

Phase One 645 Camera System

SRP: FROM £7,200-£19,995 The medium format digital camera system that promises top-quality images - for a price. Josie Reavely tests it out...

While the megapixel race relentlessly continues in the DSLR world, producing increasingly high-spec cameras to tempt high-end users, many photographers are looking at another class of camera entirely to suit their professional needs.

For some, 35mm DSLRs - no matter what their resolution - cannot match the ease of use and image quality generated by a medium-format camera system. While these cameras may not be capable of matching the speed and versatility of a DSLR when it comes to sports or wildlife photography, they do offer photographers with a more sedate workflow - those based in the studio or landscape photographers, for example - an incredibly high-quality solution.

Previously the reserve of film aficionados, medium-format digital cameras offer contemporary photographers a versatile alternative to the 35mm digital format. Medium-format digital cameras are available as modular systems, allowing you to select the components you require to suit your needs, as well as integrated systems. With a modular system or 'open platform', you have the benefit of having interchangeable components, including the camera body, digital back, lens and (often) the viewfinder, although the 645 design on test here features a fixed viewfinder. Different brands offer varying options with a range of prices, so plenty of research is in order to discover the best system to serve your needs.



Digital Photographer
★ ★ ★ ★ ★
EDITOR'S CHOICE

The Phase One brand has long been synonymous with quality, and the Phase One Camera System upholds the manufacturer's long-established reputation. The modular system includes a 645-AF camera body, which includes the universally accepted Mamiya body and lens mounts, opening up an incredible range of compatible lenses for the user, along with further options available using adaptors. You also get a Phase One digital back for your money, although the resolution and



specifications depend upon the specific package that you opt for. As well as the camera system itself, there are a number of different packages available, with various accessories and added extras to choose from. With



VIEWFINDER

The fixed-level viewfinder offers x0.71 magnification. An LED display confirms your shooting settings

PLAY BUTTON

This activates Playback mode, where you can scroll through images, zoom and delete shots, among other things

MENU BUTTON

This opens the menu system, where you can fine-tune your Capture Setup, Play Setup and Configuration

MODE DIAL

Hold down the button on top of the dial and rotate it to select your desired shooting mode

SELF-TIMER BUTTON

Press this button and use the front and rear e-dials to enable/disable the function, and set the delay between the time the shutter's depressed and the photo is taken

EXPOSURE COMPENSATION

Press this button and use either the front or rear e-dials to fine-tune your exposure settings

METERING BUTTON

Use this button and the front or rear e-dial to set the Metering mode

BRACKETING BUTTON

Press this button and use the front and rear e-dials to set the number of stops you want to bracket by and to enable/disable the function respectively

the top-of-the-range Added Value option you get a wheeled hard Peli-style case included in the price, with custom-fit foam inserts to protect your gear. It also has accessories like a FireWire cable, spare battery charger for your digital back, FireWire card reader, battery holder for the camera and the powerful Capture One software package, complete with free upgrades whenever the software is updated. Phase One also offers a three-year/300,000 exposure warranty and they'll loan you a digital back should yours need to be repaired or undergo any maintenance, so you'll never have to stop shooting.

The compact design of the digital back component and the streamlined design of the camera body keeps the system's size manageable. It's no lightweight and is definitely at home when mounted on a sturdy tripod, though it's still possible to shoot handheld if you want more freedom.

The simple, four-button operation of Phase One's digital backs help to keep the photographer focused on the task of shooting, rather than getting

bogged down in complicated menu systems and customisable functions. The smattering of controls on the camera body itself (which is simply a Mamiya 645 AFD III in Phase One livery) also reflects this philosophy: the chunky, tactile rubberised Mode dial offers a range of partial and full manual settings, as well as a Flash Sync mode. The action of this dial is positive, although for added insurance you have to depress a small button on top of it before it can be rotated, so there's no chance of switching exposure modes by accident. Nestled alongside, you'll find the rubber Self-timer mode button. Press it once to call up the 'menu' on the top LCD, and use the front e-dial to turn it on or off and the rear e-dial to set the amount of time to delay before the shutter is released.

Below the top LCD panel, four tactile rubber buttons turn the LCD light on and allow you to make changes to your AF area, Metering mode, frame rate and exposure compensation. These are fairly easy to operate, although it's fair to say that their action could be a little more positive. A small button just above the rear e-dial locks the focus, and the Power switch on the front, located just above the grip, also allows you to switch between Single, Continuous and Mirror Up modes.

On the front of the camera, to the bottom left of the lens, you'll find a fingertip-sized notch - this is designed so that you can select your desired AF mode. Its clever design makes it easy to locate and operate, without having to move from behind the viewfinder. ▶▶

“The simple, four-button operation of Phase One’s digital backs help to keep the photographer focused on shooting”

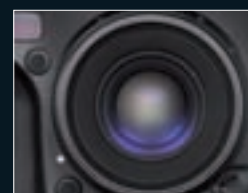
INDETAIL ▶ Features



TOP LCD PANEL: This displays your aperture, shutter speed, metering and AF mode, as well as the level of battery power. You can also make various alterations.



DIGITAL BACK: Phase One has a range of digital backs to couple with the 645 AF camera body. They offer a variety of specs, with resolutions ranging from 16 to 39mp.



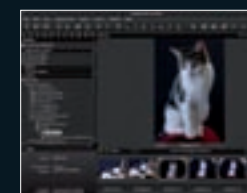
LENS COMPATIBILITY: The 645 camera is compatible with a vast array of lenses, with full functionality offered if you use Mamiya Sekor Digital and AFD lenses.



DURABLE CONSTRUCTION: The solid construction of both the camera body and digital back makes the Phase One Camera System feel like it's really built to last.



FIREWIRE CONNECTIVITY: Phase One's digital backs boast FireWire connectivity for easy tethered shooting in a studio, or on location with a laptop.



CAPTURE ONE 4 SOFTWARE: The bundled software supports the Phase One Camera System's RAW files, along with a wide range of DSLR RAW file formats.

WE WANT YOUR REVIEWS: Have you had a chance to try out the Phase One 645 out for yourself yet? If you have, write a review

on our forum or email your thoughts to us at dpreviews@dphotographer.co.uk. Agree or disagree, we want to hear your thoughts...

▶ As we previously mentioned, the Phase One digital backs all offer simple, four-button operation. The P45+ back that came with our review model boasts a 39mp full-frame sensor, that generates 11Q RAW files – a lossless, compact file format that allows faster capture and easier storage of 16-bit images. Large 11Q files average around 44MB, so you'll still need plenty of memory capacity, however.

Turn the back on, and you'll see each of the buttons accesses a menu: Play, ISO, WB and Menu, along with your current ISO and white balance settings, and your RAW file size displayed in the centre. The three foremost functions are self-explanatory, and it's certainly useful to have dedicated buttons to access each. The main menu offers just three options: Capture Setup, Play Setup and Configuration – a far cry from the complex and often cluttered menu systems found on 35mm DSLRs. These simple options allow you to customise a few settings, such as the file format and shutter latency, as well as the usual offerings like adjusting the brightness of the LCD, formatting the memory card, etc. Getting set up takes just seconds, so you're ready to get on with the important business of taking photos in a flash (no pun intended).

The 2.2-inch LCD on the P45+ digital back seems undersized, particularly if you're used to shooting with high-end 35mm DSLRs with three-inch screens. The resolution also leaves a little to be desired, with 230,400 pixels – that's the same resolution as the

“Image quality, once processed using the software, is nothing short of stunning”

LCD on a Sony A350, although the A350's screen is larger at 2.7 inches. The LCD on the P45+ is useful, up to a point. While the histogram and shadow/highlight warning makes it easier to check your exposure, it's difficult to get an accurate impression of how your image really looks on the screen, particularly when it comes to judging colour. This niggle is overcome entirely when shooting tethered, however – which is where the camera really comes into its own.

During our tests we found the longevity of the Lithium battery used to power the digital back wasn't extensive, lasting for around 145 exposures at best and making the spare that comes with the camera invaluable when out in the field (although we'd advise investing in one or two more if you're planning an extended shoot). The six AA batteries required to power the camera body itself, however, lasted for the duration of our fortnight-long test, with the battery indicator still showing full battery power remaining when we returned the kit. Using rechargeable batteries will enable you to cut the cost of powering the camera further, as well as reducing wastage.

The Capture One software that's supplied with the camera is excellent, offering not only the facility to process RAW files from your Phase One Camera System but a wide range of 35mm file formats too, allowing you to confine your workflow to the same piece of software. Featuring an intuitive 'left to right' interface, you import your images into your image library, then simply work through the icons at the top of the screen or skip straight to the 'Quick' editing menu if you're in a hurry. We cannot stress the value that this software adds to the whole package enough, particularly if you pick the Added Value option at the time of purchase, which entitles you to free upgrades whenever it's updated.

Shooting tethered, you have the option to apply any number of alterations to one image, then have the software apply the same settings automatically to any images that you shoot subsequently in the same session – a fantastic timesaving feature that studio photographers will love. When processing your images, you can make changes to everything from the exposure, white balance and curves to the

sharpness, saturation and brightness, among others. There's also a handy Shadow/Highlight tool that allows you to pull back as much as two stops of detail from the highlights. The Crop menu allows you to draw a line along any point in your shot that should be vertical/horizontal and the software will automatically straighten up and crop your shot.

Another huge benefit of coupling this software with the Phase One Camera System is the fact that Capture One has a number of lens profiles (as well as analysing data from the camera on a shot-by-shot basis) that can correct for any distortions of lens artefacts. The results have to be seen to be believed.

We could write an essay on the exciting features the latest version of Capture One offers, but one final attribute that's worthy of note is the ability to produce a contact sheet within a web page, complete with interactive Java slideshow, in seconds. It actually takes the web browser longer to load than the software takes to produce the contact sheet – an impressive feature with real practical applications.

The lens that comes with the Phase One Camera System is the excellent Phase One 80mm f2.8 AF: a relatively lightweight yet robust lens that delivers a fantastic performance, is fast to focus and offers a good level of sharpness. As well as the extensive range of optics that are already compatible with the Phase One Camera System, leaf shutter lenses – which allow the camera to sync to flash at any speed – will also be available soon, to be announced at the upcoming Photokina 2008 trade show in Cologne, Germany.

The resulting image quality, once processed using the bundled software, is nothing short of stunning. Looking at a finished print from the Phase One Camera System, you begin to appreciate the reason for the expensive price tag. An enormous amount of detail is captured and we really can't fault the system in this respect. Coupled with the tools provided in the Capture One software (in particular the facility to correct any lens-generated issues), we doubt anyone would be disappointed with the exceptional level of quality of the resulting images from this camera.

AF-ASSIST BEAM

An AF-assist beam is emitted from this point, making it easier for the camera's focusing system to lock-on in low light

POWER/BURST MODE LEVER

Use this lever to power down the camera body, switch between Single and Continuous shooting and lock up the mirror



AF MODE SWITCH

Rotate this to select from Continuous and Single AF modes, or to revert to Manual focusing

Phase One 645

Technical data

Model	Phase One 645 Camera System
Price	From £7,200 – £19,995
Web	www.phaseone.com
Phone	01903 741 821
Megapixels (effective)	16-60, 5MP (by back)
Max resolution	8984 x 6732 pixels (by back)
Sensor information	Full Frame 645 53.9mm x 40.4mm (by back)
Lens data	By lens
Zoom	By lens
Focus/macro	By lens
Shutter speed	1/4000s - 60 min
ISO sensitivity	50 - 1600 (by back)
Exposure modes	P, A, S, M
Metering options	TTL, A, A-S, S
Flash modes	1st & 2nd curtain
Connectivity	FireWire
Weight	2,250g (including AF 80mm f2.8 lens and P+ digital back)
Dimensions	1130.8 x 98.5 x 74.7mm
Batteries	AC power supply, Body: 6x AA
Storage	CF
LCD	2.2"
Viewfinder	Fixed prism

Verdict

FEATURES 9/10

■ This medium-format system offers a range of options, depending on your shooting style and budget

BUILD QUALITY 10/10

■ The matte finish and rubberised grip on the camera body make it easy to keep hold of

HANDLING 9/10

■ Well-positioned controls and a minimalist design – the LCD and battery life of the back are the only issues

QUALITY OF RESULTS 10/10

■ The image quality this camera is capable of producing is astounding

VALUE FOR MONEY 9/10

■ The cost of this system is in-line with competitor's offerings, making it a worthy contender

Total 9/10

A worthy choice for photographers looking for superior image quality and easy handling from a medium-format system

Contenders

HASSELBLAD H3D II-31

PRICE: £9,495 + VAT

WEB: www.hasselblad.com

TEL: 0208 731 3250

This 31-megapixel powerhouse offers a resolution of 31mp and full integration between camera, capture unit, lens, viewfinder and software.

LEAF AFI CAMERA SYSTEM

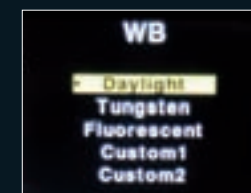
PRICE: £14,795-16,995

WEB: www.peartreephoto.com

TEL: 020 7251 2044

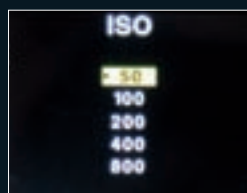
This offers an impressive range of specs, depending on the system you opt for. Resolutions range between 22 and 33mp, with frame rates of 50-70 frames per minute.

INDETAIL ▶ Menus



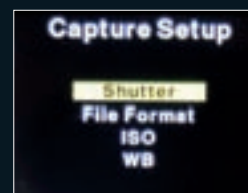
WHITE BALANCE:

Pressing a dedicated button opens up the White Balance menu, where you can select from Auto, four presets, or create up to three Custom settings.



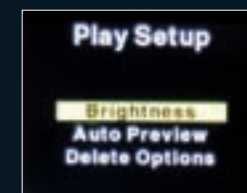
ISO:

Simply scroll down and select your desired sensitivity. The sensitivity range available is dependant upon the digital back you choose to couple with the camera body.



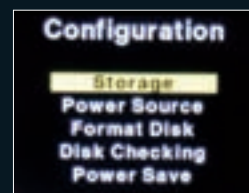
CAPTURE SETUP:

This menu allows you to customise the way the camera operates, with the option of fine-tuning the shutter latency, file format, ISO and white balance.



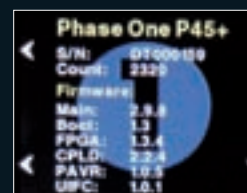
PLAY SETUP:

Here you can adjust the brightness of the screen, customise the length of time a preview image is displayed and turn the Confirm Delete command on/off.



CONFIGURATION:

Select power source, storage, format your storage card, perform a disk check, activate Power Save, set Time/Date/Language and turn the Ready beep on/off.



ABOUT:

Use this menu option on the camera to monitor details like your equipment's serial number, firmware version and card info.

ON THE FREE COVER CD: See the high-res versions of all the test shots taken by our reviewers on the free CD on page 146. Load

them up today and see the kind of picture quality you can expect to achieve from every new piece of photographic kit tested here