HEXICAM UAV Q&A's

Do you need a license for the UAV?

The IAA (Irish Aviation Authority) assesses every commercial UAV operator through their license scheme, before issuing a license to conduct commercial aerial work. The Ground School training course provides UAV operators with the necessary skills to be able to conduct this type of work in a safe and controlled manner. The UAV is not a toy and has to integrate with manned aviation. Part of the license requirement is to produce an Operations Manual, which details how the work will be conducted. The Operations Manual has to be approved by the IAA before a license is issued, our operations manual details our risk assessments and how we will plan our flights to ensure safe operations.

Do you need insurance?

Insurance is advised by the IAA but not all operators carry it, rest assured though we have cover up to €7 million, worldwide public liability insurance, & we also have camera insurance for our own kit, if a hired in 3rd party camera is used on a shoot the production must have insurance in place.

Can you fly anywhere?

The IAA imposes strict rules to ensure public safety, we are bound by these rules under our license conditions. This Permission is granted subject to the following conditions, namely, that the said aircraft shall not be flown…

Further than 300metres from the operator.

Above the height of 400 feet from the operator.

Within controlled airspace, without the permission of the relevant Authority.

Within an airport traffic zone or closer than 5km from an aerodrome boundary, whichever is the greatest distance, without special IAA permission.

Over or within the confines of a congested area without permission of the relevant Authority

Over or within 120 metres of an open air assembly of more than 12 persons.

Over or within 30 metres of persons, structure or vessel not under our control.

A key point in the approvals is the statement "Under our Control". Although these rules may seem restrictive we can fly closer to people and property if they are under our control in accordance with our operating procedures. We will also require approval from the landowner for the take-off and landing site(s). These are our standard permissions but these can be negotiated with IAA with the appropriate risk assessments. For large events we can apply to the IAA for extra permission or exemption, based on a thorough risk assessment and site survey. This takes time and would require plenty of notice and planning.

Are all drones the same?

Chinese produced off the shelf drones are found in pretty much every aerial photographer's arsenal and can be the cheapest way to capture basic pictures and video. However, if you are looking to create a higher-calibre production, TV documentary or big screen movie, a higher end professional rig such as our Cinestar or Cinema X8 octocopters will produce far superior end results ,especially when coupled with our industry leading Freefly Movi gimbals,. Also having the redundancy of an octocopter makes it a much safer machine for carrying higher end cameras & operating near talent. Be sure to discuss the equipment we have at our disposal.

Are UAV's safe?

Our UAV's are custom engineered & built in-house using industry leading Freefly & Syndrones frames, not to be confused with mass produced craft that can be bought off the shelf & have very poor quality control. We take every precaution necessary to ensure any risk is at an acceptable level before we start. This includes:

Pre-site survey - To ensure we can safely fly at your location and there are no hazards that will cause us concern. This consists of checking aviation charts for airspace, NOTAMS (Notice To Air Men) to see if any manned aviation activities are taking place in the area, Google earth, local press in case of any events nearby, weather and weather warnings.

On-site survey - This is conducted on the day; if we have identified anything in the pre-site survey that causes us concern we will make a prior on-site assessment. This will back up our pre-site survey findings

Safety checks - We carry out before flight operations, and after flight operations to satisfy ourselves the UAV is capable of undertaking any flight in a safe manner.

Fail safes - The UAV is fitted with several fail safe systems. In the event of a radio transmitter failure the UAV will land itself at its take off point. Our UAV's have 8 motors, in the event that a motor should fail we are still able to control the UAV and land it. We can also initiate the fail safe at any time to return the UAV to its landing area.

Emergency procedures - We regularly practice our emergency procedures. To ensure we are calm and under control in the event of a motor or propeller failure.

Safety in general - We will never fly if it is not safe to do so. We will never compromise the safety of others to get the shot. Air Space -Most flights can be approved in controlled airspace & in built up areas but can take a bit of prior planning & submitting of proposal to gain permission from the IAA

What information do you need to provide a quote or plan a flight?

Before you go too far in your planning stages, contact us first. Give us as much notice as you can. You may be in a geographical area where it may not be possible to provide our service. We will need some basic details of your requirements so we can carry out an initial survey to see the suitability of your requirement.

Location where the work is required.

Proposed date and time.

Amount of people involved.

With this information, we will be able to work out if we could deploy the UAV, or if we would need to seek extra IAA permission. We will let you know if your requirement is acceptable so you can continue to fine tune your plans.

How long does it take to setup the UAV's?

The speed of UAV deployment depends on many factors. We will endeavour to make the process as quick as possible. But will not rush our safety duties as a responsible UAV operator. Only once we are satisfied that risk is minimised and everything is within or under our control, then we will deploy the UAV. We can however arrive at the location with the UAV set up and ready to deploy immediately, subject to a satisfactory before flight service. We will usually arrive in plenty of time to carry out our safety checks so we are ready for take-off well before the start time. Filming with a hired in cinema camera, we usually prep the day before so we are ready to roll when we arrive on set.

How long can the UAV fly for?

The flight times vary depending on weight of the camera, air temperature and altitude. Normally our UAV will fly for up to 10 minutes on each set of batteries. We have several sets of batteries and can also charge them on the day in the field via a portable generator.

What quality is the imagery?

We use the Panasonic GH4 with the xl metabones EF mount adapter which provides excellent cinema 4K and UHD & 1080P HD, high bitrate recordings. We also have other more specialist cameras such as the Canon EOS 5D3 and GoPro3 Black. We have a selection of lenses, but can also use your own camera if required (with prior arrangement). We can accommodate most cameras up to the weight & size of the Red Epic Dragon / Canon C300/ 1DC. For these cinema cameras we use a larger X8 copter. With this larger X8 we can also accommodate an optional remote follow focus system & HD live feed.

How stable is the imagery?

We use the industry leading Freefly MoVI gimbals which provide cinema broadcast quality fully stabilised imagery at all times.

Can the camera angles be changed?

We operate our rigs as dual operator. In a dual operator setup, the pilot is responsible for flying the UAV and a separate camera operator can control the pan, tilt of the camera, providing far more flexibility and a greater range of dynamic shots. There is a live video feed to the ground which the pilot and camera operator can view. We can take photos and pan, tilt the camera all remotely.

What format is used for image capture?

Video is captured in AVCHD, MP4 or MOV formats in cinema 4K / UHD or 1080P high definition at various bit and frame rates. Photographs are captured with the 5Dmk3 in RAW and JPEG format simultaneously.

Can you view the images in real time?

Yes, we have a number of SD (standard definition) ground station monitors that allow our clients to view in real-time live remote footage of the UAV camera. This allows our clients to have an involvement in the work and guide us to achieve the shots required. Our pilots also have their own cameras on board which provide them with useful information such as battery levels, height, distance, GPS information, etc. Monitors with remote HDMI feeds are also possible with additional kit.

Can you fly in bad weather?

Rain… We can't normally fly in rain, as rain does not mix well with our equipment especially the camera, any water on the camera lens will ruin any imagery.
Wind. The maximum wind strength we can fly in is 17-20mph, anything more is beyond the UAV's safe working limits. We do however require less than 16mph winds for guaranteed smooth stable footage.

Do you have any sample images or videos?

We have a number of images and videos for reference. These are a mixture of images taken with various cameras, lenses and aircraft. Please see our website, YouTube, and Facebook pages for further details. We have been working with some of Irelands leading production companies since 2009, Our work has aired on Sky TV, RTE, ITV, TG4,.

MAP OF IAA CONTROLED AIRSPACE IN IRELAND.