

All pictures © Lee Frost

Wow. When B+W's esteemed editor emailed me asking if I'd like to try out one of Phase One's latest medium format digital backs, that was the first word that came to mind.

I'd heard of the new IQ2 series but never thought I'd ever have the chance to see one, let alone use one. It's the photographic equivalent of a motoring journalist test-driving a Bugatti Veyron or McLaren P1 – the stuff that dreams are made of.

So here are the basic facts. The Phase One IQ260 Achromatic is a 60Mp full-frame medium format back with a sensor the same size, approximately, as a 6x4.5cm film camera (that's 2.5x bigger than a full-frame DSLR). It's also dedicated to black & white capture. The colour filter array has been omitted so no



£30,000

## PHASE ONE IQ260 ACHROMATIC

It boasts 60Mp, costs £30,000 and only shoots black & white. **Lee Frost** checks his lottery numbers.

conversion is necessary and there's no infrared cut-off filter on the sensor either, so image quality is as good as it can be. The back can actually record images in three spectrums – infrared, visible and ultra violet – which makes it useful for both creative and scientific purposes.

To use the IQ260 Achromatic,

I was supplied with a Phase One 645 DF body and a couple of Phase One focal plane shutter lenses, though the back can be fitted to a range of medium format cameras including the Contax 645AF, Mamiya 645DF, RB67 and RZ67 Pro II, Hasselblad H1, H2, 555ELD, 553ELX, 503CW and 501CM.

On 645 bodies it's full-frame but on 6x6cm and 6x7cm there's a crop factor.

Within five minutes I'd found my way around the body and back and was shooting my first images – whopping 70Mb+ Raw files that end up as 350Mb+ Tiffs.

The IQ260 Achromatic is a highly specialised piece of kit that represents the cutting edge of digital technology and if you're seriously interested I suggest you visit the Phase One website (phaseone.com) and book a test drive of the system.

To be honest, the Achromatic is designed mainly for scientific purposes or for use by museums and other institutions where ultimate image quality is paramount but colour isn't. That said, if you can afford the cost, it's also a brilliant tool for fine art black & white photography as you can make enormous prints with no loss of image quality – the standard output size is 30x22in, but you could double that quite easily.

Sensitivity to infrared makes it a great camera to use for IR photography – with an IR transmitting filter like a Hoya R72 on the lens it produces amazing results.

No one's going to spend £30,000 on a back just because it produces great IR effects, of course. The fact that it does

### LIKES

- ▶ Image quality
- ▶ Resolution
- ▶ Dynamic range
- ▶ Build quality
- ▶ Wireless connectivity

### DISLIKES

- ▶ Price!
- ▶ Mono-only capture
- ▶ Longest exposure only 2 mins
- ▶ Need to use IR and UV filters

also causes problems in itself because infrared, ultra violet and visible light all focus on different points and as the IQ260

Achromatic is sensitive to all three, for normal black & white photography you need to use a Phase One TG1 filter on the lens to block IR light and a UV filter to block UV light, otherwise the images will be slightly soft – not what you want for your £30k!

If you then need to use other filters, not only will image quality be affected by the sheer number of them on the lens, but you could face problems with vignetting with wide lenses! Because the Achromatic only records black & white, you will need to go back to using red, orange, yellow and green filters on the lens to control contrast and tone as you can't do that during post-production as you can with black & white images created from a colour file. This is because the Achromatic only has

one channel rather than three.

That single channel also has exposure implications. Normally, if you blow the highlights on an image you may only blow one channel so you can retrieve detail from the other two. But here you only have one channel so if you blow the highlights you've had it! To avoid that you must keep an eye on the histogram, though with a 13-stop dynamic range the risk of blown highlights is smaller.

Another limitation of the Achromatic is that the longest exposure you can use is only two minutes, whereas with the colour IQ260 you can keep the shutter open for an hour. Two minutes is more than long enough in most situations, and the lack of noise when you do use long exposures is amazing, but like many photographers, I enjoy shooting images with 10-stop ND filters so exposure times much longer than two minutes are usually desired.

There's no live view with the Achromatic either, whereas there is with the colour IQ260 back. That said, you can create a Wi-Fi network using the back and with the aid of the Capture Pilot app, send captured images to your iPad or iPhone for review, as well as control image capture from your tablet or phone.

Once you accept and get



### TECHNICAL SPECIFICATIONS

<b>PRICE</b>	£30,000 (back only), £36,000 with Phase One 645 DF body and 80mm f/2.8
<b>SENSOR</b>	Full-frame Dalsa CCD
<b>SENSOR SIZE</b>	53.7x40.3mm
<b>RESOLUTION</b>	60.5Mp
<b>ACTIVE PIXELS</b>	8964 x 6716
<b>DYNAMIC RANGE</b>	13 stops
<b>IMAGE BUFFER</b>	1Gb advanced high speed Ram
<b>LCD</b>	3.2in touchscreen with 1.15 million dots, 290ppi
<b>SHUTTER SPEED</b>	2 mins to 1/10,000sec
<b>ISO SENSITIVITY</b>	200-3200
<b>FILE TYPE</b>	Raw
<b>STORAGE</b>	CF
<b>CAPTURE TIME</b>	1sec

used to these quirks and foibles, the benefits of the IQ260 Achromatic come to the fore. It is an awesome piece of kit. Image quality is mind-blowing and tonality is by far the best I've seen – smoother and cleaner and more subtle than you get

by converting a colour image to black & white. But that quality is going to be lost on the vast majority of us because it's more than we'll ever need, and while it's nice to have, it comes at a cost and I won't be auctioning a kidney on Ebay just yet!

### VERDICT

The IQ260 Achromatic is an awesome bit of kit – dynamic range and tonality is amazing, image quality staggering and the camera kit is quick and easy to use. But let's get real. A basic two-lens kit is going to set you back almost £40,000. You could buy a top of the range Canon or Nikon DSLR and as many Zeiss prime lenses as you can carry

then travel the world for six months on a dream photo tour and still have change! Also, while having a mono-only back may seem like a great idea, I personally shoot colour images as well, so if I was going to spend that kind of money on a digital back I'd buy one that did both – which a normal IQ260 will or, even better, an IQ280!

### RATINGS

▶ HANDLING	90%
▶ PERFORMANCE	94%
▶ SPECIFICATION	90%
▶ VALUE FOR MONEY	90%

91%  
OVERALL



BOULMER, NORTHUMBERLAND As the IQ260 Achromatic only has one channel, you need to use coloured filters on the lens to control contrast and tone. In this case I used an orange filter to enhance the sky.

Phase One 645DF with Schneider LS 80mm f/2.8 lens, TG1 and orange filters, ISO 200, 1/250sec at f/11



BOULMER, NORTHUMBERLAND Long exposures up to 2 minutes are possible with the Achromatic back, but as the minimum ISO is 200, you'll often need ND filters to get the shutter speed right down in daylight.

Phase One 645DF with Schneider 35mm f/3.5 lens TG1, 10-stop ND and 0.6ND grad filters, ISO 200, 30secs at f/22



ALNWICK, NORTHUMBERLAND The Achromatic back produces brilliant infrared images if you pop an IR transmitting filter on the lens as it doesn't have an IR blocking filter on the sensor.

Phase One 645DF with Schneider 35mm f/3.5 lens and Hoya R72 IR filter, ISO 200, 1/20sec at f/22