

# The X Factor

## HASSELBLAD X1D 50C

Where Fujifilm's GFX 50S is all businesslike and down-to-earth practicality, the Hasselblad X1D is more about style and emotion. But does this make it a better camera?

REPORT BY PAUL BURROWS



External controls are kept to a minimum, but there's still a conventional mode dial with front and rear input wheels.

**COULD THERE BE ANY** greater differences in the design philosophies behind the Hasselblad X1D 50c and the Fujifilm GFX 50S... or, indeed, their executions? It's absolutely going to influence buying decisions, as these fundamental differences directly affect both accessibility and application.

It's probably true to say that both Hasselblad and Fujifilm have similar objectives – namely, to sell more digital

medium format cameras. But for the Japanese this is a whole new ball game, while for the Swedes it's a case of increasing the appeal of the marque by moving beyond its 'traditional' products. Both have married mirrorless and medium format at the same time, but with no previous form here, Fujifilm is banking on the impressive track record it's established with the X Mount camera. Hasselblad is banking on being

Hasselblad... with a twist. Consequently, the only thing the X1D and GFX 50S have in common – apart from being mirrorless digital medium format cameras, of course – is the source of their 44x33 mm CMOS sensors, and even these both have bespoke designs, backed by processors programmed in different halves of the globe.

You're going to want the Hasselblad straightaway. It's simply gorgeous... all Scandi über-coolness and, just in case you didn't get the message, engraved "Handmade In Sweden" on its elegant top panel. Pick it up and you simply won't want to put it down... the front-to-back handgrip is supremely comfortable and the touchscreen GUI continues the casual-but-careful stylishness, as do neat design touches such as the push-down-to-lock main mode dial.

The GFX 50S is altogether more business-like in both form and function. It's also very traditional in its use of its basic configuration, external controls, a top-panel info display and conventional menus. There are touchscreen controls, though it's more of a flirtation than the Hasselblad's full embrace.

But there are clever touches here too – the detachable EVF and the three-way tilting LCD monitor screen to name just a couple. The EVF is tiltable too, via a little optional accessory. Operationally, the Fujifilm camera has its roots in the X Mount models so there's a logic that anybody, amateur or pro, will immediately grasp. Conversely, here the X1D has been more influenced by the world of digital medium format cameras where things are often done a little differently... for example, RAW capture only. The 'Blad also has a RAW+JPEG mode, but the appended JPEGs are one-quarter resolution only (i.e. around 12 megapixels). This is actually quite a key difference in terms of potential users... Fujifilm emphasises in-camera processing – including the brilliant 'Film Simulation' modes – while Hasselblad is still thinking post-camera, which is a different way of working for some, if not many, photographers. There are, of course, many advantages to shooting RAW, but not everybody wants – or, indeed, needs – to do it. It would be nice to have the option of full-res

JPEG-only capture on the X1D, as Leica offers on the SL, which is undoubtedly a competitor if you're thinking of spending this much money.

And talking of money... the GFX 50S costs quite a lot less than the X1D, but as we now know, all that hand-making in Sweden doesn't come cheaply. Nevertheless, even if it's still a big step up in expenditure from the key competition – which mainly comprises the Canon EOS-1D X II and Nikon D5, the Pentax 645Z and the Leica SL – it's still the most affordable contemporary 'Blad you can buy right now. The Fujifilm camera is right in the mix here and there's the added attraction – as far as many potential users are concerned – of a zoom lens available right from the off. While both Fujifilm and Hasselblad are working hard to build their mirrorless medium format lens offerings, there's no competition as far as the pro-level full-35mm D-SLRs are concerned so perhaps it's fanciful to think there's even a competition here... there certainly isn't one as far as speed is concerned. And it'll be a long time... if ever... before there's a 300mm-equivalent telephoto or a juicy 100-400mm range zoom.

So perhaps Hasselblad is right to go for a design that's still more traditionally digital medium format at heart, tuned to a narrower set of potential applications. And perhaps it's also right to appeal



Just in case you didn't appreciate what you were looking at... but all that hand-crafting comes at a price.

The rear panel layout is also minimalist, and the flush-fitting monitor all about aesthetics.



to the heart before the head, because there's no doubt that the X1D, despite quite a few quirks, is a camera to fall in love with.

### Making A Difference

So let's deal with these quirks first. Well, they're not so much quirks as differences... but they still matter if the stated aim is so attract a new type of clientele... specifically anybody who isn't a studio-based shooter.

We've already noted the absence of full-res JPEG capture, but where the GFX 50S's feature list is a forest of ticks, the X1D's is almost puritanical. You get the impression there were conflicting philosophies at play during the product planning stage. For example, white balance controls are provided, but the manual cheerfully states "White Balance settings are technically not necessary for 3F/3FR files". This is true, of course, but they are needed if you're dealing with the 12.4 MP JPEGs in-camera and you want to shoot them off immediately via WiFi. So the X1D has auto WB correction, a selection of presets and manual colour temperature control, but no provisions for custom settings.

Then there's a full complement of exposure control modes, but no multi-zone metering and no auto bracketing. The latter might come in handy given the metering options are centre-weighted average, centre spot (which is more like a

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selective area measurement as it covers 25 percent of the frame) and spot. However, in manual mode there's the option of a handy live exposure preview to guide settings. For the auto modes, exposure compensation runs up to +/-5.0 EV and there's an AE lock. There's also something called the 'Manual Quick' (Mq) mode which overcomes shutter lag by pre-closing shutter – hence disabling live view – which then makes things faster and quieter. The drawback is that Mq has to be first set up in another mode.

Shutter lag is an issue with the leaf-type shutters used in the XCD lenses, especially with the larger sensor, but the advantages are flash sync at any speed and, in the case of the X1D, a slimmer camera body. They're also hugely reliable, hence a one million cycles lifespan rating. Hasselblad's heritage has been in leaf-shutter lenses ever since the 500C, and the XCD lenses



**IN DETAIL**

Viewfinder eyepiece incorporates a proximity sensor to facilitate auto switching between the EVF and the monitor screen.



Look familiar? Hotshoe pin configuration is for Nikon Speedlights which give the X1D some handy flash capabilities.



The memory card compartment and connection bay are very neatly integrated into the side of the camera body. Flush-fitting covers slide out to unlock.



The sensor is another version of Sony's ubiquitous 44x33 mm CMOS imager which has an effective resolution of 51.3 megapixels. Hasselblad has ordered its own design tweaks.

have mechanisms that run up to 1/2000 second. But it's exactly because they are mechanical that there's an initial inertia to overcome.

**Focused**

The X1D has arrived with three prime lenses which, unlike the camera body, are made in Japan, but for obvious reasons, not by Fujifilm. The choice is a 45mm f3.4 which is equivalent to a 35mm wide-angle in the 35mm format, a 90mm f3.2 (equivalent to 70mm) and a wonderful 30mm f3.5 (equivalent to 24mm). Arriving very shortly is a 120mm f3.5 (90mm) and in the pipeline are a 22mm (18mm) ultra-wide and the all-important zoom, a 35-70mm (28-60mm).

All are autofocus, of course, and here the X1D is considerably ahead of its more traditional reflex cousins in the Hasselblad stable. The system employs contrast-detection measurements using 35 points in a 7x5 pattern (providing around 80 percent frame coverage) with the option of manual selection. It's first necessary to hold down the camera's AF/MF button for one second to bring up the points display, but then you can use the touchscreen to make selections which helps speed things up. At 4x4 millimetres the AF points are quite big, but we didn't experience any issues with selectivity and there were situations where this size was an advantage. There's a 100 percent zoom function for checking focus at the selected point and a full-time manual override for fine-tuning. Manual focusing is assisted by the magnified image and, if desired, a focus peaking display which is available in a choice of colours.

**In Touch**

The X1D's touchscreen and graphic user interface is where the progressives in the design team obviously got their own way. It's similar in implementation to that of Leica's T with the idea that it replaces a bunch of external controls in the quest for quicker and more efficient operation. Hasselblad hasn't gone quite as far as Leica – some conventional controllability is retained – but a whole lot further than Fujifilm with the GFX 50S.

Consequently, for general shooting the X1D can be operated entirely from

the touchscreen which has swipe and pinch/spread actions as well as tapping and double tapping (this, for example, to engage and disengaged the 100 percent zoom function). Up or down swipes switch between the main menu and the control screen which shows all the key capture settings. There are five keys arrayed down the right-hand side of the monitor screen which are also used for switching displays plus replay, entering settings and the quick return to the main menu. This is icon-based, as are the sub-menus, so everything is just a quick tap away. The main menu is divided into three sections – Camera Settings, Video Settings and General Settings – and it can be customised to change the displayed functions, although given the brevity of what's available, you'll probably only need to make minor tweaks. That said, it all works brilliantly, becoming progressively faster and more intuitive with familiarisation. It's essentially pretty simple, but oh-so-elegant.

The monitor screen itself is not only fixed, but flush-fitting so here's another example of aesthetics taking precedence over any practicalities. Do we care when the X1D looks so gorgeous? Not really, although there could be issues when shooting in certain outdoor conditions... and the X1D has obvious attractions for landscape photographers.

The specs say the panel is 7.62 cm in size with a resolution of 921,600 dots which looks a bit pedestrian, but in reality it seems both bigger and a lot sharper. Go figure. The 'Control Screen' – a.k.a. the main info display – is a neat bit of work too... for example, depending on the exposure mode, the auto setting is shown in grey digits while the changeable setting is in white. You don't even need to check the P, A, S or M indicators to instantly

know what mode you're in. Apertures, shutter speeds and ISO settings are accessed via scrollable vertical scales navigated by up/down swipes. Very nifty touchscreen sliders dial in the exposure and flash compensation using left/right swipes to move the cursor. And everything is properly sized for touchscreen control too, so there's no risk of mis-setting because you've either missed the icon or accidentally hit something else.

The live view displays – in the EVF and monitor – include the options of including basic capture data, a 3x3 grid guide and dual-axis level indicators, but curiously, not a real-time histogram. However, when it comes to histogram displays in replay, your cup runneth over with the choice of a luminance (brightness) graph, separate RGB channels or combined RGB channels shown as overlays on the image. Again in replay, the touchscreen implementation is excellent so simple tapping takes you through the histogram overlays, browsing is via swiping, and zooming via spreading two fingers from the pinch position. To speed things up you can also browse nine-thumbnailed pages by swiping a scrolling bar.

**Body Beautiful**

As noted earlier, the X1D retains some conventional controls in that it has a main mode dial with front and rear input wheels, but there's only a small smattering of other buttons for the key capture functions (i.e. focus mode, white balance, sensitivity and depth-of-field preview). The input wheels can be used for navigation, but it really is more efficient to use the touchscreen. The main



**TEST IMAGES**

Test images captured as 3FR Hasselblad RAW files and converted in Adobe Camera Raw for processing in Photoshop. Image quality is exceptional with beautifully resolved detailing, smooth tonal gradations and a wide dynamic range. Noise levels are commendably low up to ISO 6400 with very little reduction in dynamic range.

mode dial's locking arrangement – so it's pressed and recessed into the top panel – isn't a new idea, but it hasn't been done very often before despite being a much smarter method than a plain old locking button.

Externally, the X1D is all about

style, with the hewn-from-the-solid aluminium bodyshell – something else it has in common with the Leica T – simply a joy to behold... and to handle. The latter is helped by that wraparound handgrip without which the camera would actually be less than

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### THE MENUS

Main review screen includes an overlay of capture data, including the lens focal length.

Take your pick of histogram overlays – brightness, combined RGB or separate RGB channels.

The Control Screen layout is crisp and clean.

Live screen can be configured with a 3x3 guide grid or dual-axis level indicator.

Externally, the X1D is all about style, with the hewn-from-the-solid aluminium bodyshell simply a joy to behold... and to handle.

a couple of centimetres in thickness. Not surprisingly, it feels incredibly strong and is weatherproofed, but our test sample – which, admittedly, has probably had a hard life – was showing a lot of cosmetic wear and tear where painted finishes had been used.

The EVF has an extra-wide eyecup which is very comfortable and effective at excluding any stray light. The EVF panel is an LCD display about which little is known beyond its resolution of 2.36 megadots. It's good, but not as good, it has to be said, as the GFX 50S's 3.69 megadots OLED panel. A proximity sensor in the eyepiece allows for automatic switching between the viewfinder and the monitor screen. The flash hotshoe is, interestingly, pinned for Nikon's higher-end Speedlights (such as the SB-910) and its TTL auto flash exposure control. Presumably this means the X1D should be compatible with Profoto's Air Remote TTL-N controller and, subsequently, its various TTL-enabled flash products such as the B1/B1X, B2 and D2. Another quirk... there's no PC flash terminal.

The memory card compartment and connection bay are very neatly integrated into one side of the body, with flash-fitted covers which slide out to unlock and then swing open. The former has dual slots for the SD format while the latter contains a USB 3.0 'Superspeed' connection, a mini (Type C) HDMI terminal and stereo audio input plus output (both for 3.5 mm minijacks). The battery is housed in the X1D's base and employs the same arrangement as on the Leica SL whereby its base also forms the compartment's cover. There's a release lever, but the battery is completely removed by pressing down on the base/cover. Again, it's all about maintaining those clean, crisp lines and uncluttered surfaces.

Obviously from the connectors noted above, the X1D can shoot video, but as we noted with the GFX 50S, it's hard to see the serious video-maker going down this route when there's so much more capable machinery available for a lot less money. As with the Fujifilm camera, there's no 4K option, but the X1D does a pretty decent job with either 1080p or 720p footage – albeit with the choice of 30 or 25 fps speeds only – and has reasonably good built-in stereo microphones. Functionality is very limited (not even AF is available), but there is a start/stop icon in the touchscreen which is a nice... ahem... touch. Video streaming is available from the HDMI connector.

### Speed And Performance

The X1D is no speed machine, but then no digital medium format camera is. It takes an eternity to start up, but after that the AF is quite responsive and the shutter lag doesn't seem excessive, so it's possible to shoot at up to 2.3 fps with RAW+JPEG capture. This is a bit slower than the GFX 50S, but still not bad unless you want to shoot fashion or active children.

The AF also quite reliable, only occasionally faltering in low light situations. The metering tends to underexpose which is probably to help get the most from the highlights, but

you can't help wondering if a multi-zone system wouldn't be ultimately more reliable overall. Just as well the X1D's exposure compensation is so quick and easy to apply.

The image quality is, not surprisingly, superb, with the X1D optimising the sensor's resolution by not having a low-pass filter. There's just masses of finely-resolved detail especially as the XCD lenses are undoubtedly designed to handle a 100 megapixel version of the camera in the future. Hasselblad quotes a dynamic range of 14 stops which, with RAW capture, means there's plenty of scope for dealing with the brighter highlights and recovering shadow detail with post-capture processing. Hasselblad has its own free Phocus software, which automatically applies any in-camera lens corrections (for chromatic aberration, distortion and vignetting) and removes moiré patterns with the 3FR files. These files can also be converted in Adobe Camera Raw and processed in Photoshop, but not in Capture One due to 'Blad being a direct competitor to Phase One.

As we found with the GFX 50S, the high ISO performance is a revelation for a digital medium format camera, and Hasselblad goes further by extending the X1D's native sensitivity range up to ISO 25,600 (an expansion setting on the Fujifilm camera). Noise levels are impressively low up to ISO 1600 and still not problematic at up to ISO 12,800. Likewise, due to the way in-camera amplification is applied above ISO 1600, there isn't such a dramatic loss of dynamic range at the highest sensitivity settings, which means there's still plenty of scope for 'rescuing' exposures when shooting in very low light situations.

The colour reproduction straight out of the camera is a little on the flat side, but any RAW processing software allows for the adjustment of saturation and hue as desired. It's a sound base to start from.

### The Verdict

Big thumbs up for the external design and styling, the ergonomics and the touchscreen operation plus, of course, the image quality even if you have to do some extra work post-camera to realise it. Thumbs down for a slightly confused feature set in terms of what's there and what's not, the absence of full-resolution JPEG capture with in-camera processing options,

The good news is that a lot can be done with firmware upgrades, as has been proven by the likes of Fujifilm and Olympus with their smaller format mirrorless systems. Hasselblad is already talking about increasing the number of AF points and it wouldn't be hard to also add the mysteriously missing features such as a real-time histogram, multi-zone metering and at least one custom white balance measurement. Importantly, the fundamentals are right... very right. There isn't a nicer handling camera on the market in any format or configuration, and the touchscreen implementation is exemplary. The Fujifilm GFX 50S is the more capable workhorse by a long shot, but the Hasselblad X1D is the more convincing manifestation of what a mirrorless digital medium format camera should be. It's still flawed – at least for the time being – but still also undoubtedly fabulous. **GP**

The body comprises solid aluminium components and is weather sealed, so it's rugged as well as beautiful.



### SPECS HASSELBLAD X1D 50C \$13,999

body only.

**Type:** Professional digital medium format mirrorless camera with Hasselblad XCD bayonet lens mount.

**Focusing:** TTL automatic via contrast detection measurements using imaging sensor. 35 focusing points with automatic or manual selection. Touch AF point selection. Single-shot and continuous modes. Full-time manual override. 100 percent zoom function for focus assist. Sensitivity range is EV 1 - 19 (ISO 100). Low light assist via built-in illuminator. Full-time manual override. Manual focus assist via magnified image and focus peaking display (choice of cyan, yellow and magenta colours).

**Metering:** TTL using the imaging sensor with centre-weighted average (75:25), centre spot (25 percent of frame) and spot (2.5 percent of frame) measurements. Metering ranges are: centre-weighted average and centre spot = EV 1 - 21, spot = EV 2 - 21 (ISO 100).

**Exposure Modes:** Program, shutter-priority auto, aperture-priority auto, manual, manual quick and TTL auto flash. Exposure compensation up to 5.0 EV in 1/3, 1/2 or full stop increments. All exposure settings adjustable in 1/3, 1/2 or full stop increments.

**Shutter:** Electronic, between-the-lens leaf type, 60 seconds to 1/2000 second plus B (XCD lenses). Flash sync at all speeds.

**Viewfinder:** Electronic, LCD panel with 2.359 megadots resolution. 100 percent scene coverage. Eyepiece strength adjustment built-in. Auto or manual switching between EVF and monitor screen. Fixed 7.62 cm LCD monitor screen with 921,600 dots resolution and touch controls.

**Flash:** No built-in flash. External units sync via ISO-standard hotshoe (Nikon i-TTL exposure control).

**Additional Features:** Aluminium alloy body with weather sealing, depth-of-field preview, three custom camera set-ups, AE lock, programmable self-timer (2-60 seconds delay), auto power-off.

### DIGITAL SECTION

**Sensor:** 51.3 million pixels, CMOS with 32.9x43.8 mm imaging area. No low-pass optical filter. Sensitivity is equivalent to ISO 100-25,600.

**Focal Length Increase:** 0.8x

compared to 35mm, 1.3x with 6x4.5cm format lenses.

**Formats/Resolution:** RAW with lossless compression in Hasselblad 3FR format. 8272x6200 (4:3 aspect ratio), 6200x6200 (1:1 aspect ratio) or 8272x4647 (16:9 aspect ratio) pixels, 48-bit RGB colour. RAW+JPEG capture (at 12.4 megapixels with High or Normal quality settings).

**Video Recording:** MOV format (MPEG 4 AVC/H.264 compression) at 1920x1080 pixels and 30 or 25 fps and 16:9 aspect ratio. 1280x720 pixels at 30 or 25 fps and 16:9 aspect ratio. Stereo microphones with manual levels adjustment. Stereo audio input and output provided (3.5 mm minijacks). Full HD clip length up to 30 minutes.

**Recording Media:** Dual slots for SD, SDHC and SDXC memory cards (with UHS-I support). Individually selectable as a specific file destination, or for automatic overflow.

**Continuous Shooting:** Up to 2.3 frames per second.

**White Balance:** TTL measurement. Auto correction with six presets plus manual colour temperature setting (2000 to 10,000 degrees Kelvin).

**Interfaces:** USB 3.0 SuperSpeed (Type C), mini HDMI (Type C), 3.5 mm stereo audio input, 3.5 mm stereo audio output.

**Additional Digital Features:** In-camera lens corrections (for chromatic aberration, distortion and vignetting; applied automatically post-camera using the Phocus software), sRGB and Adobe RGB colour space settings, dual-axis level indicator, grid guide, exposure simulation display, RGB/brightness histogram displays, nine thumbnails page, built-in WiFi (2.5 GHz or 5.0 GHz), tethered shooting via USB.

**Power:** Rechargeable 3200 mAh 7.2 volt lithium-ion battery pack.

**Dimensions (WxHxD):** 150x98x71 mm (body only).

**Weight:** 725 grams (body only with battery pack).

**Price:** \$13,999 (inc. GST) for body only, \$3499 for XCD 45mm f3.5 lens, \$4199 for XCD 90mm f3.2 lens and \$5799 for XCD 30mm f3.5 lens.

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