

**Using Digital Images
for marketing success
Bob Kauders**

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Special Offer for Glass Artists

Bob Kauders
Using Digital Images for Marketing Success

Part 1: Pixels, Image Size, Resolution ~ what does it all mean?

Digital Photography for Glass Artists ~ an overview

Traditionally professional photographers would be hired to take photographs of glass art for publication in magazines using 5" x 4" or medium format film cameras in a photographic studio. Images produced were of very high resolutions and demonstrated a superb three-dimensional sculptural quality.

The advent of digital photography has revolutionised the way images are made, viewed and consumed. Photographs can now be taken with a digital camera, processed on a computer and published on the web, all within the space of a few minutes.

The immediate accessibility of the web has made it essential for practitioners and artists across all disciplines to publicise their work. The digital camera has now become an essential tool which many artists use to create these images.

However, there appears to be widespread confusion and misunderstanding with digital processes and many images of glass art sent to editors for publication are too small in size or of poor quality.

Image Size and Resolution

The most common misunderstanding in digital imaging is the relationship between image size and resolution.

Two Sets of Identical Twins, one large, one small!

Image files downloaded from the camera contain a lot of information. Cameras are set to a default resolution 300 pixels per inch, the standard for making prints or for publishing. Prints can be made with sizes up to A4 or larger. All this information creates large individual file sizes in the region of 6 ~ 12 Megabytes.

Images uploaded to web sites or sent over the Internet require much smaller file sizes, they must be re-set to a resolution of 72ppi (pixels per inch), which is the standard for most computer screens. These low resolution files, typically 100 ~ 800 Kb (Kilobytes) enable web pages to load up quickly but also display the image at a reasonable size, (10cm ~ 20cm). However, these files are totally unsuitable for prints or publishing.

Success in marketing and promoting glass artwork requires images that can be printed, published in magazines, uploaded to web and social networking sites and used for exhibition submissions.

The simple answer to this dilemma is to have two sets of image files, one original set at high resolution, (300ppi at maximum size) and a second set of identical images saved at low resolution, (72ppi at 20cm along the longest dimension), or to a specific size. This second set can only be created on the computer with software equipped with an Image Size button.

Ensure these images are prepared well in advance of any deadline or submission date!

Picture Size

The Pentax K5 DSLR (Digital Single Lens Reflex) contains a sensor with dimensions measuring 23.4 x 15. Millimetres, yes millimetres!



01 Pentax K5 sensor (actual size)

Image Size can be adjusted on the camera to a number of different sizes. Set the Image Size to the 'largest' when photographing glass art to utilise all available pixels (4,928 horizontal x 3,264 vertical, in the case of the Pentax K5. The effective number of pixels = 16.3 Megapixels (16,300,000).

The maximum printable picture size at a resolution of 300ppi (4928/300 x 3264/300) is 16.43" x 10.88," larger than A4. This would provide an editor with a top quality print that has high resolution and is large enough to be used on the front cover with some leeway for cropping. The image will have a large file size, anything from 5Mb to 12Mb.

The number of horizontal and vertical pixels camera manufacturers use in their sensors is dependent on current chip technology, the camera designer and marketing trends. Today in 2011 the 'fashion' is to cram as many pixels as possible onto a small sensor, reducing camera size and bulk. This does not however, always produce the best image quality. The quality and performance of the processing engine used by the camera is equally important.

There is a trade-off between individual pixel size or 'pitch' and number of pixels contained in the sensor. The bigger the pitch, the more sensitive the pixel is to light, requiring less amplification in processing. The downside is that because there is fewer pixels on the sensor the camera will produce a smaller maximum print size.

The problem of having too many pixels on a small chip will produce images that contain 'noise' because the camera will need to be used at high ISO settings (400ASA and above) to increase the sensitivity in poor light.

Bytes, Kilobytes, Megabytes and Pixels

One Byte is a single binary digit; either 0 or 1. Computers read 1 as *open* and 0 as *off*. One Byte is normally defined as having 8 Bits. In an 8bit system there are 256 possible combinations of 1 and 0.

To define one individual pixel colour (red, green or blue) requires $8 \times 3 = 24$ Bits or 3 Bytes.

1 Byte = 8 BIT

1 Kilobyte = 1024 Bytes

1Megabyte = 1048576 Bytes

1Gigabyte = 1073741824 Bytes

Sensor Types

Cameras are currently fitted with sensors in a variety of sizes; below are just four of the most common. Illustrations are **actual size** to demonstrate how small sensors are:



1. FX full frame ~ 36mm x 24mm

The same size as the negative from a 35mm film camera.

These sensors are the most expensive and are used in Professional digital cameras made by Canon, Nikon and Sony.



2. APS-C ~ 23.6mm x 15.7mm/22.2mm x 14.8mm

Nikon DX, Pentax, Sony, Canon



3. 4/3rds ~ 17.3mm x 13mm

Olympus, Panasonic



4. CCD ~ 7.6mm x 5.7mm to 5.76mm x 4.29mm

Compact cameras and camera phones

Further Information

<http://www.luminous-landscape.com/essays/sensor-design.shtml>

<http://www.cambridgeincolour.com/tutorials/camera-sensors.htm>

<http://www.trustedreviews.com/digital-cameras/review/2007/02/02/Digital-Photography-Tutorial-Camera-Sensors/p1>

Part Two ~ What Camera?

Buying a Camera

The best cameras for photographing glass art are DSLR's (Digital Single Lens Reflex). You must be able to see exactly what the lens is seeing, especially for close up work. Lenses can be interchanged. Look at cameras with relatively large sensors (APS-C) and relatively high pixel counts of 12 to 16 million.

Poor light is not usually a problem; purchase a sturdy tripod, it's almost as important as the camera itself!

The list below shows cameras that are recommended in the photographic press (Jessop's, What Camera and DP Review, February 2011) and include a standard zoom lens. Other lens combinations and kits are also available.

MAKE	MODEL	PIXELS	SENSOR	maxASA	BURST	RATING	PRICE
Canon	EOS5DII	21	FX	25600	3.9	92%	£ 2300
Nikon	D700	12	FX	25600	5	95%	£ 2500
Canon	EOS7D	18	APS-C	25600	8	94%	£ 1740
Pentax	K5	16.3	APS-C	12800	7	90%	£ 1150
Nikon	D7000	16.2	APS-C	25600	6	92%	£ 1100
Panasonic	Lumix DMCGH-2	16	4/3rds	25600	5	?	£ 920
Pentax	K7	14.6	APS-C	6400	5.2	88%	£ 800
Canon	EOS600D	18	APS-C	6400	5	91%	£ 750
Nikon	D90	12	APS-C	12800	4.5	91%	£ 680
Canon	EOS550D	18	APS-C	12800	3.7	91%	£ 600
Sony	Alpha55	16	APS-C	12800	6	91%	£ 600
Sony	NEX-5	14	APS-HD	6400	7	90%	£ 500
Canon	G12	10	CCD	3200	2	92%	£ 400
Nikon	D3100	14.2	APS-C	3200	3	89%	£ 400
Pentax	Kx	12.4	APS-C	12800	4.7	87%	£ 400
Sony	Alpha290	14.2	APS-C	3200	2.5	?	

Further Information

Click: http://www.dpreview.com/learn/?/Guides/dslr_buying_guide_01.htm for detailed advice on purchasing a DSLR.

Click: <http://www.dpreview.com> for the latest camera reviews.

Click: <http://www.jessops.com> for further details, prices and special offers.

Click: <http://www.fixationuk.com/Fixation/Fixation%20-%20Home/Fixation%20-%20Home.html> for Nikon FX and Canon Professional sales and repairs.

Camera Specifications ~ a Quick Overview

Pixels

All the cameras listed above have high pixel counts, 12 million to 21million and will produce an excellent quality print size (A4+).

Sensor

The cameras listed contain three different sensor types: FX (35mm full frame), APS-C and 4/3rds. FX sensors are expensive and require heavy bulky camera bodies. The majority of entry and mid level DSLR's are equipped with APS-C sensors, which allows the camera body to be smaller and lighter. 4/3rds sensors allow for further miniaturisation (no mirror box and pentaprism) and are referred to as "Bridge" or "Hybrid" cameras, half way between a compact and a DSLR. Worth considering if other cameras are too big and weighty.

ASA/ISO

The list shows the maximum ISO speed that can be set on the camera. ASA refers to the sensitivity of the pixels to collect light. Sensitivity can be amplified by increasing the ASA. Glass art should be photographed at the lowest ASA setting, typically 100 ASA. However, in a situation where a tripod cannot be used or the artwork has a light source that needs to be balanced with ambient light, the facility to increase the ASA would be useful. Bear in mind that with some cameras, the image quality will deteriorate with settings of 400 ASA and above.

Shooting Modes

Set the camera to Manual. Use a combination of shutter speed and aperture to get the picture you want. A large aperture, (the size of the diaphragm in the lens), will produce a shallow depth of field, which results in sharp detail at point of focus but with gradual blurring in the foreground and background. Smaller apertures will decrease this effect. Stopping the aperture down to the smallest setting (f22) will result in the largest depth of field, the picture will appear sharp from the foreground through to the background. Bear in mind, however that lenses perform at their best when set to apertures of between f8 and f11. Aperture Priority is a good auto mode to select if you are unsure about manual settings.

Burst (fps)

Frames per second refers to the number of individual frames the camera can shoot every second. This feature is not required for photographing glass art, unless you also have ambitions of becoming a paparazzi!

Image Stabilisation

Many cameras/lenses available on the market today have some form of image stabilisation, recognised by the acronyms:

- IS Image Stabilisation
- VR Vibration Reduction

Image stabilisation is a very useful feature if you take a lot of hand held photographs, particularly in low light. IS systems can provide up to three stops leeway ~ an exposure setting of 1/30th second will be 'stabilised' to the equivalent of 1/250th second eliminating camera shake or allowing sports photographers to improve picture quality by using faster shutter speeds at lower ISO settings.

Inanimate objects such as glass art do not benefit from IS systems because they should always be photographed using a tripod. When cameras and/or lenses with image Stabilisation are mounted on a tripod the IS/VR should be switched off.

Dust Removal

A common problem with DSLR cameras is dust getting onto the sensor when lenses are changed. The dust particles show up on plain areas of the image (in the sky or on walls) as unsightly blobs, which must be removed in Photoshop. Some cameras have a facility to clean the sensor, not a job you should do yourself! Dust on the sensor is not so much of a problem with fixed lens compact cameras.

Media Cards

The DSLR cameras listed in the recommendations section use CF (Compact Flash), or SD (Secure Digital) and SDHC (Secure Digital High Capacity) cards. If you decide to shoot in Camera Raw an SDHC card would be useful because the raw file sizes are very large. Cards of 4Gb ~ 8 Gigabytes are recommended. The other factor that will influence the cost is the write speed of the card (the time the card takes to 'write' the image), not of importance in photographing glass art.

It's a good idea to have a spare card, in case one develops a fault or becomes full. A spare battery is another useful accessory.

Other Options to Consider

Can you manage the camera's buttons and switches; are they too small and fiddly to operate?

How does the camera fit in your hand? Is it too small or too big?

Is the menu system clear and logical, can you find various settings quickly?

Is the monitor detailed and a good size. Can you see the image clearly, especially in bright light?

Does the camera have an additional viewfinder? Is it bright and clear? Can you see important information about aperture, exposure time and focus settings?

Does the monitor/screen flip out to enable you to shoot from very low or high angles? This can be quite useful.

Does the camera feature a Movie Mode? This could be a useful feature if you wish to add video content to a web site or to post a video on YouTube.

Is the focussing positive; is the point of focus clearly visible?

Can the lens be set on manual focus?

Can the mirror be locked up to avoid mirror shake at long exposures?

Are you able to operate the camera if you wear glasses?

Lenses

Confusion and misunderstanding still surrounds the choice of lens. Traditional 35mm film camera lenses, now labelled by Nikon as “FX” were made for the full frame 36mm x 24mm format. When these lenses are fitted on cameras with the same mount but contain the smaller APS-C sensors, the image is magnified.

When an “FX” lens is fitted to the Nikon D3100 equipped with an APS-C sensor the effective focal length is increased by a factor of 1.5x. This is because the sensor is smaller than the area covered by 35mm film.

A Nikon “FX” standard zoom lens with a range of 28mm ~ 70mm will be altered to 42mm ~ 105mm when used on an APS-C camera.

Most cameras now have lenses specifically designed to suit the size of the sensor. The Nikon designated “DX” standard zoom lens designed for Nikon APS-C cameras has a focal length of 14mm ~ 35mm (28 ~ 70mm).

Manufacturers and camera salespeople still like to quote focal lengths for APS-C cameras in 35mm equivalents, which just adds to the confusion.

Buy a protection filter and fit it to the lens immediately!

Focal Length

A good range of lens focal lengths for photographing glass art is 28mm to 200mm (in 35mm terminology!), or 18mm ~ 135mm in APS-C format. Single lenses of this range are available, but inevitably will have design compromises in order to cover such a wide range of focal lengths.

Consider purchasing a camera ‘bundled’ with two lenses, one covering 28mm ~ 70mm (APS-C 18mm ~ 46mm) and a second covering 70mm ~ 200mm (APS-C 46mm ~ 135mm).

A prime (non zoom) macro lens would be useful if your work is very small or you need to get close up pictures of the surface textures and details of the glass or if you want maximum quality.

Speed

Speed refers to the ability of a lens to capture light, the “faster” the lens the more sensitive it is in low light conditions. These lenses are discernable by the large glass elements in front, by the wide maximum aperture that can be selected, typically f2.8 and by their high price. Fast lenses are not necessary for photographing glass art.

File Formats

JPEG (Joint Photographic Experts Group)

JPEG, although not the best quality format, has become widely accepted as the industry standard due to ease of use between Microsoft Windows and Apple Mac.

JPEG is a file compression scheme. File sizes are compressed in order to store more images on the camera card. Image data is 'thrown away' according to how much compression is applied. Small amounts of data loss occur each time image is saved.

Magazine publishers will accept JPEG files, provided they are "high resolution".

Low-resolution JPEG files are used as the standard format for the Internet and web.

Camera Raw

Camera Raw saves unprocessed image data direct from the camera sensor without any 'in camera' processing or compression. Subsequent processing on a computer using dedicated software is recorded in a separate file, which never corrupts the camera raw file, sometimes referred to as the 'digital negative'. Camera Raw files can be subsequently copied and saved as TIFF or JPEG.

Camera Raw or JPEG?

Camera Raw will always produce better quality images than JPEG but it takes more time, requires special software and some background knowledge. Camera Raw files can easily be converted to JPEG.

Part 3 ~ Size Matters!

Downsizing

Always set image size on the camera to "Largest" or "Highest" or "Premium"

The picture of the Cliffs Pavilion in Southend was taken on a Panasonic 4/3rds digital camera, with a sensor size 17.3mm x 13mm and pixel dimensions of 4000 x 3000 = 12 million pixels. The camera was set to size = large, producing a file size (5.4 Mb), a print size of 13.34" x 10," at 300ppi. **Far too big for the web.**

This is easily resolved!

Cliffs Pavilion, Southend-on-Sea

A client wanted the picture on a web site homepage. The display width of the picture was 10 centimetres. The resolution (for a web site), needed to be altered to 72ppi.

A copy was made of the original high-resolution file and loaded in Photoshop.

Using Digital Images for Marketing Success

Go to **IMAGE**; select **IMAGE SIZE** from the drop down menu.

The following boxes should be ticked:

- **SCALE STYLES**
- **CONSTRAIN PROPORTIONS**
- **RESAMPLE IMAGE**

Change the **RESAMPLE IMAGE** to **BICUBIC SHARPER** (best for reduction), using the drop down menu.

The **DOCUMENT SIZE** shows the width to be **13.3"** height **10"** (33.8 x 25.4cm).

The pixel dimensions are **4000 pixels x 3000 pixels**.

Change the width to **4"** height will automatically adjust in proportion, **3"** (10 x 7.5cm).

Adjust RESOLUTION from 300ppi to **72ppi**.

The **PIXEL DIMENSIONS** automatically adjust from 4000 x 3000 to 283 x 213.

Click the **OKAY** button and **SAVE** the image. File size is 223 Kb.



Rename the image so it can be linked to the original but also recognised as a low-resolution version.

Make Copies!

Golden rule 1: make copies of the original full size files and save them on a separate hard drive.

Golden rule 2: Use the copied set of full sized files to make a further set of low-resolution files.

Golden rule 3: make a copy of the low resolution set and save these on a separate hard drive.

Golden rule 4: Back up Your Images!

Digital cameras are sold bundled with software that will enable you to download your pictures to the computer, process in Camera Raw or JPEG and adjust picture size and resolution. You can also use other software such as *Photoshop Elements 9* (£ 80), which is a simplified version of Photoshop. The re-sizing can be performed automatically as a 'batch' action.

File Size

Another area full of pitfalls and banana skins!

Every picture taken on a digital camera will have a different file size depending on a number of factors including:

- The amount of fine detail present in each scene
- The amount of 'soft' detail, sky or plain walls
- The lighting and contrast
- Camera settings
- JPEG compression
- Software processing
- Sharpening

In an afternoon session photographing several pieces of glass, taking around 200 pictures, processing them in Photoshop and saving the images at maximum size (minimal) JPEG compression, the variation in file size could range from 5 Mb to 15 Mb!

Submitting images for exhibition panels or for an editor to view on an email, size your images to 72ppi and set the longest dimension to 20cm.

Remember, this is only applicable for images that will be used on the **Internet or World Wide Web.**

An Editor's Tale

Editors, Gallery Directors and exhibition selection panels too often receive thumbnails or very low-resolution files from artists who have been asked to supply images for **printing**.

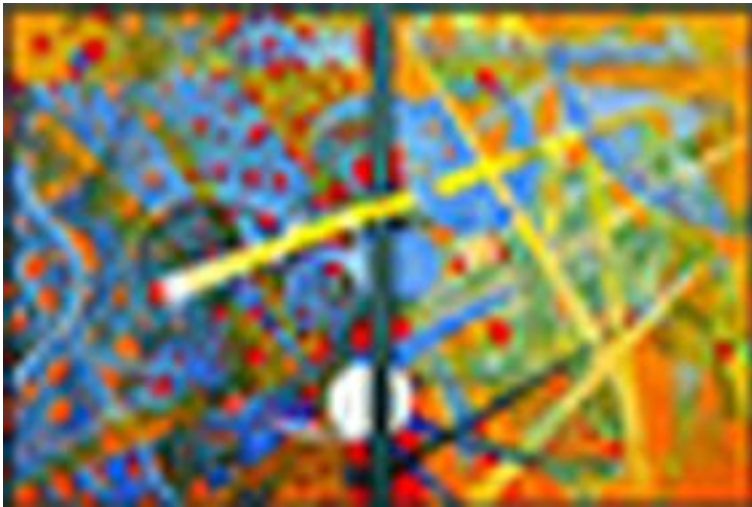
An editor wanted to publish an image of a painting "Curves" in a magazine to a width of 10cm.

The editor was sent a "thumbnail" by the artist and nothing else, (pictures actual size):



03 "Curves"

The thumbnail was re-sized to 10cm width, but the quality is unacceptable:



04 "Curves" H Kauders (10cm thumb) 283 x 175 ppi

The editor asked the artist to make a new copy from the original camera file, (luckily there was one available), to keep the resolution to 300ppi but adjust the width to 10cm.



05 "Curves" (10cm) H Kauders 1181 x 730 ppi

Part 4: Photographing Glass Art

Photographing Glass Art - Getting Started

Many artists think that in this digital age a “point and shoot” digital camera is all you need but the same rules of traditional photography apply; focus, exposure, depth of field, lighting are all critical factors.

Pictures that are of poor quality in any of these areas will not be published by editors.

The following simple tips are guaranteed to improve quality and to make images more acceptable to magazine editors.

Invest in a quality camera

Select a camera that has a large sensor (APS-C, 4/3rds or larger) and a pixel count of between 12 and 18 million (see part 1).

Image Size

Set the camera to “Highest” or “Largest”

Image Quality

Set the camera to “fine” or “finest”

ISO Speed

Set the camera to the lowest ASA speed, usually 100 ASA. Do not set the camera to “auto ISO.”

Sharpening

Switch off in camera sharpening. Sharpen at the end of processing on the computer.

Tripod

Tripods dramatically improve image quality, especially when using low ISO settings. The camera remains steady and secure, preventing camera shake and blurred images. A black tripod is recommended to reduce reflections in the glass.

Smaller apertures can be set (f5.6 to f11), giving more control over depth of field.

The photographer has more time and freedom to carefully consider focus, composition and framing.

Exposure

The reflective and transmissive qualities of glass can cause problems to camera exposure meters, resulting in under or overexposure.

Set the camera to manual exposure and take a reading off an 18% grey card placed in the object position facing camera lens. Only the grey card should be visible in the camera viewfinder when taking the reading.

Bracket exposures by third stop intervals to plus 1 stop and minus 1 stop, i.e. if the metered exposure reading off the grey card is 1/15th second @ f11 take the following bracketed exposures:

1/15th @ f8
1/15th @ f9
1/15th @ f10
1/15th @ f11 * metered reading
1/15th @ f12
1/15th @ f14
1/15th @ f16

Check the Histogram setting on the camera and select the exposure(s) that fall within the shadow and highlight limits, without 'clipping.' You can also switch on the highlight warning on the camera to see if any areas are likely to be 'burned out'.

Digital cameras benefit from having a high picture capacity; cards of 32 Gigabytes are currently available enabling deletion at time of shooting or better still, on the computer.

White Balance

Where possible take a pre-set white balance reading (you may have to delve into the camera's instruction manual), rather than relying on the camera's auto white balance setting, which can vary from one frame to the next even if the lighting remains the same.

Lighting - Essentials

Always photograph glass art in the environment for which it was intended to be viewed.

Glass designed for interiors should not be photographed outside.

Photograph the work in context: how does it stand, sit or lie?

This should be visually indicated with a visible background, floor, wall or plinth.

Ideally, glass art should be photographed in a controlled studio setting, however perfectly adequate pictures can be obtained with natural light both indoors and outside. Make the following observations:

- How does the glass change in appearance according the time of day, and the weather conditions?
- Is overcast or direct sunlight preferable?
- Is the light source producing unwanted hot spots, reflections or areas that may "burn out"?

- Is there a large window nearby that could be used as a light source?
- Do you need reflectors to “fill in” the shadows or to emphasise shape and modelling through reflection?
- Emphasise the transmissive and reflective qualities of the glass.
- Keep lighting simple.

Follow Nature

Start by observing way that nature works; basically one light (the sun) with a “fill in” (the clouds). Observe how light changes during the time of day, dramatic but differing contrasts at the beginning and end of the day. Flatter more even lighting at midday.

Think of your first light as the sun, the main light source. Position the light in the place that works best for bringing out the shape, form and texture of the glass. Remember this is your main light, all additional lights or light modifiers should compliment or enhance the effect of your main light. If the shadows are too strong use a reflector as a fill in, just as the clouds soften sunlight. A common technique in Glass photography is to reproduce the effect of overcast light, (also popular with wedding photographers!) Outside, this can be achieved by working in the shade, using a light modifier or waiting for a bright but overcast day and using silver or white reflectors to fill in shadows, Flash can also be used as a fill in light but it should be used off camera with a special lead or better still, triggered wirelessly away from the camera.

In the “studio” (gallery space or a workshop) special ‘soft boxes’ or ‘fish fryers’ are used to reproduce this ‘overcast’ effect. They are available in a range of sizes from small 2ft x 3ft to single boxes big enough to light a new car, (click the link to “Calumet” and search for “Light Modifiers” in the additional Information section below). These baffled flash lighting kits, sometimes suspended on a boom arm, can position the light overhead, acting as the midday sun on an overcast day. As a guide, the light box should be larger than the longest dimension of your glass art.

In the studio a curved Perspex tabletop background is ideal but expensive. Lighting can be placed behind the Perspex and/or overhead to emphasise form and texture. If you are DIY minded or know someone who is, purchase the Perspex and construct your own set up.

Take care with reflections, especially hotspots and lights. Use reflectors, baffles, and screens to control lighting. Sometimes the camera, tripod, lights and other objects in the background behind the camera are reflected in the glass. This can be prevented by cutting a hole in a large piece of black felt or card (the bigger the better) and hanging this in front of the camera with just the lens poking through the hole.

Another technique, especially good with jewellery and small pieces of reflective glass is to purchase or construct a ‘light tent.’ A simple tent can be made out of greaseproof or tracing paper made into a cone shape with the narrow end fitted over the camera lens and the wide end covering a diameter larger than the piece being photographed. The camera is positioned vertically above the object, which can be supported on a hidden plinth.

All this sounds expensive, which it is, but a good investment in camera and lighting can reap real dividends when it comes to marketing your work.

The three images below, supplied by David Reekie were taken on a graduated background with a three light set up and some fill-in reflectors.



Background colours should harmonise with the work. Dark shaded/graduated greys are often better than black.

Flash or tungsten lighting kits are available.

Selection of shots

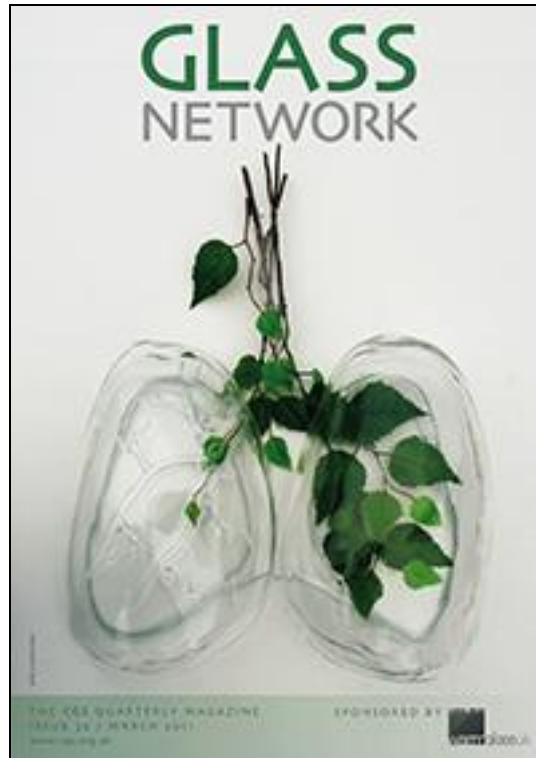
Take several photographs at different angles and edit these later.

Experiment using different lens focal lengths.

Try using a long telephoto lens and a wide aperture to blur the background.

If the object is large a wide-angle lens will place more emphasis on the object with a dramatic receding background.

Ensure the photographs include plenty of background space around the artwork to allow for cropping or a “cover shot”. Take a couple of shots with much more background space than you think you need. Where images are going to be used as a cover shot, editors need space around the image to add the magazine title and text relating to the content of the magazine.



Final check!

- Take one or two close up photographs showing fine detail or textures.
- Remove background clutter and distractions, especially when photographing in a specific location.
- Take a selection of landscape and **portrait** orientated images, remember magazine covers are in portrait format.

Make copies!

Once the images have been downloaded on the computer from the camera card, make a copy of the folder; keep one folder as the “original.”

Process and edit the images only from a new duplicated or copied folder.

Further copies can be made from the “original” folder if mistakes are made in processing, or if images are lost or spoilt.

Create another folder that will contain the low-res images, which will be re-sized.

Keep the numbering of the images in both folders the same. Clearly mark which folders contain the high and low resolution Image. Processing software has the facility to automatically rename/re-number and re-size image sequences.

- Write down notes on the settings used when processing images.
- Restrain image processing to a minimum, avoid over tampering.

- Sharpen image at the final stage of processing.

Further Information

Click the links to view commercially available Perspex tabletops:

http://www.speedgraphic.co.uk/lighting_studio/table_top_studio/178_0c.html

<http://www.calumetphoto.co.uk/eng/browse/categories/studio-lighting/tables-stools-accessories/shooting-tables>

Click the links to view a selection of reasonably priced graduated backgrounds:

<http://www.photography-backgrounds.co.uk/vmchk/Varitone-Graduated-Backgrounds.html>

<http://www.tabletopstudio.co.uk/Pages/Graduated%20Colour%20Backgrounds.htm>

Click the link below to view a selection of reasonably priced photographic light tents:

http://www.stevesphotoshop.co.uk/photo_light_tents_cubes.html

Part 5 ~ Marketing Success ~ How to Get Your Images to Work for You!

Marketing and Publicity

An organised and methodical approach to marketing is essential.

- Contact the magazine editor directly, find out what they require.
- Research.
- Organise submissions well in advance.
- Magazines often work to long lead-in times of up to 4 months before publishing.
- Keep presentations small and simple.
- Don't inundate editors with 20-30 shots.

Send a few (3-6 max) representative, visually eye catching, low-resolution images of between 500Kb ~ 1 MB each on CD.

Attach an image contact sheet and an "index sheet". This has an immediate impact.

Tell the editor that you have larger "high resolution" file sizes of the images you have sent, specify what file sizes these are. Editors need to know they can access this large file to make page layout decisions, cropping, enlarging or using detail.

Editors receive a postbag of submissions on disc every day. Work that is not methodical and clearly labelled will be rejected or lost. An editor said to me: "examples of poor presentation are discarded".

Consider having a few pieces of key work professionally photographed, perhaps in collaboration with other glass artists, on medium format or 5" x 4", then getting these images professionally scanned at high and low resolutions. Low-res images can be sent on CD or e-mailed. High res image can be sent by mail on CD or by courier when required and in some cases via the Internet with a high-speed broadband connection.

Make full use of 'Web 2' (social networking) to get your work seen by as many people as possible.

Labelling and Indexing

All images must be clearly labelled and indexed. Low-res files should have same ref number as the equivalent high res files. The CD should be clearly identified with indelible ink. The CD jewel case should also be clearly identified. Editors still receive CD's with no identification; these CD's usually go straight into the bin!

Each image must be captioned, the following is a guideline provided by the editor of a glass magazine:

- Image ref number
- Artist's name
- Name of work
- Year it was made

- (blown glass, cast glass, steel, enamel etc)
- Dimensions (height, width, depth)
- Price (if applicable)
- Photo credit
- Indicate whether full shot or detail

Enclose a contact sheet with CD including the index sheet as a Word document and/or hard copy. Make life as easy as possible for the editor. Remember editors receive hundreds of CD's on their desks every day!

Double check that your CD can be opened on MAC and PC systems, any imaging lab will check this for you. Confirm that you have enclosed the right disc!

Include a good portrait of yourself, or have one ready that you can send if requested:

- Head and shoulders
- Working in the studio

High resolution and low-resolution files!

Exhibition Submissions and Applications

Follow application instructions carefully. Make sure you supply exactly what is asked for. Label each image properly:

- Artist name
- Title of Glass Art
- Date
- Image number
- Resolution HR (high resolution) or LR (low resolution)

If sending work on a CD make sure it is clearly labelled on the CD and jewel case.

Remember that a selection panel may have over 500 images to consider, if your name is not clearly visible, it could easily be disregarded.

Send 3 or 4 pictures, do not inundate. Choose images that best represent your work.

Images should be at least 20cm in width with a resolution of 72ppi so they can be clearly viewed on laptops or digital projectors. Check the file size, it should be about 400 Kb ~ 800 Kb.

Send 1 picture (the best one) as a high-resolution image. The organisers may use this for publicity.

If high-resolution images are required (for printing), make sure the images have a resolution of 300ppi and are sized along the longest dimension to A4 (29.5cm). Check the file size, it should be between 5 Mb ~ 10 Mb or greater.

Common mistakes

Several glass art magazine editors provided feedback for this article. Common problems encountered were:

- Images labelled only with the original camera code number!
- No indication of author or title of work!
- No supporting information sheet!
- CD not labelled!
- CD case not labelled!
- Only a small close up detail image of a piece of work has been supplied!
- No images showing the full artwork and its spatial context!
- Artwork has been photographed but framed too tightly, no space around edges!
- All photographs have been taken in landscape format!
- Images have been supplied at 72ppi but at a ridiculously small size, only 1cm or 2cm in width! When the selection panel view these on a laptop or projector the image will look like cold porridge!

Artists often make the assumption that editors will know specific details about the glass art without any supporting information or prior knowledge. Be specific and detailed in describing the artwork:

- What the artwork is.
- What is it made of?
- How does it stand?
- Is it a light feature?
- Does it have a power supply?

Getting work published

With so much competition it is not easy to get work published, having a good set of high quality images, properly indexed will help. Editors will usually consider three possibilities for getting work published in the glass art press:

1. News feature:

Prize winning work, major commission, museum purchase.

2. Review:

Gallery or museum exhibition.

3. Single Artist feature:

Very rare for up and coming new artists.

Bob Kauders would like to thank the following people for helping with and contributing to this article: Pam Reekie, Administrator, Contemporary Glass Society. David Reekie,

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Further Information

The following web sites may be useful for further tips on photographing glass art:

http://www.tabletopstudio.com/documents/glass_photography.htm

<http://www.sandcarver.org/photoglass1.htm>

<http://www.brighthub.com/multimedia/photography/articles/74872.aspx>

<http://www.glasscommunity.com/articles/articles/general/307-how-to-photograph-glass>

<http://www.glassblower.info/photographing-glass.html>

Special Offer to Glass Artists!

To coincide with this article Bob Kauders is offering a one-day, one to one workshop using your own equipment and lighting (available light, flash or tungsten) at a very special rate.

Please telephone 07976663134

email bobkauders@talktalk.net for further information.

Website:<http://bobkauders-photography.co.uk>

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