

Safety Briefing



Mounting Cameras for Use in the Air

Some superb videos and still photos have been shot in flight using cameras mounted in a variety of places inside and outside the glider cockpit. Yet the growing popularity and affordability of high-quality cameras and mounts make it easy to overlook their effect upon the performance and airworthiness of the glider itself.

It is not the BGA's role to tell people whether or not they can attach cameras to their gliders. This note is to suggest some aspects that should be considered. Careful thought, imaginative consideration of eventualities, and assessment of the potential risks, are as important as with any other aspect of the glider's airworthiness.

Security

It's easy to get carried away by manufacturers' claims and assurances, and the solid feel of a suction mount in the comfort of the hangar, but how well will the mount cope against the force of the hurricane-strength airflow over the next hour or so? Your camera probably cost several hundred pounds, so it would be a shame to lose it. Together with its mount it weighs rather more than a cricket ball, and could do some damage if it strikes your tailplane. If it's tethered, or held through the DV panel, it could flail around and smash your canopy. And it's not water or fine sand, so it's likely to be lethal if it hits somebody. Everything else attached to your glider has been designed by a professional engineer.

Even within the cockpit, your camera should be securely mounted. Loose articles can jam controls - as a military Airbus captain recently demonstrated¹.

Aerodynamics

Your high-performance glider has the aerodynamic cross-section of a serving plate. Your camera and mount are probably about as aerodynamic as a sugar bowl. And you might be thinking of mounting them where they can affect the airflow over the wings, tailplane or control surfaces: just about where an earlier manufacturer would have put the spoilers. The effect of your camera could be anything from a few points off the glide angle to turbulence over the tailplane or even a change in handling at the stall. Several pilots have described worrying buffet even at modest airspeeds.

Weight & Balance

It's a long way from the cockpit to the tailplane. A pound on the fin could be equivalent to taking ten times that off the pilot's weight. After formal modifications and repairs, gliders are always reweighed.

Distraction

Now that you're a movie maker, part of your attention is likely to be on the direction, stunts and acting: even if you don't manoeuvre or play specifically to the camera, your concentration and airmanship could be diminished. Do you have the reserves of ability and judgement to cope in the prevailing conditions? Can you avoid being further distracted if the camera needs attention? The NTSB recently blamed distraction by cameras for the doubly-fatal crash of a light aeroplane²; the camera footage provided convenient evidence.

Legality

It is not clear whether your camera would be regarded as 'carry-on' equipment, or whether its attachment to the airframe would need formal modification approval. In either case, the ANO requires all equipment to be installed or stowed such that it does not present a danger or impair the airworthiness of the aircraft³. Your ARC and insurance might be invalid if the glider does not comply with airworthiness regulations - and your club might have its own rules, too.

References

1. Service Inquiry: incident involving Voyager ZZ333 on 9 Feb 2014 <https://www.gov.uk/government/publications/service-inquiry-incident-involving-voyager-zz333-on-9-february-2014>
2. NTSB report on Cessna 150K N6275G, Identification CEN-14FA265 http://www.nts.gov/_layouts/ntsb.aviation/brief.aspx?ev_id=20140531X12318
3. CAP 393 Air Navigation: The Order and the Regulations (2014) article 38 (5) <http://www.caa.co.uk/cap393>

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