

ATTACK OF THE DRONES

COME FLY WITH ME

The Inspire 1 from DJI has the potential to transform the drone market for first-time fliers.

Terry Hope gets a flying lesson



You can hardly move for news stories about drones just at the minute, and they've certainly caught the public's imagination. It's not hard to see why: they're cutting-edge, exciting and appeal to pretty much anyone who's ever yearned to wield a joystick. However, in the world of pro filmmaking what's getting people excited is their potential for commercial use. Suddenly anyone with access to a fairly modest sum

could think about offering an aerial photography and filming service, a market previously prohibitively expensive to enter.

There are a couple of things to mention up front. First of all, just because everyone has recently gone drone crazy doesn't mean drones have only just arrived on the scene. Heliguy, near Gateshead, is well established and has been supplying custom-built drones to the filmmaking industry for years,

The revolution cometh? The Inspire 1 could change the drone market, particularly for aerial videographers and photographers.

as well as inspection units for specialist businesses. The company has masses of experience, built its first remote-controlled helicopters in 2008 and has recently added distribution of more mainstream UAVs to the bespoke side of its operation, along with dedicated training.

Which brings us neatly onto another point. There is a danger that anyone who has ever flown a toy helicopter might get the idea

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Pro Moviemaker editor, Terry Hope with Heliguy's technician Julian, learning how to operate the Inspire 1.

Flying out of the box

The primary reason for my visit to Heliguy is to get hands-on with the brand-new DJI Inspire 1. A potentially groundbreaking new product, the DJI arrives effectively ready to fly out of the box, doing away with the need to order a bespoke product or to try to offer a professional service with a product that looks like an upmarket toy.

The Inspire 1 is a major step up from DJI's previous top-of-the-range product, the Phantom 2 Vision+. The Phantom was very highly thought of and it definitely had a role to play in the professional market – witness the fact that a specialist retailer such as WEX stocks it – but although it opened the door for many filmmakers, it came with restrictions, both in terms of its rather plasticky appearance and the incorporated camera, which offered Full HD Video capability and a 14-megapixel still camera, neither of which were sufficient for a full professional offering.

Compare this to the Inspire, which not only looks like a fully developed piece of professional kit, but it also comes complete with a 4K camera with a nine-element fixed focus 20mm high-quality lens that can deliver pro-level video footage and a 12-megapixel still camera built in for good measure. The camera sits underneath the body of the drone and can offer a full and unrestricted 360° view of the world below: on the controller you just tap the screen and drag

your finger to wherever you want the camera to look – an amazing level of control. Tantalisingly it's also a separate unit, and so the smart money would be that somewhere down the line there could be alternative cameras, making the Inspire upgradeable.

At the moment the Inspire 1, if you pardon the pun, is flying off the shelves and DJI is having to work hard to keep up with orders. Heliguy, one of the UK distributors, is currently offering the product for £2381 with a single controller and £2747 (both including VAT), including a second slave controller (compare this to the £999 the Phantom 2 Vision+ costs). This second controller is crucial, and it's a sign that DJI is catering for the professional market. A clip on the controller allows a tablet such as an iPad mini or the Samsung Galaxy to be attached, and this then receives a live feed via Wi-Fi so that you can see the view the drone is achieving in real time. Serious film productions usually have one trained pilot flying the craft, while a dedicated camera operator, whose sole consideration is the framing of the shot, is viewing the live feed and controlling the camera gimbal. Doing both things on your own can be tricky, particularly when you're still feeling your way, so most filmmakers will look at the two controller option.

I've come to Heliguy to look at the Inspire 1 and, as a newbie to drone flying, to find out about the training and the legal ins and outs.



DJI's Inspire 1 comes with a camera capable of 4K video and 12-megapixel stills, which offers a full 360° view from its position below the drone.



If you've ever been tempted to buy something like the Phantom 2 or the Inspire 1 online and think you can simply teach yourself to fly it from the instruction manual, you're going to be disappointed. While nothing about either product is difficult to understand – they are both remarkably easy to fly – you can't learn by trial and error. You need to know what you're doing from the off, which is why Heliguy regularly arranges handovers for these products – one of which I was able to sit in on – where everything is explained and the customer goes away feeling more confident.

The company also offers one-day training on the Inspire 1 for those who want to be more confident about flying the product. Full pilot training is going to be

part of the company's future plans. The UAV market is exploding, and professionals are clamouring for the credentials they need to be able to fly legally.

Flying the Inspire

Before you even think of taking off, you need to upload the DJI app that establishes the video link. This gives you access to the Inspire's full range of features. Everything from manual camera controls to flight telemetry and even auto take-off and landing is just a tap away, and there's even a battery indicator that lets you know exactly how much flying time you might have left: clearly a crucial consideration.

Out of the box, the drone needs to be set on the ground and fitted

with a fully charged battery, which clicks into place and provides enough power for a flight time of around 14 minutes. Press the button on the back for five seconds and it comes to life, sitting up on its lightweight carbon-fibre arms as it adjusts to its take-off position. Each of the four 13in propellers is then spun into place and secured with a clip; essentially it's then good to go. Once it's undergone its preliminary set-up it can be prepared for action from scratch in a matter of a minute or so.

And so finally to the moment of truth: the actual flying. Heliguy technician, Justin led me to a vast field, well away from traffic and passing people to demonstrate how to work the Inspire 1. Once it's fired up and while still on the ground, he checks each pair of rotors to make sure they look and sound as they should. Then the craft is gently raised a short distance off the ground and checked again: if it's fine, it's configured into its full flying position and it's good to go. Justin flew several sorties across the field and then it was my turn to have a go, under his close supervision of course.

It was quite a thrill being in charge of such a responsive craft, albeit for a short flight. The two joysticks that control left and right and forward and backward movement and pitch were highly intuitive, and it was quite straightforward to master simple movements. One of the best tricks is the UAV's hovering ability: as it flies, the position of the Inspire 1 is constantly updated and recorded using a high-strength, intelligent GLONASS + GPS system. This dual positioning system enables higher precision and quicker satellite acquisition, allowing you to see where the aircraft is on a live map and giving it a point to hover at when you release the controls. The drone even remembers its take-off point and dynamically tracks your current position, so you can bring it back to its take-off position at the press of a button. It will also come back to you automatically if the battery runs low or the connection with your remote controller is lost.

The Inspire 1 is said to be ultra-stable, and indeed that's exactly how it felt. The onboard Inertial Measurement Unit (IMU) incorporates both a six-axis gyroscope and an accelerometer to

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monitor minuscule changes in tilt and movement. This in turn allows the craft to compensate and adjust immediately, holding its position at all times.

The Inspire 1 is also designed to fly indoors, its Vision Positioning System combining visual data and sonar waves in a single unit, detecting both variance in patterns on the ground and current altitude. With this information, the craft can hover in place and automatically raise or lower its arms as you lift off or descend to the ground.

» More information

www.heliguy.com
www.rheinmetall.com
www.dji.com

SPECIFICATION

Contact: www.dji.com

Cost: £2381

Weight (with battery): 2.94kg

Hovering accuracy: Vertical - 0.5m, Horizontal - 2.5m

Max tilt angle: 35°

Max ascent speed: 5m/sec

Max descent speed: 4m/sec

Max speed: 22m/sec

Max flight altitude: 4500m

Max flight time: approx 18 minutes

Cameras: 4K, 12.7 megapixels

Lens: Fixed 20mm f/2.8, 9 elements in 9 groups

Supported card types: SD

HOW IT RATES

» Features 10/10

4K makes footage future-proof

» Performance 9/10

Highly responsive and easy to fly

» Handling 8/10

After a while it's intuitive.

» Value for money 9/10

Not cheap but opens new doors

PRO MOVIEMAKER RATING: 9/10

Cutting edge technology

+ Pros: Aerial filming on a plate

- Cons: You need to be qualified

THE VERDICT

An unusual test in many ways, and quite unlike the cameras I normally get my hands on! You can probably tell from my comments that I've been very impressed with the Inspire 1, although I have to stress I'm basing my observations on the short amount of time I had with it. Time will tell whether it's reliable in service, but its feature set is truly breathtaking.

The ability to shoot 4K footage from the air is going to set the pulses of many filmmakers racing, and the Inspire 1 has clearly been designed with the professional in mind. I can see all kinds of uses for it, from footage or stills for estate agents through to overhead coverage of wedding parties, spectacular sequences for independent films and countless

commercial applications. On the course, there was even a wind turbine inspector who uses a drone, saving a fortune compared with usual methods (lots of scaffolding!).

The thing to remember is that you can't go into the drone market lightly. It's crucial to have the training, and you need your licence before you can fly legally on commercial jobs. However, adding up the £1560 cost of the Heliguy/Rheinmetall course and the £2747 cost of an Inspire 1 and two controllers still gets you plenty of change out of £4500, and for that you've potentially got a new strand to your business that no weekend warrior is ever going to threaten.

Food for thought? You bet!

