

# Phase One IQ180

**SRP: £30,300 (Classic package, £33,000 value added package)** We test the crème de la crème of medium format digital camera backs and put the Phase One IQ180 to the ultimate shooting test

**At the top of the pile, well above the rest, sits the Phase One IQ180.** This is the very latest in digital camera technology and the medium format digital back, even at first glance, makes a lasting impression.

So who does the IQ180 appeal to and is it worth the money? Well, unless you have a spare £30,000 to spend on a digital camera back, it isn't really an option to an enthusiast or hobbyist. The IQ180 is part of a professional photographer's digital working system – you'll want to see a return on the investment so really only those at the top of their game can consider it as an option.

There are many alternative setups that can be used, as essentially the IQ180 is a small box part built like a tank that encloses an 80MP sensor and fits neatly onto the back of a compatible body. For this review we rigorously tested the digital back in the studio and on location with a 645 AF SLR body, Phase One 28mm, 45mm lens and Schneider 80mm and 110mm lenses. One great factor regarding the Schneider lenses is that the studio flash source will sync up to a shutter speed of 1/1600sec, which is perfect if out and about on location. This means you can keep the lens wide open on a bright day if you want to produce that popular shallow depth of field effect. The Phase One lenses are set to sync with flash light sources at the standard 1/125sec and were better in the studio and in the landscape location.

When using the IQ180, what hits you right away is just how easy it is to operate. There are no frills or spills that you get with some camera systems and everything is clearly labelled. The 3.2-inch touch screen back is simple to navigate and there is an alternative option to use four-button controls on the sides. This is useful for when you can't operate the touch screen, like when wearing gloves on chilly outdoor shoots, for example.

On the home menu you have ISO, WB, playback and main menu options, and in the playback screen the histogram, data loss reference image and focus ref image can be sourced on the side. These are extremely useful for reviewing images and seeing what areas are in focus and



**Digital Photographer**  
★ ★ ★ ★ ★  
**EDITOR'S CHOICE**

which have lost data. To check the focus at 100%, the LCD screen can be doubled tapped and it instantly zooms into the shot. You also have the option to zoom up and down on the side slider to go in and out of the image. The playback quality is high on the screen; however, to get far more accurate results it is best to shoot straight to the computer if this is an available option.

The IQ180 takes incredibly detailed images, which was always going to be a given with an 80MP sensor and

**On disc**  
Load up the Digital Photographer cover disc to view a selection of test shots captured by our reviewer

**RELEASE BUTTON**  
To disengage the body the release button needs to be pressed

**TOP OF BOX**  
The solid box design simply clips onto the back of the body and has been built to last



**MEMORY CARD**  
The slot to insert the memory card can be found on the side of the back

**ON/OFF SWITCH**  
The back as well as the main camera body needs to be switched on



▲ The quality of colours is amazing, as is the Capture One software for converting to black and white

“The IQ180 really comes into its own in the studio – with the right accessories, body and lenses, it cannot be faulted”

£30,000 price tag, but it is remarkable at just how high the production quality is and what you can do with the results. When presented with a vast dynamic range, the sensor does well to retain data from the shadows and highlights as the back has a 12.5 f-stop dynamic range capability. The colour balance is spot on and produces vibrant colours, although the back did suffer from one small problem on the Auto WB setting outdoors. Occasionally it couldn't read the light correctly and produced a purple tinge. This wasn't a great problem, as on most shoots photographers will preferably shoot on a Manual setting; however, if there is a mixture of light sources that keep changing you will need to be aware.

The ISO range on the IQ180 goes from 35 to 800, and the back also includes a Sensor+ feature, which is a useful option for those shooting in low light. The ISO can be increased, but this is at the expense of the resolution. Having said that, with an 80-megapixel resolution to spare, even at half the quality the images do not greatly suffer as they're still recording at 5162 x 3878 pixels. In the Sensor+ mode the ISO ranges from 140-3200.

Taking images at an 80-megapixel resolution does come with a couple of niggling issues, though. Firstly, image data files are gigantic, and unless you have an up-to-date computer system and the latest Capture One software you will find it incredibly difficult to edit them. ▶▶

## Contenders

### Leaf Aptus-II 12

**Price:** €24,000 (approx £21,000)  
**Web:** www.leaf-photography.com  
**Tel:** 01903 741 821

This full frame 80-megapixel digital back also takes images at a 10320 x 7752 ratio. This is one of the IQ180's closest competitors in the market and available at a cheaper recommended retail price.

### Hasselblad CFV-50

**Price:** £12,000  
**Web:** www.hasselblad.co.uk  
**Tel:** 0208 731 3250

This digital back works with the Hasselblad V System cameras and is a much cheaper option for the professional photographer. However, this digital back only offers 50 megapixels.

## INDETAIL ▶ Features



**80-MEGAPIXEL FULL FRAME SENSOR**  
The sensor is capable of producing high-quality images that are perfect for the professional photographer working in the studio or on location.



**SENSOR+**  
Sensor+ is designed to push the ISO higher, but image resolution reduces as a result. As the starting resolution is already high this isn't really a problem.



**TOUCH SCREEN LCD**  
The 3.2-inch touch screen LCD on the back panel is responsive and easy to navigate. There are buttons down both sides if you can't operate the touch screen.



**COMPATIBILITY**  
It's compatible with the Phase One 645DF/AF Mamiya 645DF/AFDIII, Hasselblad H1 and H2, 555ELD, 553ELX, 503CW and 501CM.



**VIRTUAL HORIZON**  
An option to set a level mode is possible with the IQ180. This is a great feature out on location to ensure the horizon is straight. In the studio it can work well as a guideline.



**12.5 F-STOP DYNAMIC RANGE**  
The detail between the highlights and shadows retains information, as the 12.5 f-stop range is great. This is reassuring if you're on location.

**WE WANT YOUR REVIEWS:** If, like us, you have been lucky enough to get your hands on the Phase One IQ180, we'd love to hear your thoughts.

You can share your test shots on our forum at [www.dphotographer.co.uk/forum](http://www.dphotographer.co.uk/forum)

**LCD SCREEN**  
The IQ180's touch screen measures a healthy 3.2 inches



**CONNECTION POINT**  
The FireWire lead connects to this part of the back, under the plastic flap

**BUTTONS**  
If the photographer is wearing gloves the LCD screen can also be altered using the buttons on the side panels

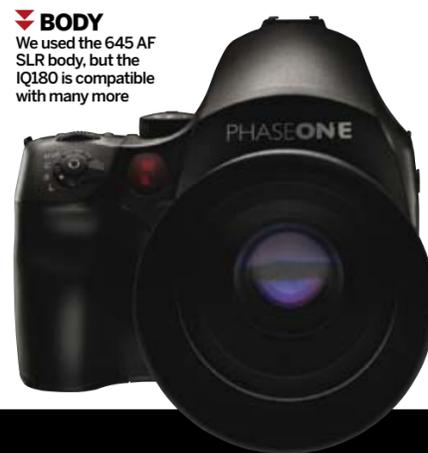
“The Phase One IQ180 is an outstanding performer that’s fast to process images, and if you’re at the top of your game then it’s definitely worth the investment”

▶ If you’re shooting to compact flash cards then make sure you have plenty to hand as they fill up very quickly. On the plus side, if you’re shooting through tethered means, which for the majority of studio setups you should be, then a standard laptop or computer can handle the shooting. It’s just the editing side where your technology really needs to be up to date.

The Phase One IQ180 by itself is not a heavy piece of equipment, but once you put it with a body and lens then suddenly it becomes a bulky and hefty camera. The build quality is reassuringly amour-like and, yes, it is much heavier than a normal DSLR, but it’s not unreasonable to carry around on a shoot. We tested it in a variety of locations, even to take a few candid street images,

although it stands out like a sore thumb and subtlety is not its thing. In the studio, though, it really comes into its own, and with the right accessories, body and lenses the IQ180’s performance cannot be faulted.

The Phase One IQ180 is an outstanding performer that is fast to process images, and if you’re at the top of your game then it’s definitely worth the investment. The value added package is more money; however, in this deal the photographer has a five-year warranty and all the accessories needed, whereas the classic package is only 1 year and the basic accessory kit. If you can’t quite justify the spend then Phase One is still continuing its P range models, and the lower IQ160 and IQ140 are slightly cheaper options worth considering.



**▼ BODY**  
We used the 645 AF SLR body, but the IQ180 is compatible with many more

## ISO AND WHITE BALANCE PERFORMANCE

Noise and colour casts studied under the microscope

The ISO results from the IQ180 are incredible as the detail is sharp and the images are vibrant in colour. When comparing the setup shot at ISO 35 and ISO 800 there is obviously a difference up close at 100%; however, from a distance it is hard to distinguish much at all. The noise levels at 800 might affect an image with a lot of dark space, but overall it shouldn’t be too problematic if the images are not being enlarged to an epic scale.

In terms of white balance, the Auto setting was not as consistent as we believe it should have been. It struggled in daylight between the clouds and sun, but most professional photographers will set the white balance manually and will rarely rely on the Automatic setting. The studio results showed the correct compensation the camera needed to adapt to, so all in all the results were pleasing.



### MAIN POINTS FROM THE GRAPHS:

Colours are spot on across the spectrum and are vibrant and saturated. The ISO results are highly pleasing and at ISO 35 the detail is incredible. Even if images were enlarged to billboard size the image quality would remain high.



## Phase One IQ180

### Technical data

<b>Model</b>	Phase One IQ180 digital back
<b>Price</b>	Classic package €33,990/£30,300 Value added package €36,990/£33,000
<b>Web</b>	www.phaseone.com
<b>Phone</b>	01903 741 821
<b>Megapixels (effective)</b>	80
<b>Max resolution</b>	10320 x 7752
<b>Sensor information</b>	Full-frame CCD 53.7mm x 40.4mm
<b>Lens data</b>	By lens
<b>Zoom</b>	By lens
<b>Focus/macro</b>	By lens
<b>Shutter speed</b>	1/10000-120sec
<b>ISO sensitivity</b>	35-800 (140-3200 in Sensor+)
<b>Exposure modes</b>	By body
<b>Metering options</b>	By body
<b>Flash modes</b>	By body
<b>Connectivity</b>	FireWire 800
<b>Weight</b>	582g without battery
<b>Dimensions</b>	89mm x 102mm x 62.4mm
<b>Batteries</b>	Li-ion
<b>Storage</b>	Compact flash
<b>LCD</b>	3.2-inch touch screen
<b>Viewfinder</b>	By body

### Verdict

**Features** 10/10

■ The Sensor+ and easy menu options are excellent features, but the one that stands out is the high-resolution sensor

**Build quality** 10/10

■ It’s built like a tank and designed to stand the test of time. If you purchase the value added package the IQ180 comes with a 5-year warranty

**Handling** 10/10

■ Images were processed either to the CF card or through tethered shooting quickly and efficiently

**Quality of results** 10/10

■ This is where the digital back really comes into its own and produces stunning results

**Value for money** 9/10

■ The IQ180 could be the perfect upgrade for your business, but it is a lot of money to fork out

**Total** **10/10**  
The quality and speeds from the IQ180 are on another level. A superb digital back that’s pushing the market forward

## INDETAIL ▶ Test shots



**COLOUR IMAGE**  
The colours are vibrant throughout the image and pick up the background detail. Using a shallow depth of field produces a dreamy effect.



**STUDIO TEST**  
The Phase One IQ180 excelled in the studio tests. We found shooting tethered to the computer to be the easiest option for getting it right first time.



**MEMORY**  
There is the option to record images onto a CF card, which is useful if you’re on location. Make sure you have plenty to hand as they soon fill up quickly.



**OUTDOORS**  
In daylight the back sometimes struggled when left on the Auto WB setting. It produced a purple tint, but it’s one that’s easy to correct in the editing process.



**BLACK AND WHITE**  
The Capture One software has an excellent setup for converting images to B&W. Although there is some info lost in the highlights, this adds to the effect of the image.



**100%**  
At 100 per cent crop the detail is still sharp and defined. This is reassuring for photographers who need to enlarge their images to a grand scale.

**EXAMINE THE EVIDENCE FOR YOURSELF:** Take a look at the high-resolution test shots on your free CD at the back of the magazine. Simply

load them up and inspect the finer details for yourself.