
- **Zoom in as another way of filling the frame.** **d5. zoom in:** a corollary to d1 is to zoom in. However, this has the effect of limiting the size of the aperture, so may be difficult in poor light. It also visually compresses the depth of subject, which is often good for our kind of material – emphasising a traffic jam, or the number of cyclists in a crowd. The opposite is 'wide angle' which can lead to dull pictures unless you go really close to something to put it in the foreground.
- **Take control of the exposure for back-lit subjects.** **d6. backlit subjects:** (especially in winter, against low sun). The camera sensor needs to receive a certain, fixed range of amount of light to expose a scene properly. On 'P' the camera chooses both aperture size and time to provide this, on 'A' you choose the aperture and it chooses time to match, and on 'T' you choose the time and it chooses the aperture. The trouble is there are both light and dark areas in the scene. Most cameras use an average over the whole scene to decide the setting. Some let you choose to base the exposure only on a small point in the centre ('spot metering'), or give this additional emphasis in the calculation ('centre-weighted').
- **For back-lit subjects, select spot or centre-weighted on your camera if available.** Usually the automatic setting will give a good picture, but a backlit scene is a problem, especially if the subject is relatively small, as the exposure will largely be calculated from the background, making the subject too dark. In this case, (a) choose centre-weighted or spot setting if you have it, (b) point the camera at the subject before pressing the button (as with focusing) and then reposition with the button held halfway down, (c) if the camera doesn't have any centre weight control, point the camera at something more generally dark at roughly the same distance as the subject and meter and focus on that, then reposition with your finger held on the button.
- **Avoid shadow chopping up the scene.** Try to avoid scenes where half what you want to see is in shadow and half isn't.

## e. artefacts

- *Look for flare in the LCD not the viewfinder.*

**e1. flare:** pictures taken towards the sun are often effective (saturated colours, high contrasts), but risk a row of green spots or coloured fringes in them due to the sun refracting through the layers of the lens. This is very hard to correct after the event. You can usually see this happening on the LCD, but in pocket cameras you won't see it in the viewfinder (or if you do, it won't be the same as the lens sees it) – so judge your picture on the LCD if you don't have a SLR (i.e. viewfinder sees through the lens) camera. The LCD *does* see through the lens.

- *Shield the lens when taking towards the sun.*

To avoid flare, shield the lens from the sun by cupping your hand over it or holding out your arm to shade the camera. Some cameras have lens hoods supplied for the purpose. The closer the sun is to being in the frame, the harder this is.

**e2. reflections:** if you take pictures through or of a window or into a display case, you are bound to get reflections in the glass. In real life you just ignore them, filter them out, but they become very obvious in a 2D picture.

- *Make sure you aren't reflected in the picture.*

So when taking pictures of cars etc – whose windows generate very strong reflections – check carefully that you can't see yourself in the picture.

- *Hold lens against glass to take through it.*

Press the lens against glass when taking through it, or you'll see yourself and what's behind you, not the subject you intended.

- *Observe the shadows.*

**e3. shadows:** shadows in a picture can be very effective, but because we filter them out (like reflections) in normal vision, you can easily miss them. Be careful not to chop someone in half with a shadow unnecessarily, especially a face.

- *Compose close-ups in the LCD not the viewfinder.*

**e4. close-ups:** your camera probably can't focus an object at less than 10cm or 20cm. For distances less than 1m or so, you may have to choose a special close-up (aka 'macro') setting – usually a button or switch with a flower symbol. When doing this, compose the picture using the LCD – for non-SLR cameras using the viewfinder you aren't seeing what the lens is seeing. The closer up you are, the more significant is the distance between the lens and the viewfinder (this is called 'parallax'). Even when only moderately close (a group of people for example) the picture may be offset from where you want it if you don't use the LCD.