Taking better pictures of your work

Introduction

As a potter you spend your time with your materials and in time you get good at achieving what you envisage. When it comes to taking pictures of this work you need to appreciate that it is another skill that has to be learned, it isn't enough to just point your camera at the pot and press the button, that might be OK for a record of what you are doing, but it won't do your pots justice if you are trying to get into a gallery, or to sell through a website. However it isn't all that difficult to learn how to take basic product shots that will do very well for submissions to galleries, social media and web use.

To achieve this it is best to shoot with a 'soft-box' – a large light-source that produces a soft even light. You can buy these, but they are usually meant to be attached to photographic lights and can be expensive. You can just as easily make a serviceable softbox yourself with little more than cardboard and gaffa-tape and use tracing paper or layout paper for the diffuser to get the light soft.

It is not my intention to give you a step-by-step plan to make a softbox, in my experience craftspeople are an immensely practical bunch and I'm sure you will work this out. What I want to do is to tell you that it is OK to do this, using a cardboard box with a sheet of tracing paper over the front and a builder's site-light shining through a hole in the top will potentially give you professional looking results!

Equipment

- **Camera** – whilst you can take great pictures with a mobile phone, having a camera that allows you at least some control will make things much easier. Regrettably, with cameras you do tend to get what you pay for, but if you look for a camera that has not too wide a range on its zoom and has a fixed preview screen you are likely to get a better result for less money, since the articulated screen is an expensive luxury and a wide zoom range is either costly or a compromise on quality (or both). Be realistic, you probably won't buy a camera only to photograph your work, it also has to take pictures of your children, your holidays and the demonstrations that you go to, so get the best you can afford, but make sure it will do the product shots well before you commit, especially that it will focus as close as you want to get to your work.
- **Tripod** – You can take perfectly good product shots without a tripod, but it will be harder. Without a tripod you will have to prop the camera on piles of books, or on your furniture and framing the

photograph will mean tilting the camera and wedging it with bits of wood or card. A tripod will enable you to put the camera at the right height, the right angle and get it level with great ease.

- **Light** – The more light you have the more options you will have, but not quite in the way you are probably thinking! To control the lighting you need to have control over the main volume of light. If you are photographing in a place with loads of daylight, coming from all sides then to control the main light source you need flash which, for a brief duration will be much brighter than the daylight. You may be lucky and have a skylight over your workspace that you can use if you can shield off other light from the side. However, for most people the answer is to wait until it is dark outside and use artificial light over which you can exert control! The more artificial light you have the shorter the exposures will need to be and the higher the likelihood of getting sharp pictures.
- **Grey card** – a neutral grey reference. If you Google '18% grey card' you will get loads of hits, any of them will do.

Making a Softbox

The purpose of a softbox is to make the light source bigger. With a bigger, but diffuse light the shadows will be softer since the light is coming from the whole diffuser and will wrap around the pot below it. The simplest softbox would be a cardboard box, reasonably large, at least twice the width of the pots you want to photograph, so if you are photographing a bowl 30 cm wide the box should be 60 cm wide. I have made my softbox from scratch and used foam board, but if you have used an ordinary box then paint the interior with white emulsion paint, or line it with aluminium foil, with the duller side out. The box will need an open side, which will face down over the pots and will have a diffuser taped over it – the opposite side is where the light will be, for this you need to improvise depending on what kind of light you are using. The easiest bright lightsource that won't break the bank are probably LED sitelights, for just under £30 you can buy a 23w LED sitelight that will be pretty bright. (from Screwfix)

Whatever lights you buy simply cut holes in the box and place the lights on top facing through the hole make sure they will not slip off,

The diffuser is just a sheet of paper, tracing or layout is probably best, but even baking parchment would be fine, as long as it lets the light through and isn't coloured. You need to tape this over the open side or the box as neatly and as flat as you can. You do not want any gaps where un-diffuse light leaks out as this will show.

Supporting the softbox. There is no need to over engineer things as I have: I will need to break mine down and re-assemble it. A stick in each corner held

on with cable ties or gaffa tape would do the trick. There are a couple of things you must consider – it must be secure so that it won't collapse on top of your pots. If your lightsource is hot don't let it touch the cardboard (or choose a different lightsource). You need enough width between the legs of your lightbox so that it does not encroach in your pictures. If your work is very large you may be better off having the box supported on a couple of poles sticking out sideways and propped on chairs or something similar, or a single pole at the top with the box hanging beneath.

Background

The two main versions of the classic product shot are with a 'scoop' or with a horizon. For a scoop you need a roll of paper fixed high up behind the shooting space and rolled out to form an arena on which to place your work. You need space behind the work otherwise it is very hard to get any contrast into the picture. For a horizon you let the paper roll out behind the table on which the work is sitting and you sit the work on another piece of paper. There needs to be a space between the table and the background and the back edge of the background needs to be neat or it will show.

I favour white, it is easy to source and it won't distract from the work, don't go for colour, if you don't want white then pale grey, but neutral!

French flags and reflectors

Not some kinky fashion statement, but a way of directing light, these will help you to get the light where you want it to be and to remove it where you don't want it. A 'french flag' is a piece of board that you use to position shadows, they can be used to create the graduated background behind your pots. Ideally they should be thick enough not to let light through and it is helpful if they are dark and matt – in the interests of clarity and cheapness think thick corrugated card! A reflector does the opposite, putting light into areas which are too dark. The ideal reflector is a piece of white cardboard, not shiny. For this specific lighting setup it is probable that a French-flag as wide as the softbox and a couple of reflectors about A4 will be ideal

Understanding just enough about digital photography

Raw or Jpeg

Most digital cameras offer a choice of file formats: Jpeg and Raw. These can be likened to what in the past would have been a print (jpeg) and a negative (raw). Jpegs are ready to use, they can be posted on the internet or used for publication without any further work whereas a raw file has to be processed, ultimately into a jpeg (there are other file formats, but for the sake of simplicity I'm not going to go there) The camera captures data in a 'raw' format and if you set it to do so it will process jpegs 'on the fly' out of this data.

Your choice of file format depends of how serious you are and what facilities you have, if you have no image processing software then you are going to be better off with jpeg, but any change you make to the image will result in small losses in quality, changes can be adjustments to colour, contrast, cropping, exposure, or picture dimensions. This is because jpeg is a compressed format, each time you save it it is compressed again and ultimately these compressions will degrade the image, the process is slow, but it will happen. If you are serious about getting the best quality then raw is better. With raw you are using the actual data from the camera and you can make all sorts of adjustments to the pictures, either individually or to a batch of pictures and then get your computer to make the jpegs out of them to use. Each different version you want you get from the raw file, so if you want a big file for print and a small file for web, or if you decide your picture needs more contrast you get the new file from the raw data and your jpegs will always be as good as they can be. The raw data does not change, the adjustments you make are simply stored as instructions to tell the computer what you want to do when it is making the jpeg.

Raw capture does need a piece of software to process the photographs, this will have been supplied with the camera, or will be available from the manufacturer if raw capture is available on the camera. There are also programmes like Adobe Lightroom, and Apple Aperture that do the processing. During the copying of the pictures onto your computer you will be able to make corrections to the whole batch for instance to the white balance for colour accuracy or to the contrast.

Colour accuracy

The way you deal with colour accuracy depends on the file format, either way this is what you use the grey card for. For jpeg capture you can put the grey

card in front of your pot and point the camera at it then use the 'Custom White Balance' (CWB) function on your camera. You will need to find out how to do this by reading the relevant section of the user manual for your camera. CWB tells the camera software what neutral is so that when the camera makes the jpegs it knows what colour the subject should be. Over a series of photographs where the lighting remains constant you should be able to use the initial CWB.

If you are shooting raw then you can postpone the colour correction until you transfer the pictures into your computer. Use the grey card at the beginning of the session (and if the light is changed at any point). These pictures with the grey card become your reference pictures. For the sake of consistency it is a good idea to use a preset white-balance on your camera. The camera will have fixed settings for daylight, flash, tungsten, fluorescent etc., but also an 'auto' setting which is how most people use their cameras day to day. If you set the camera to a fixed setting then all the pictures will look the same colour and the correction you make will correct them all the same way.

For raw shooting you will 'import' the images into your computer using a programme called a 'raw-converter'. There are many of these, I use Adobe Lightroom, but there will be one with the software supplied by your camera maker to deal specifically with their files. During or just after the import process you will be able to adjust all files using a correction that you create for the first 'reference' image. There is typically a tool in the software that has an icon of a pipette or eyedropper. If you select this tool and click on the grey-card area in the reference image – hopefully magic will happen and the colours will clean up nicely.

Using your computer to improve your images

All I have talked about so far is essentially about taking the pictures and getting the colour right, because this may happen 'in-camera'. There are other things that you can do to your pictures to get them looking as good as you can, that should be done with your computer. It is unrealistic to teach all this in a brief talk, especially since each photo-software will have a different operation, but if I tell you what you should be looking at then it will give you a good place to start.

- **Exposure -** Does the picture need to be brighter or darker? Modern digital cameras record masses of data so if your pictures are too light or dark then changing the exposure in the computer will probably be OK unless the error is huge.

- **Contrast -** The pictures straight from the camera may appear a little 'flat'. You can improve this by increasing the contrast. Don't go too far, just enough to make the pictures a little punchier.

- **Saturation -** This is how vivid the colours in the picture are and is probably the most subjective of the corrections, you may want to brighten or reduce the saturation, depending on the work you have photographed

- **Level and Cropping -** It is very distracting when you look at a picture and the subject is at a slant in the frame. Try to get it straight when you take the picture, but if you fail you can tilt the picture slightly in the computer. The tilting is often part of the same control as the cropping function, so you can straighten the picture and, if there is too much space around the piece you have photographed, or if there is anything encroaching into the frame then you can crop it out at the same time.

- **Size -** What are you going to use the picture for? As a general rule of thumb you can manage almost anything with just two image sizes: Hi-res – for all practical purposes, as a non-professional photographer Hi-res means the biggest size that your camera will produce. Whether you are shooting raw or jpeg, it is the size that the jpegs will end up if you just export them full size. There are things that you can do to make your files bigger, but don't! There is no point!! Low-res – I decided ages ago that my 'low-res' would be an image with a maximum dimension of 1000 pixels. This looks good on a computer screen. In time I may have to make it bigger because screens are getting bigger, and higher resolution, but at the moment it is still ample for everything I do on the internet.

    - **A quick note on the technicalities of size -** DPI - Dots per inch: on a screen this is 72dpi and for printing most people use 300dpi. This represents the number of picture elements ('pixels') per inch, but it is no longer accurate for computers since the dots on a screen are now much smaller than they used to be, so the picture will display smaller. DPI is just a number recorded in the file that tells the computer how to display an image and it can be changed. An image 4000 x 3000 pixels can be at 72 or 300 DPI, at 72dpi it will display huge, 55 inches or 1.4m by 41 inches or just over 1m and at 300dpi it will display small, 12 inches by 10 inches, 30cm x 25cm. This isn't hi and low res, this is just about how the file is labelled. If you stick to the full size for hi-res and the maximum dimension of 1000 pixels for low res you should be fine.

- **Sharpness -** From a photographer's point of view sharpness sounds like the last thing that you should change. I am aware of the ambiguity of this! Sharpness will hopefully already be captured in your pictures, but as you adjust them it will change the way they look and they may appear softer. Digital imaging utilises something called 'unsharp mask' (USM) this introduces apparent sharpness to the pictures by placing contrast at a very small scale where there are changes in tone in the picture. Bluntly if there is a dark thing against a light background it will add a darker line followed by a lighter line between them, the eye picks this up as sharpness. USM is applied to the file at a pixel level, it isn't a percentage, so on a file that is 1000 pixels across it will look much stronger than on a file from the same image that is 4000 pixels across, it should therefore be done only when the image is the final size it is going to be so that you can see what the result is going to look like. A small amount of USM on an image for web use is probably all you will need, while a full resolution image may need much more to get the desired effect.

Camera settings

- **Exposure metering –** You need to be able to set the exposure to use a small aperture, this will give greater depth of field – more of your pot will appear sharply focussed. Automatic exposure is fine, but on a Nikon it should be A mode (aperture priority) on a Canon Av Mode (aperture value). Read the relevant section in your camera manual…
- **Aperture or f-number –** Having said you need a small aperture, some of you won't know the relationship between the numbers and the size of the aperture. A bigger f-number is a smaller aperture, cameras and lenses differ, but a setting of f11, f16 or f22 is probably best (assuming that you have this option on your camera, if there is an A or Av setting it probably will).
- **Focus –** In my testing I found some difficulty getting my camera to focus where I wanted it to. The ideal focus point will depend on the pot, the scale and what you are trying to achieve. If your camera will give you a small enough aperture to get the whole pot sharp you need to be focussed about half way through the piece. If the aperture isn't small enough to get the whole pot sharp you need to focus closer, so that the sharp parts of the pot are the front areas. The correct choice of focus point will be where the closest bit to the camera is sharp and the depth of field carries you back through the pot as far as possible. However there are exceptions, a plate with a decorated centre for instance you need the decorated area to be the main focus of the picture. If your camera struggles to focus on the area you want then either use manual focus if that is an option, or place something patterned at the point which you want to be the centre of the focus

and use the pattern to get the camera focussed before removing it and shooting the picture.

- **ISO –** Use a low ISO, typically between 100 and 400 ISO. ISO is an indication of how much light will be required to get a correct exposure, it is a trade-off, to get the best quality you need more light, lower ISO. If you don't have much light you can opt for higher ISO but get less quality. With a tripod it shouldn't matter, use between 100 and 400.
- **White Balance –** As I said before set the White Balance to something fixed, daylight or flash are likely to be best unless your lightsource is an old tungsten light where the tungsten setting will be better. If you are shooting jpeg then Custom White Balance, using the grey card and whatever system the camera requires.
- **Shutter release –** Traditionally you would fire the camera in a setup like this using a cable release, a short flexible cable with a button on the end. This prevented you from moving the camera and reduced vibrations. Most modern cameras don't have a socket for a cable release, instead you need to have an electronic release, maybe even a remote control, or even in some cases an app on your phone to do the same thing. Instead what you should be doing is to use the timer function, the same function you use to take pictures of your family when you run from the camera to be in the picture too. This can often be adjusted for time, I use 2 seconds on mine (because I am impatient) the default is most often 10 seconds, but as long as there is a delay between pressing the button and the exposure being made it will work just as well as a cable release.

Setting up and shooting

Once you have gathered everything together you will be ready to shoot. For a scoop background attach the background paper to the wall behind where you want to shoot. You need plenty of space behind the softbox or all you will be able to achieve is a white background, but not too much or you may begin to see the sides of the background in the pictures. The background is simply rolled out over the table so you have a flat place for the pots and a smooth curve where the background reaches the wall. For a horizon you move the table away from the wall, the background goes straight down behind the table. You then get another piece of the background paper and line the table, making a neat fold over the back. Kinks and folds in the paper will show so do it carefully!

The softbox stands on top of, or astride the table, it needs to have enough height so that it is well out of the picture area and that you have enough space to use a french flag to get the background into shadow. The higher the softbox is the harder the shadows will get, so don't go too high.

With the softbox set up you can put the french flag up, I usually just clip it to the back legs of the softbox so that its bottom edge is about 100mm or 150mm below the softbox, between the softbox and the background. What it is doing is reducing the amount of light that can fall on the background and it should give a soft gradation of light.

You can do everything up to here with daylight flooding into the room, or with the ordinary lights switched on, but at this point you should switch on the light in the softbox and switch off all the other lighting. If the other lighting is daylight then put your feet up and wait for it to get dark. You need your softbox to be brighter than any other lights in your working space or you will really struggle to get decent results.

You are now ready to put the pot into the scene! Place it under the softbox and then set the camera up on a tripod if you have one, on a piece of furniture and a stack of books if that is all you have. The camera should be just above the pot and tilted down for most shapes, considerably above the pot for flatware, or the flatware needs to be propped, or on a plate-stand. If your camera is level with the piece it is quite hard to get a sense of the depth of the piece. With the camera and the pot in place you need to look hard and critically at what you see through the camera. Look for shadows that are too deep, look for reflections of the light, look for dirt on the background, or creases. It is from the camera position that you need to be looking since these things only matter if they look bad from the camera position, if you can't see it from there it really doesn't matter. Shadows can usually be fixed by propping your reflectors against the front legs of the lightbox, tilted so that they pop light in under the pot, you should be able to see this happening.

Reflections are a little harder and there isn't a hard and fast way to fix them: try moving the pot, try moving the camera it will take trial and error. If your work is very shiny it may be worthwhile buying a can of 'dulling spray', this will remove the reflections and is then washed off afterwards. Another old trick is to put a cross of dark tape, or two narrow strips of card from side to side and front to back on your softbox which will just make the reflection look like a window. The other way is to add white boards to the sides, between the legs of the softbox and also at the front, with a gap or hole to shoot through, this makes the reflections solid, and you no longer see them.

When you are ready ensure that the camera is focussed, that it is correctly set for white balance, ISO and all the other things, put the grey card in front of the pot, take a picture, remove the grey-card and take the final picture.