

Blindingly Obvious Defence Against Laser Attacks

By Alex Fisher

Laser attacks on aircraft are a worrying development. Some States have brought in legislation making them a specific offence, others choose to deal with them under more general laws. It is likely that such States divide into those who have experienced laser attacks on their territory and those who are about to. Legislation may well reduce the temptation, though it is early days and there are few signs that it is yet doing so. Naturally there is talk of defensive measures, mostly high-tech, but one simple Stone Age defence is available to flight crew, but only if they think about it first and know what to look for.

Greater Manchester (UK) police helicopter unit tracks laser attacks near Manchester Airport; they use video data for evidence, and have showed some of their footage to Flight Safety Groups. What is striking is that before EVERY successful illumination bright, but not blinding, flashes were seen first. It is of course practically impossible for someone with a hand-held laser device to target even a slow moving helicopter from some distance and hit it without 'dithering' around it first. A laser beam is very narrow but a small amount of energy leaks outside the main beam. That's the reason for the warning flash; it is the outer edge of the beam seeking the target but not quite succeeding. In hazy conditions, the beam itself will be clearly visible. This is an excellent warning that something nasty may be about to happen, and is the perfect time to pick up something to protect your eyes and/or at least to look out as little as possible until you find it; the checklist would be an obvious choice. The beam will of course come from the same position as the bright flash just observed, or the base of the beam if that is visible.. At the very worst, a hand in front of the face covering that point would be effective. All laser attacks should be reported to ATC soon as practicable, the earlier the report the greater the possibility of catching the offender red (or green) handed. Lasers emit a very pure light but natural sources are often a mixture of colours/frequencies. A pure bright red or green flash is quite likely these days to be warning of a laser attack

The majority medical opinion at present is that permanent eye damage is unlikely at the ranges most attacks have occurred with the lasers in common use today (this could change as more powerful models reach the market). Dangerous or not, these attacks are certainly distracting and they can only increase landing risks. The defence is as simple as it is obvious, but thinking of it afterwards is no use.

Conclusion

- Think 'laser attack' every night wherever you are in the Western world.
- Treat exceptionally bright flashes on the ground as a warning you are about to be targeted by some idiot with a cheap, powerful toy laser.
- Don't look in the direction of any suspicious light, but use some suitable card, or even a hand, held up to shield the eyes from anything coming from that direction.
- Report any laser attack to ATC immediately.