

# GTC WORKSHOPS



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A fully booked workshop was an indication of the popularity of the subject of this GTC event where over 100 people attended the GTC Drone Workshop held at the Latimer Place, Chesham on 26 September.

The day was split into four parts: 'The Evolution and Technology of Drones and Gimbals' introduced by Simon Beer of Production Gear Ltd.; 'High End Done Filming' with The Helicopter Girls Katia Nelhams-Wright and Emma Boswell; 'Rules and Regs' presented by Paul Nicklin of Whispercam Training and, after lunch, flying demonstrations held in the spacious grounds of Latimer Place in what turned out to be some glorious weather.

Simon Beer has always been an enthusiast of UAV or drone flying since their early commercial development and gave video examples of building and experimenting with quadcopters and hexacopters in 2012. There followed video clips demonstrating the various uses for drones including an impressive excerpt of live HD footage being streamed from the Holuhraun Volcano for ABC's *Good Morning America* programme.

Simon then went through the range of drones from DJI in depth, starting with the early Phantom 1 which had a simple hanging device for a GoPro, through to the Phantom 3 featuring a 3-axis gimbal with an integral camera and full operator control. The latest quadcopter, which is proving to be extremely popular with cameramen, is the DJI Inspire 1 which Simon demonstrated. The introduction of the X5 series lens and 3-axis gimbal for



Simon Beer of Production Gear Ltd. demonstrates the new DJI Inspire 1 quadcopter

the Inspire means that cameramen now had access to built-in Micro Four Thirds 4K cameras built specifically for aerial photography.

The Ronin 3-axis hand-held stabilization gimbal was also demonstrated by Simon, giving members hands-on experience of this new technology. The system has three operating modes: underslung, upright, and briefcase mode. The maximum load weight of the Ronin is 7.25kg (16lbs), and with the 3400mA 4S smart battery fully charged, can run for over four hours (depending on the attached camera rig and gimbal usage).

The Helicopter Girls Katya and Emma Boswell are best known for their high-end drone filming, featuring heavy-lifting aircraft carrying the ARRI Alexa Mini.

Their rigs have full camera and lens control and are able to use a range of prime lenses with a maximum focal length of 100mm. Balance seemed to be the key element in providing stable images with a camera operator, as well as a pilot, required for operating a heavy-lift outfit.

Emma stressed the importance of a tech recce before each shoot - looking for safe areas for take-off and landing, sight liners, obstacles, type of ground surface for low flying, frequency interference etc.

Building your own drone was also recommended as this would increase your knowledge of the individual parts that go up to make a flying camera platform. Emma also pointed out some of the restrictions to flying a heavy-lifting drone, including wet weather: it can work in heavy moisture but not in rain.

The total possible lifting weight is 20Kgs top loaded, but it normally flies at around 18K and giving flight duration of 6-7 minutes per battery charge.

In terms of safety standard permissions the CAA requires an aircraft to be 150m from a congested area and 50m from a person, vehicle or building outside the operator's control. The CAA's UAS OSC has introduced a new tier of operating skill and experience enabling a handful of operators to reduce cordon distances, particularly important for congested areas. This enables operators to fly to within 10m of a person, vehicle or building outside our control.

Continuing on the safety and Rules and Regs theme, Paul Nicklin from Whispercam Training described the process of obtaining a PFAW (Permission for Camera Work) from the CAA.

Before undertaking any commercial work operators must undergo a test to prove their competency. There are organisations which have been approved by the CAA to provide training and assessment (like Whispercam), and the qualification is often confusingly named according to which school you are qualified at, BNUC, RPQ, UAPQ etc. The courses generally last from 1-3 days and the ground school and knowledge exam will include subjects such as: air law, airspace, airmanship and human factors, meteorology, navigation and charts, aircraft knowledge and operating procedures. You then have to draw up an 'operational manual' which has to be approved by the CAA before finally taking a flight test which assesses your procedures and skill, and includes 15-20 minutes of flying.

So after a look over some of the more general rules and regs it was outside for a bit of practical flying with a demonstration by The Helicopter Girls flying a heavy rig with a MÖVI gimbal carrying an ARRI Alexa mini. It was an ideal day for flying, plenty of sunshine, light winds and the beautiful spacious grounds of Latimer Place to safely fly in. They also demonstrated a mid-range Hexacopter - the DJI S900 - carrying a Panasonic GH4 on a DJI Z15 gimbal. Simon Beer also demonstrated the Inspire 1 and members were able to try operating the gimbals in a live situation.

There was a huge amount of interest in the new technology and the day proved an excellent taster and introduction to the subject.

Thanks must go to Clive North for organising a brilliant day (I know this was a difficult one to pull together), Christina Fox for hosting the day and sponsors ARRI, Productiongear, Presteigne Broadcast Hire, and contributors Simon Beer of Production Gear, Katia and Emma The Helicopter Girls and Paul Nicklin from Whispercam Training.



Preparing for take-off with the Arri Alexa Mini



Radio camera control



Using the DJI Ronin

