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Est. 1895 | autocar.co.uk | 7/14 December 2022

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Landscape mode

Ultra-high-resolution photographer Alexander Lindsay has made an art form of shooting some of the world's most dramatic landscapes to produce enormous yet pin-sharp prints. **Richard Webber** spends a day with him in search of the ultimate 'big landscape, small car' image

PHOTOGRAPHY MAX EDLESTON, ALEXANDER LINDSAY



At an Alexander Lindsay exhibition, you don't just walk around the room, you walk around the photographs. His prints go up to 15 metres wide, with a surface area more than two-thirds that of the Bayeux Tapestry. But unlike, say, giant-format billboard ads, Lindsay's prints are incredibly sharp – 200 dots per inch at a minimum – which means you'll never see pixelation or degradation: what looks like a beautiful landscape from across the room still looks beautiful at the end of your nose. It's brain-bending stuff, widely known as gigapixel photography.

Lindsay explains his process: "Every camera has a sensor,

whether it's film or digital, and the size of the sensor dictates the quality of the picture. Taking a digital sensor and overlapping images in effect makes that sensor truly enormous, giving a much, much higher quality image. You can make it as big as you want. I use a high-spec Nikon Z7 – nothing you can't buy on the high street – but it's more about taking the pictures in a precise grid. You then stitch them all together in Photoshop."

Fife-based Lindsay is now exclusively a photographic landscape artist whose typical prints are between one and eight metres wide and cost around £1000 to £6000.

But his 40-year career comprises a panoply of photography and film-making projects

beyond the reach of civilisation, from the bottom of the ocean to the Atacama Desert and Soviet-occupied Afghanistan (see Q&A over the page). He half-jokes that Scotland on a rough day can be as challenging as anywhere, but we're hoping for clemency on a warm-ish October afternoon in Perthshire.

'Big landscape, small car' is a phrase uttered by Autocar snappers on more indulgent shoots, accompanied by a noble, faraway stare as they scour some pretty vista for a spot to place the car. But this time, we're going giga.

Our subject is a Jeep Compass crossover, specified in Trailhawk trim for the off-road chops to satisfy Lindsay's wilderness oeuvre, and in Colorado Red for maximum visibility. The idea is to find a perch for the car within a sprawling

landscape to fill two pages of the magazine. At first glance, it will appear tiny but remain pin-sharp when we blow the image right up.

Lindsay's chosen spot is in Strathardle, where we leave the A924 to cross the river and venture onto a sporting estate. Blacktop gives way to rough and we begin trading on the skills that make this the only Compass to wear Jeep's 'Trail Rated' badge. Look beyond its modest silhouette, candy hue and metropolitan plug-in capability and the Trailhawk packs the kind of below-the-radar gubbins that once made farmers swoon for Subarus.

Unlike an entry-level Compass, the ride height starts with a '2', like a Wrangler's. There's also an extra 77mm of wading depth, improved approach and departure angles, a 20:1 low-range ratio for the →

The Jeep's all-season Continentals are 'mud and snow' rated but not specifically for off-road. That might explain the rear axle briefly losing traction on a grassy bank.

SMALL CAR...

JEEP COMPASS 4XE PHEV TRAILHAWK 1.3 TURBO

Price	£43,545
Engine	4 cyls in line, 1332cc, turbocharged, petrol, plus electric motor
Power	237bhp at 5750rpm
Torque	258lb ft at 1850rpm
Gearbox	6-spd automatic, 4WD
Kerb weight	1935kg
0-62mph	7.3sec
Top speed	124mph
Battery	11.4kWh (total)
Economy	141.2mpg
Electric range	29 miles
CO₂, tax band	46g/km, 8%

...BUT PERFECTLY FORMED

← six-speed auto gearbox, hill-descent control and additional underside armour. There's a 178bhp, 199lb ft blown 1.3-litre petrol four-pot powering the front axle and an electric motor at the back that makes only 59bhp but almost matches the engine's torque.

A snaking trail rises through ancient woodland whose massive, gnarled roots strangle the path. The gradient increases and there are muddy sections, rocks and V-shaped ditches to contend with. Choosing Sand/Mud mode from Jeep's proprietary 'Selec-Terrain' system cranks up the idle speed, locks in four-wheel drive and maintains traction sufficiently as we weave and rise, without any obvious dissonance between the contrasting power sources at each



Precise set-up of the camera is imperative

end. We can't move as swiftly off road as Lindsay's 02-reg Toyota Land Cruiser, but that's mainly about ground clearance. It still feels impish doing this stuff at all in an electrified family crossover.

We breach the tree line onto open moorland. On steeper inclines, the optional 360deg camera gives a helpful view of the terrain ahead when we see only sky through the windscreen. Short downhill sections let us try Hill Descent

mode, which requires low range and steadily shepherds us down.

Lindsay picks a hairpin on which to place the Jeep then drives on some more before tramping across the spongy carpet of grass, sphagnum and heather. We can barely make him out when he radios to say he's happy with the set-up. Autocar photographer Max Edleston and I scramble up to meet him and take in the view. The valley is green and bucolic; pastures are separated by trees that look like broccoli from here, then the verdant softness gives way to the bare, rugged uplands, ruddied by autumn.

The Nikon sits on a tripod using a manual panoramic head, which has markings in degrees. The shape of our magazine's double-page spread – 1.5 times as wide as it is high – makes for a narrower field of view than Lindsay normally shoots, at around 45deg. Nevertheless, with the camera turned to portrait orientation and a 135mm zoom lens, he'll need 40 shots totalling about 1.9 gigapixels, from which he can then create the final image.

The head is set up so the camera rotates around the nodal point, which is where the light beams cross within the lens. This avoids parallax, meaning the individual images remain in sync and can be joined up with precision.

Shadows cause variation, and



Q&A

ALEXANDER LINDSAY

LANDSCAPE
PHOTOGRAPHER**What is the most extreme environment you have worked in?**

"Filming and photographing the wreck of the Titanic 4km underwater was technically very challenging, adapting equipment to work on submersibles. I was inside a tiny capsule with two others, 12 hours at a time. We took Buzz Aldrin down and he said being on the bottom of the ocean felt very similar to being on the moon."

How did you get into gigapixel photography?

"I was planning another Titanic expedition with the very brilliant photographer Christoph Gerigk, who had pioneered what he called 'mosaic photography' to create vast images of underwater archaeological sites with incredible colour and clarity. It never happened, but the project evolved into my eight-month expedition

through South America in 2013, and I developed my techniques from there."

What are the challenges of working in an active war zone?

"Filming with the Afghan mujahideen was a hell of an undertaking. We went months at a time without access to electricity. There were 13 porters with mules. Just keeping the 16mm film equipment clean and working was incredibly hard."

What vehicles have you used on your expeditions?

"I shipped a Nissan Navara to South America, and it was absolutely dreadful. We did 25,000 miles, but it required unbelievable pampering. In southern Africa I used a 20-year-old Toyota Land Cruiser, as I do at home. I have a total passion and respect for Land Cruisers. With the Afghans we'd often travel in 1970s FJ40s, which were fantastic."



Lindsay is used to more hostile places



Changes in the light can interfere with the multi-image process

The Compass has a usable zero-emission mode, although at least around 3% of the battery's 11.4kWh capacity will be held back for four-wheel-drive duties.

Trailhawk edition is Jeep's only 'Trail Rated' Compass



therefore complication, so when the sun obligingly breaks out and a new spectrum of colours emerges across the scene, there is a silent flurry of activity. To eliminate hand-induced tremor, Lindsay uses a remote trigger to take each shot, then rotates a couple of clicks on the head and repeats until a left-to-right sweep is done. He then tilts the camera up a little (freehand this time) and sweeps again. Four sweeps and just a few minutes on, it's done. "That was nice," he beams.

A week later, I'm downloading a very large zip file. After overlaps are trimmed off and the image is cropped, the final photograph is 1.4 gigapixels. My monitor's resolution is a respectable 1920x1080 pixels, but I'd need 17 of them to view the whole thing at 100% scale.

More important than the numbers are that we have a gorgeous Perthshire landscape,

from foreground tufts to distant mountains, all in vibrant shades, with a speck of bright red among the moorland. We can zoom in until that speck not only assumes the shape of a Jeep Compass but also retains enough sharpness to make out the tread pattern on the tyres.

We can also magnify a distant, brownish hill near the horizon until a patch of green appears on its slopes, then keep zooming until it resolves into a field, and eventually we can even count the sheep in that field. And do the same for maybe a hundred other fields in the image. By comparison, one of Edleston's single photographs of the same view becomes a Monet-like work of impressionism long before the field is even discernible.

It's remarkable. But you needn't take my word for it – explore the image for yourself at alexanderlindsay.com/autocar-shoot. **A**