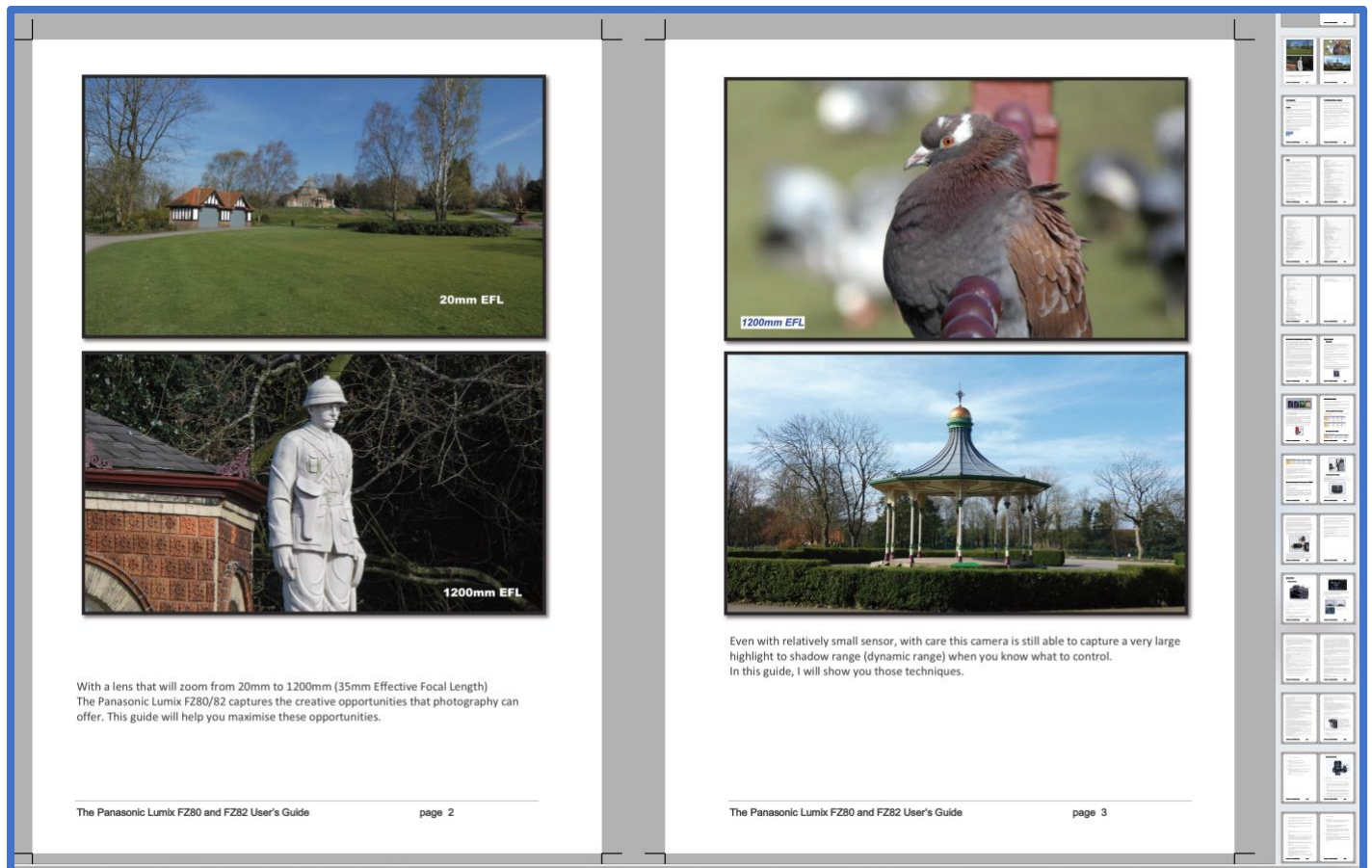


Winner of the Panasonic Lumix FZ1000 User's Guide

Thanks to Lindsay, at my local Subway restaurant, who I asked to pick the random number for the entries for the FZ1000 User's Guide.

The winner was Adri van Vliet from Belgium. The book is on its way to him.

The Panasonic Lumix FZ80/82 User's Guide



I'm pleased to announce that I have now completed the new guide for this camera. I shelved most of my current projects to spend full time on this one.

The book has slightly more pages than previous editions of my guides so again I have elected to publish the Black and White version alongside the Colour version on Amazon Websites to allow purchasers to get the hardcopy at a more realistic price and have the benefit of the colour PDF for reference.

Both books should be available early after you receive this newsletter when the publishers deliver my proof editions.

As with the FZ1000 all purchasers of the guide will be sent the colour version of the PDF file if they forward the Amazon order number.

The PDF will also be available for sale in the Store page of my photoblog for just £9.50.

<https://www.grahamhoughton.com/my-store/>

Tripod Mounting Plate Update

The materials for me to produce these plates have now arrived and next week I will start to produce the first batch. The demand is far greater than I had anticipated so I will have to release them in batches as I can spend the time on them.

They will appear in the store page for sale probably from 20th April.

If the weather turns cold again I may have to delay them as it is not good for spray painting at low temperatures – especially on aluminium which is tricky to get a good adhesion anyway.

Keep an eye on the store page <https://www.grahamhoughton.com/my-store/>

If you are interested in the purchase of one of these adaptor plates.

Panasonic Lumix FZ1000 II

I took delivery of the new camera and managed to get out to do some first evaluation shots comparing it to the existing FZ1000.

There, of course can be sample variations between the two cameras but I think that these should be fairly minimal.

To my eyes the image quality difference was too close to call so essentially no change in the images that you will get from the new camera.

Where the new camera really scores highly over the existing camera is in the new features that have been added such as the touch screen LCD.

This really does help to speed up menu item selection, selectin the point of focus and performing “pull focus” in video clip shooting.

The optics of the EVF have been upgraded to give a slightly larger view of the OLED display.

Also there is now the full implementation of 4K photo modes including Post Focus and focus stacking in-camera. 30P video has now been added to the 4K video options.

To enable landscape and close up macro photography shooters the minimum aperture has been now increased to F11 from F8. With diffraction compensation turned on there is little evidence of image quality loss as seen in this image of an old Mill Chimney at Barrow Bridge, Bolton.



I did a quick review of my impressions of the new camera [here on YouTube](#).

Now the FZ80/82 User's guide is complete I will be able to spend more time getting to appreciate some of the improvements and changes to the camera operation and if they are significant I will do an additional guide for the camera.

A new M4/3 Camera from Panasonic the G90

Panasonic have announced a new additional camera in the micro four thirds line up – the G90.



The new camera will be available for sale in the UK from early June.

Headline features for the camera:

20.3MP MOS sensor with no LPF – for amazing stills picture quality like G9

Unlimited video recording in 4K 30P and FHD 1080p

V-log L preinstalled – for those wanting to work seriously with video (this is the most affordable camera to have V-log L)

Live view composite – take long exposure composites e.g. for astrophotography without over-exposing ambient light areas, and monitor results in real time. Key use is for creating star trail images against a dark night sky even if there are city lights in the background

5-axis Dual I.S. 2 (5 stops) – for sharp pictures and steady video when shooting handheld

2,360k OLED LVF, 0.74x magnification

High speed video up to 120fps (up to 4x slow motion)

4K photo functions – Auto marking & sequence composition

Mic & headphone socket for video audio

USB power charging for using on the go

Free-angle OLED 3" touchscreen

WB/ISO/Exp comp dedicated buttons

L. Monochrome D & Grain effect mode

Built in flash

Dust & splash resistant (when paired with compatible weather sealed lens)

Wi-Fi & Bluetooth

For video shooters the inclusion of the V-log L is a great offering as normally these are paid for updates however it is still only implemented in 8 bit so doesn't offer such a huge advantage that V-log can bring with 10 bit implementation.

The headphone jack is also a welcome addition for monitoring the audio being recorded.

The price, at launch with the 14-140 mm lens will be £1,259.00 or for body only £899.

I'll be taking a look at this camera once it arrives at a local store as I need to see if this camera has the "hair trigger" shutter button like on the G9 where I constantly get multiple exposures or video footage of my feet as the shutter is released so very easily.

The main take away for this is the fact that Panasonic have now upgraded all the camera lines to use the 20M sensor from the previous 16M one. The LCD is now OLED as well as the EVF which doesn't have the field sequential colour issues that have been an issue with camera like the GX9.

4K is still only a 1:1 central crop from the sensor (which requires less camera processing power, doesn't cause overheating and has reduced rolling shutter effect).

If the shutter button is as was with the other G series cameras prior to the G9 it could be that this will likely replace the G9 considering it has more features added in as well!

50K Subscribers reached on my YouTube Channel

I was highly delighted to see the 50K mark for subscribers to my YouTube channel was reached a couple of weeks ago. I want to thank everyone who has followed my channel in the 12 years that I have been active on there. If you haven't subscribed yet, please do so as it does help to get more exposure as the subscriber count and viewing minutes' drive the YouTube algorithms for channel promotion.

<https://www.youtube.com/user/ghough12/videos>

Wide Angle versus Telephoto background rendering with the FZ80/82

We are often faced with a situation where we need to get close to as subject in order to fill the frame. This would normally require that we move close to the subject and use the wider angle setting of the lens.





As we move closer with a wide angle setting the background is captured only slightly out of focus and can be quite distracting.

So with the second shot to reduce the cluttered background I used the full optical zoom of the camera and moved back to several feet.

You may note in the camera data that the it reports the EXIF data that Panasonic write to the file.

Panasonic always use the diagonal of the aspect ratio being shot which isn't the same as the true crop factor of the whole sensor. So shooting at the 16:9 aspect ratio the lens is still set to optical 1200mm EFL but the camera reports 1320mm.

Take the same image at the same position at 4:3 aspect ratio and the subject remains the same size in the image but the camera now reports the correct 1200mm EFL.

To me this is just Panasonic trying to trick people into believing the camera is more capable than it really is and when I asked them for explanation (some years ago now) they just couldn't accept my logic when presenting the same view at different aspect ratios giving the same subject image size within the frame.

Lithium Ion Battery Follow up



I had an email from Anna Kučirková from IQSDIRECTORY:

I wanted to get in touch with you. I've recently written an article Lithium-Ion Batteries: Where They Came From And Where They're Headed.

It provides some good information on this fascinating technology: You can read it here:

<https://www.iqsdirectory.com/resources/lithium-ion-batteries-where-they-came-from-and-where-theyre-headed/>

Spring in Winter?



Bluebells in early April – normally mid-May when I see these in the woods

With our recent spell of warmer weather during the winter months the bluebells, in one of the woods nearby, have started to show. I find these great subjects to photograph as some cameras struggle to render the blues correctly if the sensor is susceptible to infra-red light. This image captured with the Panasonic FZ2000/2500.

Green.L 10 Stop ND Filter Review



I have been using the Green.L 10 stop ND filter as an experiment to see if the cheaper option filter matches the quality of the more expensive version, like the Hoya Pro ND filter.

I was pleasantly surprised just how neutral this filter turned out to be and shows no visible signs of adding any distortions to the image.

The first image is without the filter.



The second image is taken with the Green.L filter attached to the front of the FZ80/82, with a 58mm to 62mm step up ring, and used in the artistic nightscape mode to enable the longer than 4 seconds exposure time.



The filter mount is very slim and well machined and attached to the lens without any issues. It is made from aluminium and a nice satin black anodised finish

The filter comes with a basic, but adequate, case for protection and available in all the popular sizes.

At only £13.99 in the UK it was really worth the money
Amazon UK affiliate link <https://amzn.to/2KCcvlM>
Amazon USA <https://amzn.to/2D4kXEb>

Manchester Photo Walk May 2019

On Thursday 16th May 2019 I will be doing a photowalk around the very picturesque Castlefield Canal Basin in Manchester, UK.

I propose to start the walk at 11.30am and it should conclude around 2.30pm.

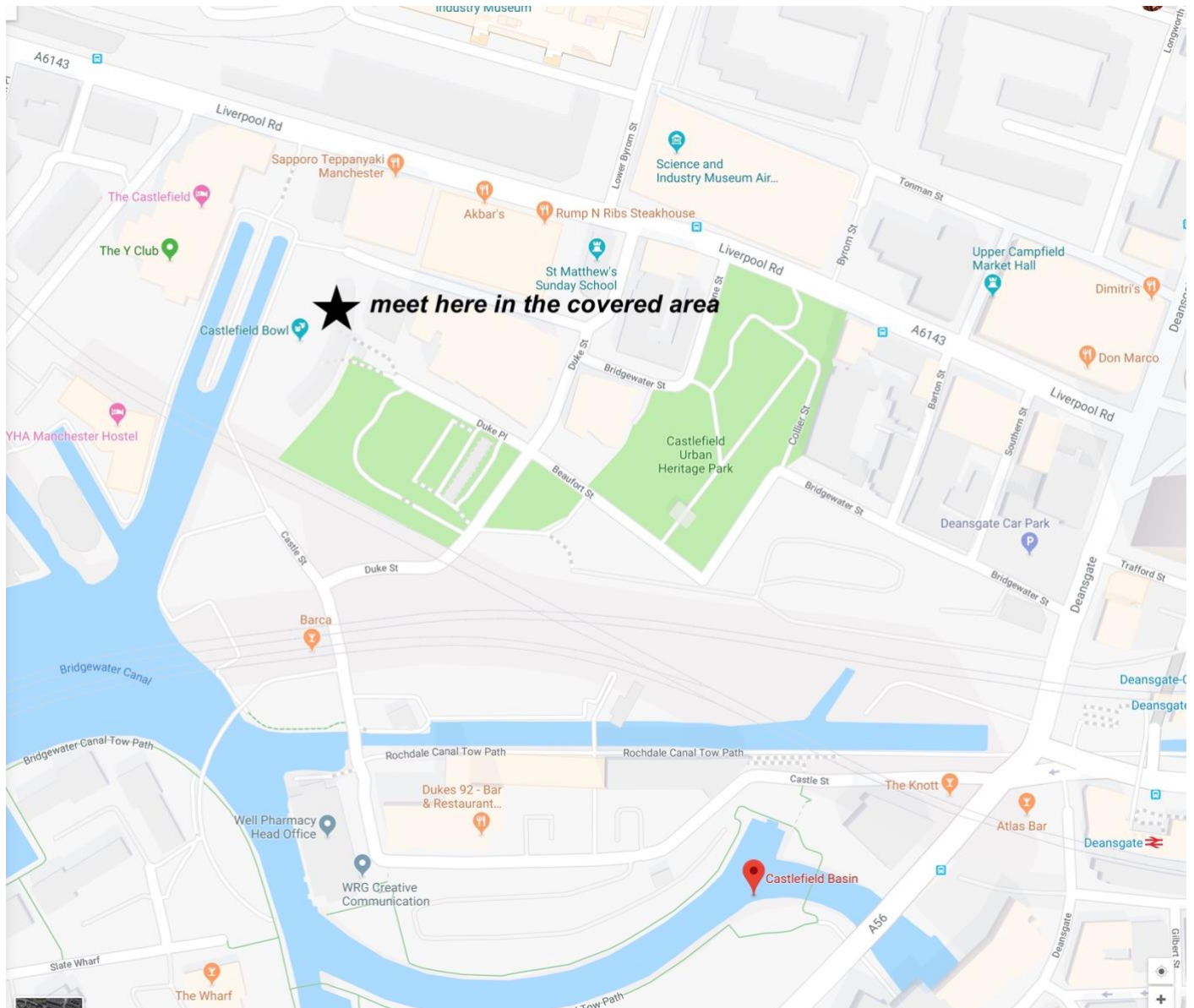
Meeting at the Castlefield Bowl under the covered area – It is Manchester after all so expect rain



The walk will be an informal event with the opportunity to enjoy taking some classic images from around this part of town. Any camera and any level of expertise welcome. I will hope to give you some instructional techniques to show you how I would set up the cameras for both stills and video production.

There's no charge for this event – just a way to be able to say hello to some of my subscribers and discuss what you like, or dislike, about the YouTube channel and blog etc.

If the weather is really wet we will move back to the comfort of the Museum of Science and Industry where there are again lots of opportunities to shoot various scenes under difficult light.



The nearest British Rail station is Deansgate however the area is well supported by free bus links and the Metro tram lines all stop at Deansgate and it is literally a 10 minute walk to the suggested meeting point.

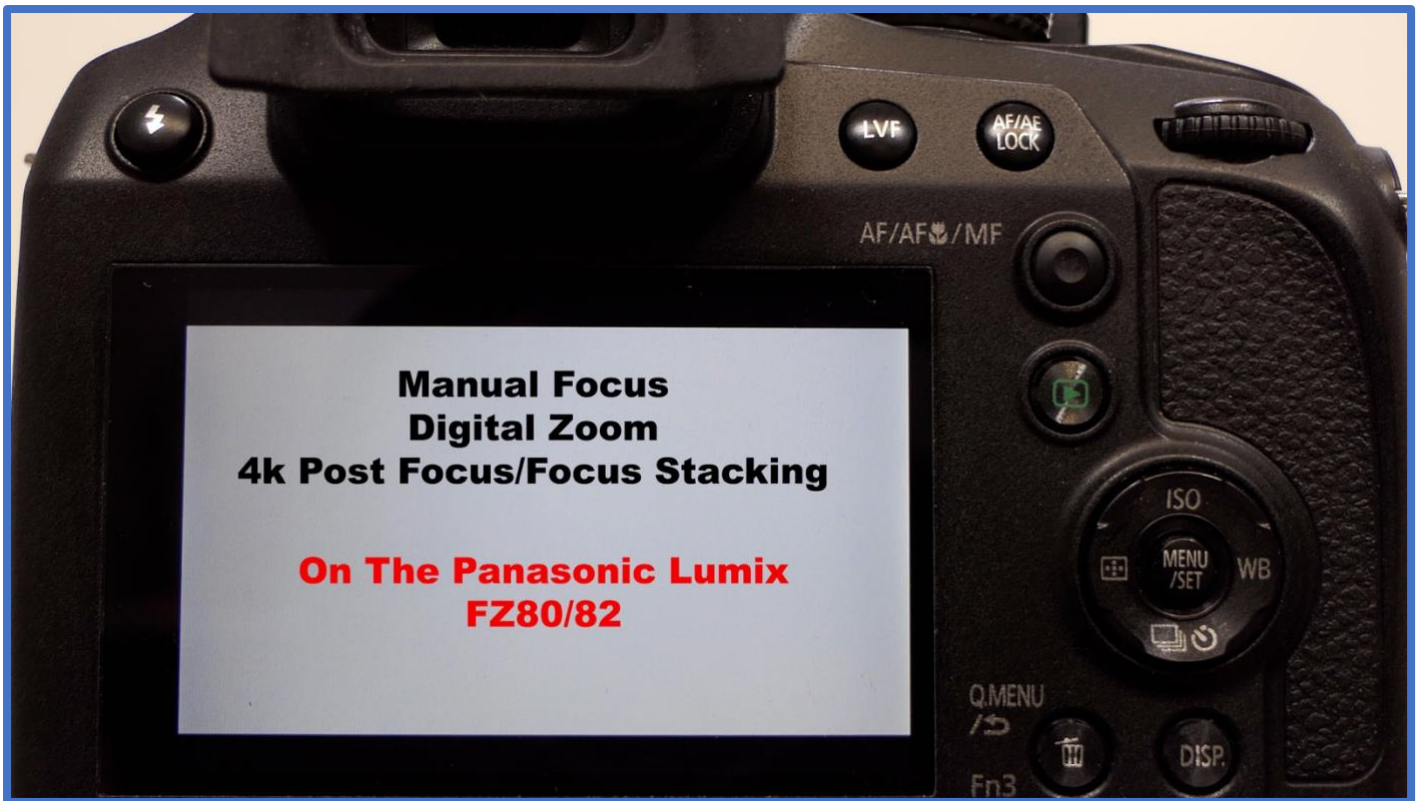
I did have a number of responses to join the walk but if you are free on that Thursday and would like to join me then please [respond to this email](#) and I'll keep in touch with details of travel/alternative meeting points if anyone is delayed etc.

If the event looks popular and delivers meaningful information to those who attend then I might possibly do one on a weekend date, and at other venues.

Panasonic Lumix FZ80/82 Manual Focus, 4K Post Focus -Focus Stacking and Digital Zoom

Some of the things that I learned during the writing of the FZ80 and FZ82 User's Guide that I thought would be of general interest.

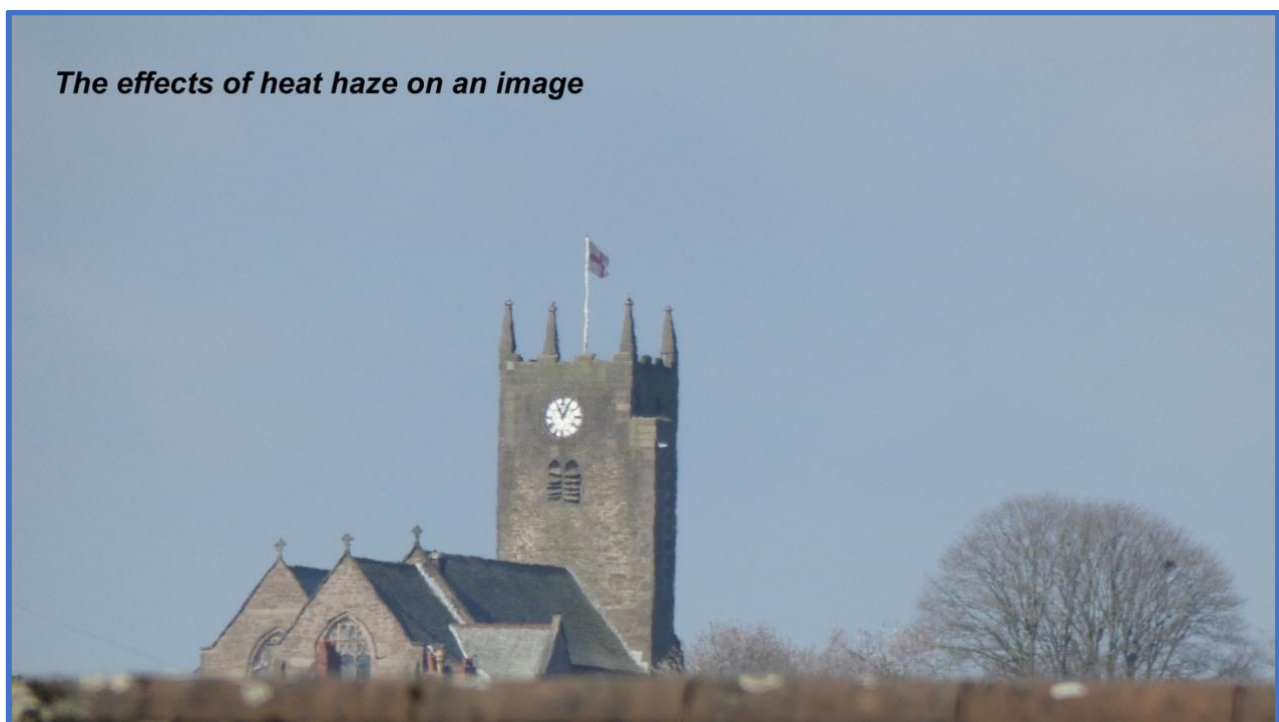
I have just produced a new video on YouTube which covers these features and I hope that it helps you to better understand this very popular camera. [The link to the YouTube video](#)



The Effects of Atmospheric Haze on Image Quality

When you are using a camera like the FZ80/82 which has an effective focal length of 1200mm at maximum zoom it is easy to think that the image quality is very poor. This can be for a variety of reasons but one that is often overlooked is heat (or atmospheric) haze.

Here's an image taken at 1200mm EFL of a church about 1 mile away and you can see how bad the image is.



Apart from the lack of detail, the haze has caused distortion to the vertical lines (like the flag pole).

Now this image was taken when the temperature was only 5 C so the effects of heat haze can play havoc with these long focal length shots – especially when there are expanses of land, or even water, between the camera and the distant view. I can only imagine what the images are like from the Nikon P1000 with its 3000mm lens!

Can Older Cameras Really Give Better Image Quality?

I had a comment on my latest YouTube video from a disconcerted FZ80/82 owner who was finding that the images from her, very much older, FZ38 camera were better than the images from her new camera. This was shooting ice hockey games and presumably in low light.

Well to answer this we have to look at how the technology of camera sensors has evolved.

If you remember, say 10 years ago, the camera manufacturers were accused of “mega-pixel” wars and that with every iteration of camera the sensor pixel count increased.

And with every release of camera came the usual comments from technical review sites that stated that increasing pixel density made the camera a lot worse in low light conditions.

This is due to the light gathering ability of the individual photosite (pixel). The smaller the photosite the less photons (light) it can capture in any one time period.

This means that the resulting analogue signal from the photosite has to be amplified more and this comes with a penalty of increased noise.

Around 8 megapixel on the 1/2.3 inch sensor (the one in the cameras in question and also most bridge cameras) was considered as the maximum.

Yet new cameras kept on coming out with ever increasing pixels as manufacturing techniques improved.

This included the way in which the photodiode were wired so that less of the surface area was used in getting the electrical signal of the chip (BSI – back side illuminated) and how the micro-lenses were fabricated to guide more light into the photodiodes.

Also signal processing improved to be able to reduce some of the noise being generated.

As a result of this we have seen these tiny sensors now evolve to 20Megapixels.

Now this is fantastic if you have lenses that can resolve light to a high enough level that the increased pixel density can truly use and show the benefit.

However it does mean that in low light the noise is likely to be higher than in cameras with lower pixel density, i.e. larger photosites.

Given lenses with a high resolving power and good contrast (MTF) the results are likely to be superior.

Also the early sensors were CCD (charge coupled devices) which although much slower in the ability to get the signals off the sensor (which limits their use in video to 720p or 1080i) were superior in image quality than the later generation CMOS (complementary metal on Silicon) sensors.

Production of CCD sensors was a very complex matter and had to be done in specialist fabrication lines where CMOS could be produced in regular integrated circuit manufacturing plants. This made CCD very much more expensive so it was no surprise that CMOS was utilised by manufacturers.

With the rapid rise in the “hybrid” cameras needing to shoot 1080P and now 4K (and even 6 or 8K) the CCD was also redundant as it cannot run at these speeds.

So to summarise this, yes the older cameras can, and many do, outperform there modern day successors and you may remember I did a few videos a couple of years ago about 5 good reasons to buy a LX5

<https://www.youtube.com/watch?v=41weRKEDe9Y> and 5 reasons to buy a TZ10

<https://www.youtube.com/watch?v=HifS8RsVico> because of this very reason.

If you want more technical information I also did a series on how sensors work

<https://www.youtube.com/watch?v=Xkput-1xNYE>

So all this really means is that to get the best image quality you must keep the camera ISO set to its lowest (native) ISO and wherever possible use the widest apertures to gather as much light into the sensor when the light levels begin to fall.

It is a fact that marketing has really overtaken camera performance and high end production videos showing these new cameras in operation are often discovered to be “fake”. Some of the claimed shots are actually from much larger sensor cameras – Huawei were caught out with this one recently as they were using stock images from full frame cameras!

When Canon produced the 5D-MkII with its 1080p video that became the benchmark camera. No camera in Canon’s consumer line up has matched the image quality from that camera and hence the 5D-MkII is still a much sought after camera for video shooters.



And finally the image quality from the FZ80/82 at 1200mm in sunlight shows what can be achieved – under the right conditions....

Until the next issue, thanks for your subscription.

Graham