

Photographing Your Collection

THERE IS MORE TO GREAT PHOTOS THAN “POINT AND SHOOT”. BUT DIGITAL PHOTOGRAPHY, COMBINED WITH A FEW TIPS AND TECHNIQUES, MEAN THAT YOU CAN NOW TAKE PROFESSIONAL QUALITY PHOTOS OF YOUR COLLECTION.

Philip Moorhouse



My colleague David was photographing his collection. Disappointed with the results, he made a costly purchase of a high end camera. Imagine his frustration when he discovered there was no “magic fix”, and his photos looked much the same as before!

In reality, a few basic skills are far more important, and much cheaper, than expensive cameras. This article describes a few simple tips and techniques that mean high quality photographs of your collection are inexpensive and consistently achievable. Good photography isn’t a skill that develops overnight, but digital photography means the learning curve is free - if you don’t like what you see, press “Delete” and try again.

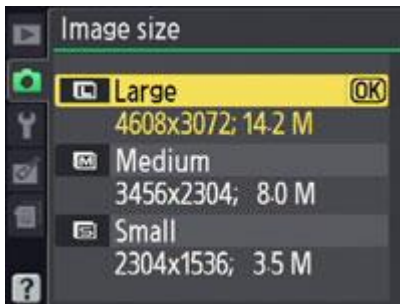
1. Your Camera

I use a mid-range DSLR camera, and pretty much any modern camera has the ability to take high quality images. Poor photos are usually the result of poor technique, rather than an inadequate camera.

If you are serious about taking consistently good photographs, then a DSLR is the way to go, but most of the following tips will improve your photography, whatever you are using.

So the first tip is many people are not using their camera to its full potential; take the time to learn what its functions are, and don't go off and buy an expensive camera. At least, not yet!

2. Setting Image Size



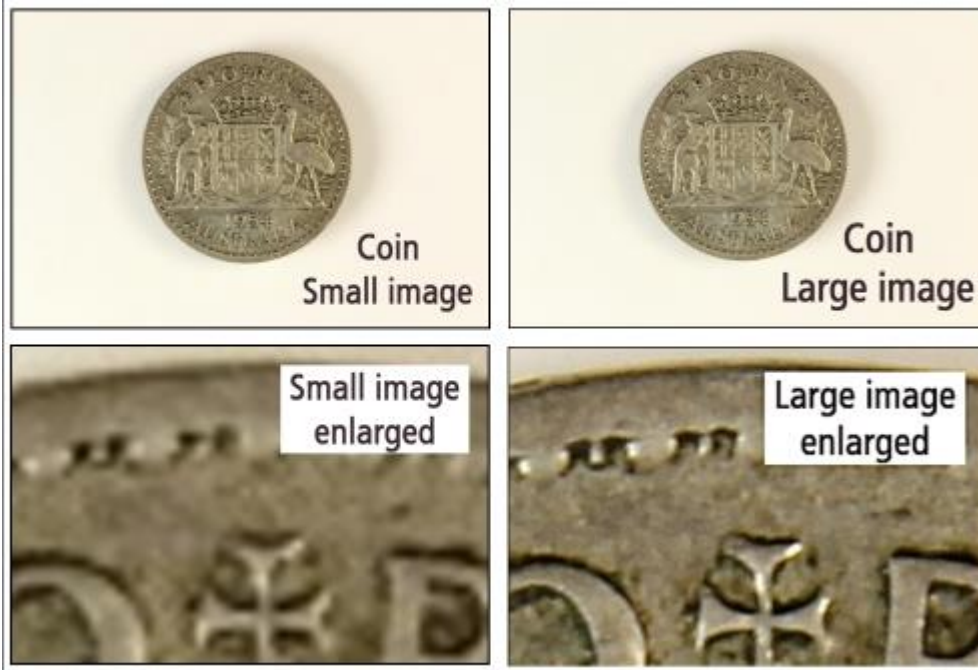
Many cameras have three settings for Image Size (or Quality Setting): small, medium and large. Your camera should usually be set to highest quality, the largest images possible. You can always reduce a photograph in size later if you want (eg to email to a friend) – but you can never increase it.

The downside is that you cannot fit as many images on your memory card. However, an 8GB memory card costs around \$8. This means that the additional cost in taking a highest quality 14.2MB photo over a 3.5MB photo is...wait for it...about 1 cent!

3. Photographing small objects

A simple experiment with a coin shows how important Image Size is, particularly when photographing small objects. Using a standard lens on my camera, I focussed as close in as I could - 12cm. But that left a lot of “wasted” white space around the coin.

The two photos look identical, but one was taken at highest quality, and the other, at lowest. When you enlarge them, the difference become obvious – the highest quality image stays sharp, while the lowest quality image goes blurry. If your entire collection is coins, you may need a special macro lens; but for the occasional small item, take the photo at highest Image Size, and you will often be pleasantly surprised how sharp it is.



4. Backgrounds and Backdrops

Your items will look best when isolated against a plain background. White is generally optimal as it shows off the colours in the item without any colour shifts or colour reflections. Neutral colours such as grey and black can also work well.



To create a seamless background use an infinity screen, which is simply a sheet of thin card bent up against the wall (or a box or other support) while the rest is horizontal. As it curves, there is no visible transition between horizontal and vertical surface.

Time taken? Seconds. Cost? \$2.29 for the white card.

5. Soft lighting

Good lighting is critical to great photographs. For small objects and memorabilia, the secret is diffuse, even lighting. This will reveal colours and textures, while soft shadows give form and shape. Sounds difficult? Not at all!

All you need to remember is **never** use direct lighting, such as direct sunlight or the built-in flash unit on your camera – it results in dark shadows, hot spots and uneven lighting. Soften the light first, and you do this using diffusion and reflection.

Light Box

A Light Box (or Light Tent) is very useful for soft lighting. They are commercially available in varying sizes and prices, starting from around \$30. Or you can make your own (out of an old cardboard box!) for only a few dollars. The main photograph at the top of the page shows one I made myself in about an hour. You can find instructions in **Appendix 1** at the bottom of this article.here:

Or you can buy them as a kit online (eg eBay) including two lights, some coloured backdrops (throw out the blue one) and a basic camera stand. This simple kit costs less than \$100!



Diffusing Screen and Reflector

Another alternative to soften light is make your own Diffusing Screen and reflector, as shown here.

Diffusing Screen & Reflector set

This lighting method works well for any single light source - a window or artificial light.

The set takes about half an hour to make, and will last for years.



You will need:

- Foam Core board (approx 500 x 750mm)
- Roll of greaseproof paper or baking paper or tissue paper
- PVA/white glue and cheap paintbrush
- Craft knife
- Ruler



Step 1

- Mark four lines 2.5cm in from each edge of the foam core board and carefully cut out this rectangle, leaving a frame.
- The greaseproof paper is not wide enough to cover the frame, so cut two oversize lengths and glue them together with a 1cm overlap.



Step 2

- Cut the greaseproof paper to the exact size of the cutout panel, plus an extra 1.5cm on each side for glueing.
- Using slightly diluted PVA glue (so it is quite runny), paint a 1.5cm strip along one edge and glue the paper down on the frame.



Step 3

- Repeat on the other three edges. (Tip: So the paper is tight, use two people, and glue it in stages. It sticks quickly).
- Finished!



How to use it

- Set up a curved backdrop.
- Place the diffusing screen on the window (or light) side
- Place the reflector on the other side
- Move the item to the left or right until it is evenly lit on both sides.

Time taken? About 30 minutes. Cost? \$12.29 for the foam core board.

Combine it with the Infinity Screen backdrop, and for under \$15, you are well on your way to better photographs!

6. Artificial vs Natural Lighting

Mother Nature provides excellent lighting; if you have a nice big window and are equipped with a Light Box or diffusing screen and reflector, you can get great results. But the sun is fickle. The light quality and direction are continually changing, and unfortunately it is switched off every evening.

Selecting artificial lights

Eventually, you need to consider some form of artificial lighting. Good lights are surprisingly cheap, and easily available at camera stores and online. As I mentioned earlier, you can often get them in a kit with a Light Box. When you choose lights:

- Ideally, choose lights that are daylight balanced (cool white, or 5400K colour temperature).
- Although you can work with a single light, a pair of lights gives you much more flexibility.

- Continuous fluorescent bulbs are better than flash, as you can easily see what is happening when you make adjustments.
- Avoid halogen lights. They get very hot, and can be a fire hazard next to cardboard and tissue paper!
- Do not use the built-in camera flash unit, as mentioned earlier.

But any two lights will work, as long as they are identical, so the AWB (Auto White Balance) setting on your camera can correct the colour to neutral.

7. The AWB (Auto White Balance) setting

The AWB setting on your camera is often a source of confusion. The purpose of AWB is to give you accurate colours under all different sorts of lighting conditions. Through the day, we might walk outside on a cloudy day (blueish), sit under a fluorescent light (greenish) , or read next to a lamp (yellowish). Our clever brain is colour correcting automatically, so we don't even notice the changes.

AWB is just the camera's way of doing the same thing. It usually does a great job of removing any colour caste, but if your photos look too warm (yellow), or too cool (blue), then check your AWB setting is on.

Occasionally, your camera can get tricked, and you may want to override AWB and set it manually. For example, if you are taking a photo using a red background, the AWB will try and "balance out" what it thinks is too much red, and turn your item blue! This is another reason why neutral coloured backgrounds are best.

I even experimented using two Ikea desk lamps (see below), and they worked fine, although it required a longer exposure time, so a tripod was essential.



Continuous fluorescent lights



Ikea desk lamps



No AWB (Auto White Balance)

8. Tripod

Since you won't be using direct sunlight or the in-built camera flash, your shutter speeds will be slow. This will produce camera shake and blurry images if you are holding the camera while shooting. A tripod is essential to prevent this.

If you don't have a tripod, you could set your camera on a steady surface and try and line it up in the desired position, but it is awkward to get it pointing at just the right angle. When a basic tripod costs less than \$30 and will last for years, why bother? Other benefits of a tripod are:

- It is easy to retake an identical photograph if you need to make adjustments to exposure or vary the composition or lighting.
- Once you have the ideal set up, you can do a session, taking photographs of one item after another, quite quickly.
- Pressing the shutter release often causes camera shake on a long exposure. When your camera is on a tripod, you can use the self timer instead.
- Even better, most cameras work with a wireless remote shutter release. You can stand anywhere, and it frees up your hands if you are holding a reflector card near the item.

Cost? Around \$3.50 online.



As an extra bonus, taking group family portraits (including yourself) becomes a breeze if you have a tripod and remote shutter release.

9. Correct Exposure

If you get the other basics right first, such as even diffuse lighting, then getting correct exposure is less hit and miss, and much more predictable. And if you are using a tripod and don't like an exposure, simply reshoot it.

Although your camera will usually do a good job using auto exposure, there are exceptions. In the badge photo below, because there was a lot of white background surrounding the badge, the auto exposure was tricked into thinking the image was too bright, meaning it reduced the exposure, and the badge was underexposed. The solution is to check the image you can see on the camera's built in LCD display, and set the exposure compensation to +1 or +2. If you are not sure, take two or three photos.



10. Editing your photos

Once your shoot is finished, its time to do some photo editing. A detailed look is well beyond the scope of this article, but here is a brief overview.

Has soft lighting dulled the contrast? Too much space around the item? Image too big or too dark? Photo editing can help. But first, one golden rule – **never** work on your originals, only work on copies. Photo editing is where you can:

- Auto correct – one button often does everything
- Brightness – brighten the overall image
- Contrast – increase the contrast by adjusting your white and black levels
- White balance – make any required colour adjustments
- Cropping – get rid of excess background
- Sharpness – highlight intricate details in your items
- Reduce Image Size – for emails, uploading to the web, etc

If you have a PC, it comes already comes loaded with **Paint**, a basic photo editing program, or **Photos** if you use a Mac. Or search online for “free photo editing software” and you will find a huge range, from entry level programs to others that rival Photoshop in features.

Some are web-based, others you download, and still others are mobile apps. One good program with an intuitive interface is **Pixlr** (www.pixlr.com) which has **Pixlr Editor** and **Pixlr Express**; both are free.

Conclusion

Good photography takes time and thought, as my colleague David discovered when he bought an expensive camera. But like everything else, practice makes perfect. I hope these tips have been helpful, and shown you that many techniques are cheap, and frequently, free. Get started, keep these tips in mind, and soon you will be on your way to professional quality photos of your collection.

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How to Make Your own Light Box



A Light Box (or Light Tent or Light Cube) is a great solution for photographing small objects. It provides soft, even lighting and a uniform, seamless background. They are commercially available in varying sizes and prices, starting from around \$30. Or you can make your own with this simple project.

The above photograph shows one I made in about an hour, and cost \$4.50 (for the white card). All other supplies were around the home. The hardest part was finding a large cardboard box!

Lighting

Once your Light Box is complete, you can light it in several ways - see the lighting notes at the bottom of this article.

Backdrops

Your items will usually look best when isolated against a plain background. White is generally best, as it reveals the colours in the item without any colour shift or colour reflections. Other options are greys and

black, You can also experiment with textured backgrounds, and shiny, reflective backgrounds.

Taking Overhead photographs

Just flip the Light Box onto its back

Let's get started!



Step 1

You will need:

- strong cardboard box, appropriate for the size of the items you will photograph
- roll of kitchen greaseproof paper. or baking paper, or tissue paper
- PVA/white glue, or a roll of clear tape
- craft knife
- sheet of large white card
- ruler
- medium foldback clips x 2



Step 2

- Turn box on its side, and decide which of the four sides will become the bottom.
- Now open up box so it is flat, and cut top flaps off as pictured. (Or leave the top flaps on if your box is shallow and you want to extend the depth.)



Step 3

- Mark lines at least 2.5cm inside each edge of the box on the top and two sides.
- *(Tip: It should not be less than 2.5cm, or the box will not be strong enough.)*
- Cut the 3 windows out of the top and two sides, being careful not to cut through to the other side of the box.



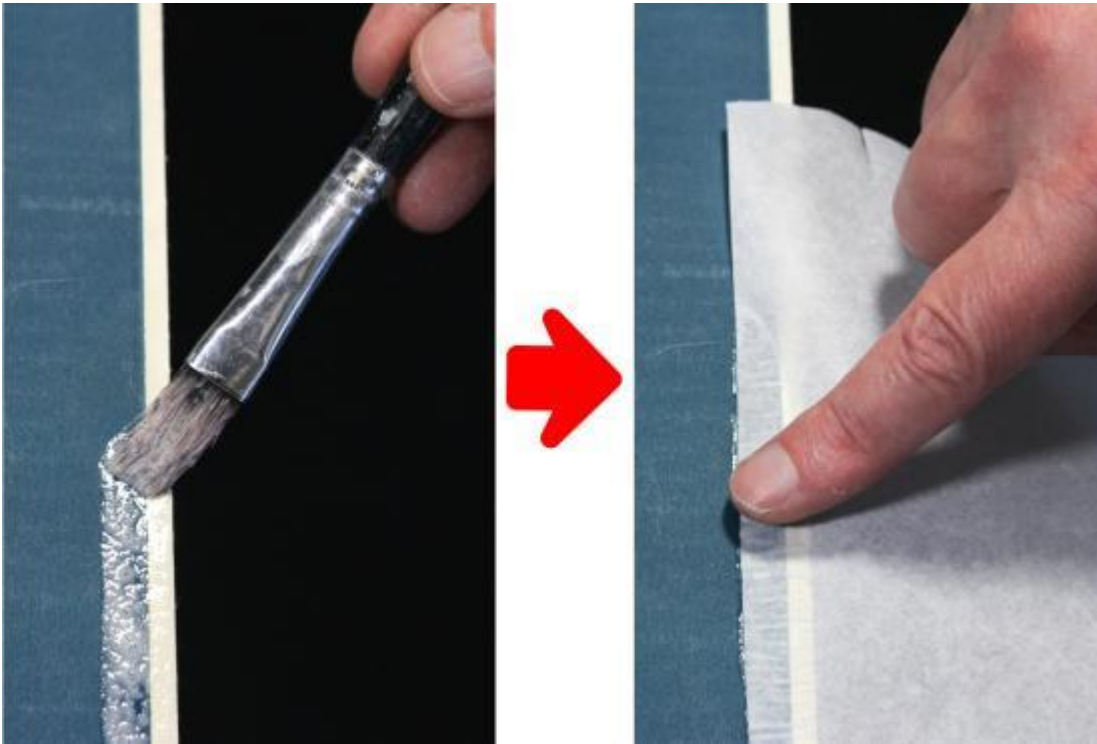
Step 4

- Fold the box back up.
- The original bottom of the box is now the back
- You now have a frame with windows on the sides and top.
- Temporarily tape the back



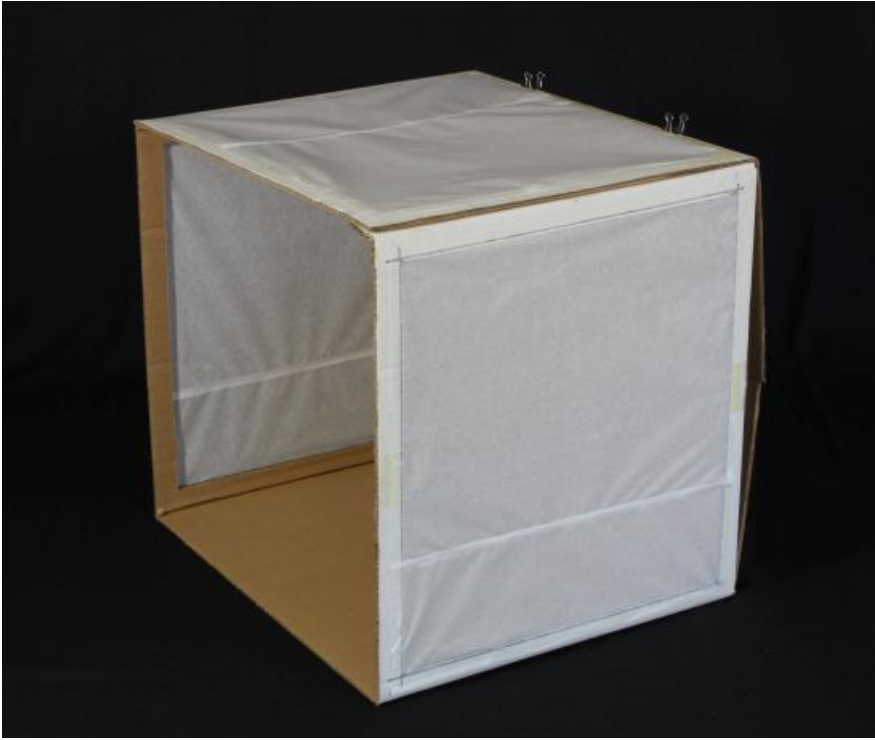
Step 5

- Cut two thin slots out of the top panel, along the back edge. Insert the foldback clips, so that one side clips the inside, and the other side clips the outside of the box.
- You will use these clips to hold your backdrop card in Step 7.



Step 6

- Open up the box so it is flat again
- Cut 3 pieces of greaseproof paper (or baking paper / tissue paper) to fit the cutout windows, plus another 1.5cm on each side for glueing. The easiest way to do this lay the three cutout panels on the paper, adding 1.5cm on each side.
- For this particular box, the greaseproof paper was not wide enough, so I had to glue two oversize pieces together with a 1cm overlap first, and wait 15 minutes for it to dry.
- Using slightly diluted PVA glue (so it is quite runny), paint a strip 1cm wide along one cut edge and glue the paper down.
- Repeat on the other three cut edges.
- *(Tip: So the paper is tight and without wrinkles, use two people, and glue it in stages. Once it sticks you cannot adjust it, it just tears.)*
- Repeat for the other two cutout panels
- As an alternative, you can use clear packing tape instead of glue if you prefer.



Step 7

- Re-assemble the box.
- If you look carefully, you can see the joins in the greaseproof paper
- Lightly tape the back of your Light Box
- Insert the two foldback clips into the two slots at the top back.



Step 8

- Cut your sheet of large white card to the final width of the box
- Clip the card at the top, and push it gently in until you have a smooth, even curve at the back. Avoid any folds.
- Finished!
- The main photo at the top shows it in use.



Step 9

- When you have finished a session, just remove the backdrop card, and cut the tape holding the back.
- Fold flat and store (eg, behind a book case)

Lighting Options for your lightbox

Once your Light Box is complete, you can light it in several ways.

1. Natural Light

Mother Nature provides great lighting, but the sun is fickle. The light quality and direction are continually changing, and it is not available in the evenings, or when it is windy or cold. But you can do it, as shown in these pictures.



Light Box set up outside



This photograph was taken outdoors in bright sunlight

(Note: I should have rotated the box slightly, as you can see a patch of direct sunlight at the bottom right!)

2. Artificial light

The best option is two lights, one on each side of the light box, as shown below:



A typical two light setup.
See also the main photo at the top of this page.



Photograph taken with this setup.

Selecting / Buying lights

Good lights are surprisingly inexpensive and easily available at camera stores and on online (eg eBay).

- But any two lights will work, as long as they are identical so the AWB (Auto White Balance) setting on your camera can correct the colour to neutral.
- Choose lights that are daylight balanced (cool white, or 5400K colour temperature).
- Continuous light fluorescent bulbs are better than flash, as you can easily see what is happening when you make adjustments.
- Avoid halogen lights. They get very hot, and can be a fire hazard next to cardboard and tissue paper!