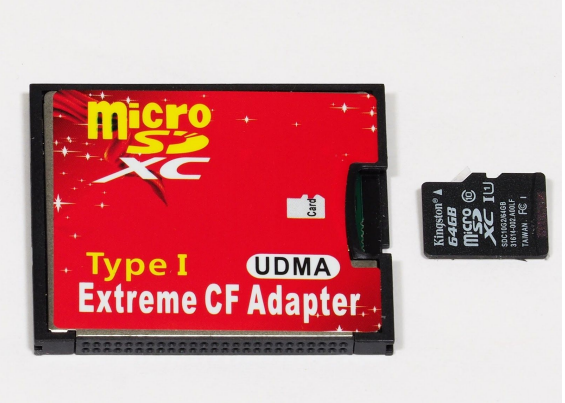
Newsletter for Week Ending 10th March 2018

Compact Flash to Micro SD Adaptor



One of my cameras, the Canon 5D mk3 has dual card slots. One slot is the standard SDXC slot and the other is a Compact Flash Slot.
The 5D mk3 utilises the faster UDMA 7 Compact Flash protocol that allows you to attain up to 90MB/sec of write speed with high performance CF cards such as the SanDisk 16GB Extreme Pro CF UDMA 90MB/s and the Lexar Professional 1000x 16GB CF Card. However, for some unknown reason, Canon does not support the faster UHS-1 (ultra high speed) standard for SD cards, which means that no matter what SD card you use, the 5D mk3 will always revert its speed back to 20MB/sec instead of the faster 45MB/sec UHS-1 speed.

Now if you are shooting video this may have significant impact if you are using the highest bit rate recording or have implemented the Magic Lantern RAW shooting for video option.

I have for a couple of years now adopted the micro SDXC card in a SD carrier. Mainly as the cost is about ⅓ of the equivalent SD card and, according to many reports, the electrical performance is identical.
So when I discovered that there was indeed a CF to micro SD (and also SD) I purchased the CF adaptor to test it out with a U1 SDXC card.
Using the same Micro SDXC card (Kingston 64GB U1) in both the CF adaptor and the SD card adaptor and shooting RAW+ L JPEG the buffer filled after 7 shots and took 15 seconds in each case before the camera was able to shoot the next image. So this was identical performance indicating that the Micro SD was perhaps the limiting factor.
Repeating the test with a 16GB Sandisk Ultra Micro SD card again the camera buffer filled after 7 images but the camera took 25 seconds before the camera was ready for the next image.
The next stage was to test a real CF card in the CF slot so I purchased a Sandisk Extreme 32GB UDMA 120Mb/s CF card. It vastly improved the write speed of the image files. The buffer filled as before but quickly started to release the camera back to shooting with only about a 1 second shot to shot lag as the buffer was full. It pays to read the manual as it does clearly state that UHS-1 speeds are not supported on the SD card slot - A real error in design for a camera of this class.

Are Ikea LADDA Ni-MH Really Panasonic Eneloop Batteries?

There's plenty of evidence on the WWW that suggests the 2450 Ikea Ladda Ni-MH batteries (which cost just £5.50 here in the UK) are actually rebranded Panasonic Eneloop Pro batteries which retail at £12.50.
The evidence suggests that as these are labelled "made in Japan" and that there is only one battery plant in Japan that now manufactures Eneloop cells there is a very high probability that these are indeed Panasonic Eneloop cells with the pro capacity of 2500mAh.

I ran a three cycle charge/discharge/charge routine and verified that the cells were in fact extremely close to their listed specification.

So for just under half the usual retail price if you are in Ikea, pick yourself up what appears to be a great bargain if you want rechargeable Ni-MH cells for your torch or flash gun.

Some time ago I did a whole series of discharge tests with Alkaline cells and at that time the Ikea alkaline were one of the top performers too, so credit to them for selling great battery products.

A tale of an Expensive Accident!

Many of you may remember I did a series of constructional articles on running Panasonic Bridge cameras from either Lithium - Ion cells or USB power banks with suitable DC-DC converters. (Tech Talk articles on photo blog site)
Well last weekend I was experimenting using a 2S-2P 18650 Lithium Ion battery pack and a dc-dc converter to keep the cell output a constant 8.4 volts as the 18650 cells discharged down to their normal cut off voltage of about 3.2 volts per cell.
I was using the Panasonic FZ2500 as the test load as I wanted to see how long the camera would continuously record video.

After 6 hours the cell pack was still showing over 7.2 volts - which I reckoned was 50 % discharge so I left it running overnight.
When I looked at it first thing this morning it was showing 6.5 volts which is about 95 % discharged. I left it whilst I went through for breakfast.
When I returned the power pack had shut down (the cells over discharge protection kicked in) so the dc-dc converter was trying to output 8.4 volts all the way down to 6.3volts (which is the cell protection cut off voltage)

But it must have started pulsing at this switch off point and as a result it took out the internal protection fuse within the FZ2500. I needed to have a go at repairing the FZ2500 (which is out of warranty anyway).
I managed to get a service manual for the FZ2500 for just $12 but it turned out that the seller had reduced the file sizes and it was impossible to read some of the schematic diagrams so it became impossible to locate the suspected failed component on the main PCB.
In the end I decided to send the camera to the UK service agents DKAVS for repair.
They established that a new main PCB was to be replaced (they don't do component level replacement which I was going to attempt) and the total bill came to £237.

So this highlighted an important factor which I had not previously considered, nor I guess has anyone else that has made USB to 8.4v converters etc, is that the camera does not soft shutdown when the battery voltage reaches 100% discharge.
The power packs (USB or lithium ion cells boosted to 8.4v) are thus not intrinsically safe and it would be my conclusion that the best way of powering the camera from an external battery pack would be to use a dummy battery box with the 10K resistor modification fitted.
By using this and a 8.4v lithium cell pack as the voltage of the battery starts to drop then the LCD display will show the % discharge and when the battery drops to 6.4 volts the camera will soft shutdown like it does when using the internally fitted camera battery.
Lesson learned - the hard way!

The Perfect Storm - The Beast from the East meets Storm Emma

Well this week plunged the majority of the UK into turmoil as heavy snowfalls and blizzard like conditions closed many roads, closed airports and rail services were shut down early.
Now I think this had a lot to do with the extensive media coverage about the impending conditions.
We have had heavy snowfalls and plummeting temperatures before and we managed.
This time we failed. I guess for the fact that in recent years we have hardly had any

significant snow (in England anyway - not Scotland) and people have just lost the ability to drive on snow.
I was out during the week and it was obvious that a lot of drivers just didn't know how to drive in these conditions. Some were driving far too fast in the outside lane of the motorway, were driving too close to the car in front and braking late and too hard at roundabouts etc.
I know I'm lucky as I have a vehicle which I can engage 4 wheel drive in situations which require that extra grip.
I've been in the USA when snow fell and drivers seemed to cope very well and in continental Europe snow chains are winter tyres are matter of fact in some areas.

The nice thing though about the snowfall was the opportunity to get out and photograph some winter scenes even though the outside temperatures were -7C.

A chance to practice exposure compensation and white balance setting to get optimum results.

5 Reasons to Buy a Panasonic Lumix LX5

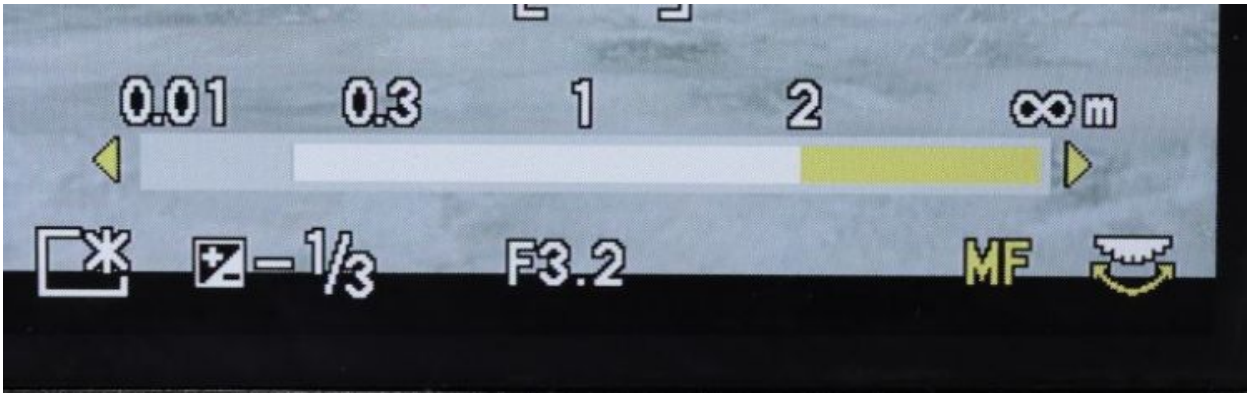
Continuing my look at some of the cameras that I have owned, and subsequently sold, and recently re-purchased - this time it's the Panasonic Lumix LX5.
Now the LX5 was aimed at serious amateurs and featured a slightly larger CCD sensor than the current compact cameras at the time of release (1/1.63 inch and 10.1 megapixels).
It has an expanded optical zoom over the LX3 predecessor now giving 24 - 90mm EFL at f2 to f3.3.
It features RAW file format plus the usual JPEG files. The LX5 has the ability to take one image and then process that into three different images depending upon your selection of the "film type".

Again the multi aspect format sensor maximises the number of horizontal pixels captured and, for the first time a new 1:1 square format has been added. Interestingly the aspect ratio is selected by a switch on the lens barrel.
In manual mode the shutter speed is 60 seconds to 1/4000 sec.

The front of the LX5 featuring a larger rubber finger grip over the size of the pad on the LX3

The top of the camera featuring a flash hot shoe, dedicated record button and pop up flash
Note the aspect ratio switch on the top of the lens.

The camera has manual focus capability and the focus can be altered by the back control wheel or the left/right navigation buttons on the 4 - way pad.
There is also a hyperfocal distance scale which is useful for getting maximum DOF at the set aperture and focal length of the lens.

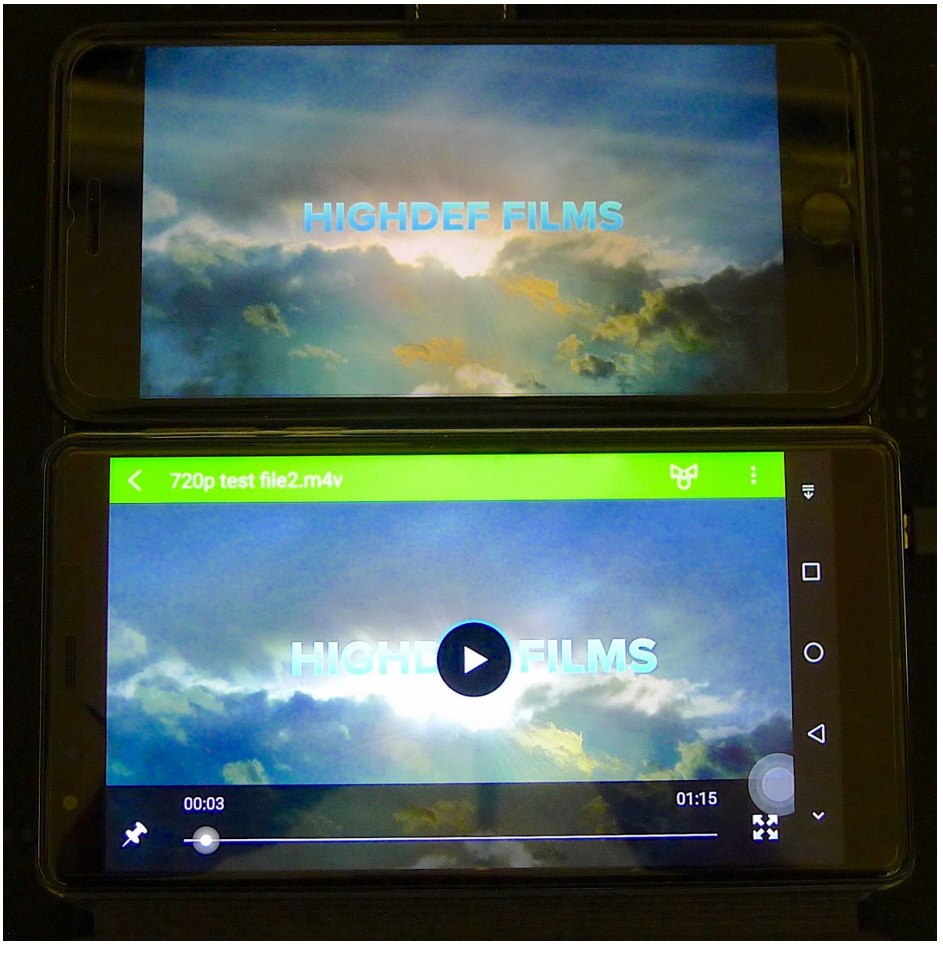


A couple of sample images at ISO 80 on a very cold, grey day in Wigan.

I will be doing a reasons to purchase video, similar to the one I produced for the TZ10 (ZS7).
link to YouTube Video

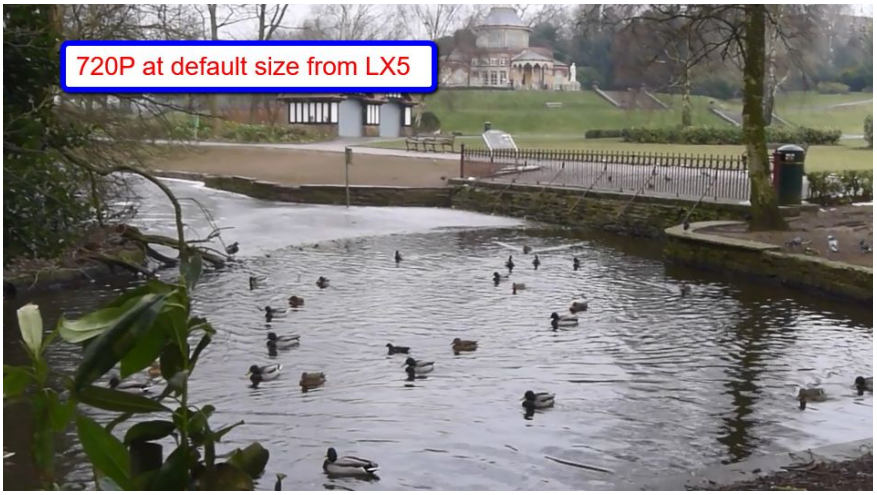
A New Lease of Life for Older Cameras?

When I was filming the two videos about the TZ10 (ZS7) and the LX5 I was debating whether to include sample video from the cameras. The reason for the debate is that the cameras has a low bit rate for recording and can only record at 720p in AVCHD or in HD in the motion JPEG format.
Viewed on a larger screen with 1920 x 1080 upscaling the actual quality leaves quite a lot to be desired. However I remind myself that a lot of people now shoot video on their smartphone and upload it to social media sites such as Facebook. It is viewed, in the main I would guess, on other smartphones or tablets and if viewed on computer screens the video is not expanded to full screen and is played in the default window size.
It now makes sense that these cameras can produce video quality equaling the smartphone with the added feature of being able to use the longer focal lengths - something the smartphones cannot do.
So with this in mind I wanted to discover how easy it would be to edit and upload clips from these cameras directly to the smartphone for local playback and also upload and post direct to the social media site. I anticipated that the later would be far easier to achieve.
To check this out I would film a couple of clips on the TZ10 and the LX5 and then the challenge would be to edit them together, complete with titles and voiceover and then try and upload to the smartphone directly and then to my Facebook social media site with a question asking what my “friends” thought of the video quality.
This is my experience:
Well, editing the AVCHD 720p video was straight forward using iMovie on my iMac computer.
I rendered it out as an MP4 file and it is added as the final sequence in the LX5 video
The final files are shown on the iPhone 8 plus (top) and Shark 1 lower



Transferring the file to my iPhone 8 Plus was done using “AirDrop” as I could not get iTunes to communicate with my iPhone. Once the file was transferred to the iPhone it played with very good quality and audio.
Turning to my Shark 1 Android phone it was easier to transfer the file using an OTG (on the go cable) and plugging in the SD card reader and copying the file over to the phone (although it did play directly from the card without hiccup)
Again quality was very acceptable. I uploaded the same clip to my Facebook page and set the private flag so that I could judge the image quality at the default image size. Again it looked acceptable. Clicking full screen showed the loss of quality - partly due to the camera 720p option and also the extra re-compression by Facebook.
So I guess it is fair to say that even recording in 720P AVCHD gave sufficient image quality for display on smartphones and tablets but IMHO there just isn’t enough bit rate in the file to display on a large screen TV. So if you want a camera that will surpass the fixed focal length lens of a smartphone you don’t really need to go out and buy a all singing 4K enabled camera in order to get great video clips.

A screen grab for the MP4 720P file upscaled to 1920 x 1080 for replay



Same file at default resolution of 720P

Product Review: LED Light (AD-L) For Godox Wistro AD200 Flash Unit

The Godox AD200 is a powerful, speedlight looking, flash unit which supports a traditional Xenon flash head and a open bulb strobe head.
Godox have now added a 60 LED head for the unit.
This LED light clips in place of either the flash head or open flash tube and gives another convenient point light source.
In terms of brightness with ISO 1000 set on the camera exposures are 1/60 sec @ f5.6 with the source exactly 1 metre from the subject. Colour temperature looks good at just under 5000K on my colour temperature meter. No obvious colour casts (green or magenta) from the light.

The light intensity can only be set from 1 of 3 levels by the back control wheel or the lower right hand button on the rear control panel of the flash unit.
It is rated at 9V and 400mA 3.6W, however I measured closer to 600mA at 9 volts.
The light will accommodate the Godox barn doors and gel lighting kit if needed.

For the head to be recognised by the AD200 main unit the firmware in the flash needs to be updated to version 2.0. This can be downloaded and installed via the G2 software from the Godox main website. The LED light costs just £20 in the UK and available from Amazon UK affiliated link Amazon USA affiliated link

Link to my Review on YouTube

Watch out for my modification to make this a USB powered macro light!

Product Review: Manfrotto Pixi Tripod

The little Pixie tripod from Manfrotto is a neat and compact accessory ideal for small compact digital cameras, bridge cameras, CSC's, smartphones and small DSLRs.

Construction is of a very high-quality, as you would expect from Manfrotto, and when folded it's light and easy to transport. When folded it can act as a hand grip.

The tripod has a standard ¼-20 screw-thread which fits any camera and you can adjust the ball head position by pushing in the release button inwards. It has non-slip rubberised feet to prevent slipping on smooth surfaces.

The tripod stands only 12cms tall when the legs are extended outwards with a 8 inch footprint.
It's great for indoor use such as photographing small objects in a light tent, for example, when you can take your time setting up the shot, and perfect for table-top use.

One thing worth a mention is that the tripod only allows for about 30 degrees of vertical camera elevation up or down, but a Manfrotto has a new version which (with a small price premium) addresses this issue and extends elevation to 90 degrees.

The heaviest camera it will take is 1Kg, which should be fine for most DSLRs and small compacts; however this weight restriction might limit the size of zoom lens you can use with it without it toppling over.

If you can live with these minor restrictions and your camera is not too heavy, this little tripod is a great portable accessory.

In the UK it is £17.95 on Amazon affiliate link and $19.50 on Amazon USA affiliate link
Link to my Review on YouTube

Product Review: LE-168A Pro Series LED Video Light, sold by AllieBe on Amazon

I have reviewed many LED panel lights over the past few years and it is good to see that LED technology has now reached a stage where it is possible to produce high output stable colour temperature LED's and incorporate then into compact video lights.
You should not overestimate though the amount of light that you think that these lights would produce.
This model, the LE-168A is a single colour temperature unit. I would always recommend thes in preference to the bi-colour units as the output is immediately halved as only half of the LED's are lit for either colour selection.

Both banks, the daylight 5500K and the Tungsten 3200K can be mixed but with an undetermined colour temperature.

The LE-168A is daylight only and with the unit on full power produces 740lux at 1 metre with the soft diffuser fitted.
This equates to an exposure of 1/60 sec, F5.6 @ ISO 640.

I measured just over 5100K with my colour temperature meter and the spectral response showed just a slight loss of green in the light output.

The unit is supplied with a frosted diffuser and a 3200K Orange filter which slides into the front of the LED housing.

There is an inbuilt battery capacity remaining check which is activated by pressing the check button by the side of the orange level indicator.

The unit can be powered by 6 AA size, Ni-MH or Alkaline batteries inside the unit or by Sony NP-Series Li-ion rechargeable battery, Panasonic CGR-D16S rechargeable battery, (Panasonic CGR-D16S, Sony NP-FH70, NP-FM55H, NP-F550) , Canon LP-E6 battery, or Nikon EN-EL15 Battery. Run time will be dependant upon battery capacity and light output level. The Sony NP-F550 2400mAh battery should give 2 hours of light at full intensity. The intensity can be controlled by the rotary knob on the back of the unit which also acts as the on/off switch. The output appears to be flicker free when dimmed.

It can also be powered from a 9v DC power supply (7v - 9v and the current is 950mA - the unit begins to regulate from 7V. The unit can be used form 5v but at a reduced light output

The kit is supplied with an adjustable mounting bracket to allow it to be installed in the hot shoe of the camera/camcorder.
On camera light is never very flattering but sometimes is the only option for run and gun type interviews etc.
It could be used on a light stand as a light source and the shadows that are created filled by use of a white card reflector.
It is lightweight (depending upon the installed battery option) and should present no problem in the additional weight when attached to your camera. If used within the 1 metre camera to subject distance there is enough light output for filming video with DSLR without unduly high ISO setting.

Iphone 8 Plus HDR Images

The image quality from the iPhone 8 continues to amaze.
Images taken today show an ISO of 20 at the fixed aperture of F1.8 giving exposures in the region of 1/200 to 1/500.
Because of the small sensor the depth of field is ideal for landscape images where foreground to distance are required to be in sharp focus.
By default the new HDR mode is set to ON in the iPhone 8/8 Plus.
In this mode the camera takes 3 exposures and then blends them to give the best dynamic range.
Now this might not be something that you want to happen automatically. You may want to set the option to be able to turn the HDR mode on or off from the screen.

You can do this by going into SETTINGS - CAMERA - TURN HDR OFF.
Now when you use the native camera app you will see the HDR icon.
Tap it and it gives you the option for Auto, On or OFF.

Here's a couple of images taken with HDR set to ON

Backlit image in shadow 1/516 sec, F1.8 @ ISO 20

Looks to have made a good blend as there is some sky detail and plenty of the shadow detail in the shaded areas of the image.

Strong sunlight streaming in through upper windows, the detail in the wall paintings has not blown out and the lower shopping area still has good detail 1/1600 sec, F1.8 @ISO 20

In this image though the resulting combination has made the image look “painterly” with loss of tonal gradation in the fountain and the statuettes. In this case a better option would have been to set the HDR option to Off. 1/873 sec, F1.8 @ISO 20

News of a New Tutorial for the FZ300/330

I know I've done the "transitioning" and a few instructional videos on the FZ300/330 and have the "user's guide" available however I'm still getting a lot of requests for help on getting good images with this camera.

So I'm proposing to do another short series concentrating on more of a hands on approach going out and capturing a few landscapes, flower close ups, wildlife and basic video techniques.
From your feedback I know quite a few of you like to see how to setup the camera rather than read the manuals etc., so I think that this will help consolidate your learning.

I'll hope to show how I would set up the camera to shoot each of the images taken during the video and explain why I've chosen those settings and how I arrived at the composition for the image.
I'll be trying a few different filming techniques myself to see how they can be best used to illustrate the series.
It will be like you are on a photo walk with me as I look for the shots and then create the image.
We'll also look at some basic image editing as I now have screen recording set up to enable the capturing of live edits etc.

Although the series will be based on the FZ300/330 a lot of the techniques will be applicable to any camera system so I'm hoping there will be something for everyone.

So until the next newsletter, thanks for reading and I hope you will continue to subscribe and follow me on my Youtube channel

Graham