


<b>OPERATIONS ADVISORY NOTICE (OAN)</b>		 Transport Malta Civil Aviation Directorate Flight Operations Inspectorate Transport Malta Malta Transport Centre Pantar Road Lija LJA 2021 Malta
OAN Number: <b>08/18</b>	Issue Date: <b>09 July 2018</b>	
<b>Subject: Laser Illumination – Information for Pilots</b>		

## 1.0 Introduction

Studies and Investigations on Laser targeting of aircraft have proven the danger to attacked persons. Laser attacks and the safety risks such actions pose have been also included in the Malta State Safety plan. (SSp)

Highly adverse effects have been encountered after exposure to green laser light (peak sensitivity of the human eye especially when dark-adapted, even by daylight – sunglasses!). The diffraction of laser radiation is very low and the output power as high as 1.000 mW. Therefore the distance for laser effects by a 5 mW green laser light (laser pointers for slide shows) are anticipated to be dangerous up to minimum 12.000 ft (FL 120, approximately 2 NM).

## 2.0 Purpose

This OAN shall give guidance for recommended actions in cases of sudden exposure to laser illumination to minimize the negative effects of laser radiation on the eyes health and to improve the capture of perpetrators.

Furthermore the protection from negative effects of health problems of victims hit by laser beams (inflight incidents as results of flash blindness or afterimage, visual injuries and pain, blindness in extreme cases, including the social effects after temporary or permanent reduction of vision) shall be improved.

## 3.0 Appendix

Checklist with recommended actions is being appended to the OAN. Operators may wish to make use this checklist and/or make it available to their crews.

**Flight Operations Inspectorate**

## Checklist with recommended actions

Item	Required Action	Remarks
1. Illumination by laser beam	Move your eyes off the laser beam !	
2. Inform the other pilot	Report the attack and the direction to avoid the effects on the other pilot, e.g. 'laser attack, 10 o'clock!'	
3. First fly the aircraft	Keep the aircraft configuration stable and use the autopilot, if appropriate	
4. If distracted as PF	Delegate the controls to the PNF	
5. Evaluate the location of the laser device	Try to remember/identify <ul style="list-style-type: none"> <li>- the location or direction of the laser beam,</li> <li>- the distance to the aircraft and</li> <li>- the own position and altitude</li> </ul>	
6. Exposure	Estimate <ul style="list-style-type: none"> <li>- the duration of the laser exposure and if</li> <li>- the laser beam did follow your flight path</li> </ul>	
7. Laser device	Try to evaluate <ul style="list-style-type: none"> <li>- movement of the laser source during the illumination and</li> <li>- whether it came directly from the source or has been reflected</li> </ul>	
8. Laser color	Identify <ul style="list-style-type: none"> <li>- the color of the beam and</li> <li>- any change of color during illumination</li> </ul>	
9. Report	Report the attack to ATC asap and ask for immediate report to the law enforcement units	
10. Eye care	Don't rub your eye(s) !	
11. Effects on the vision	What effects on the vision have been experienced? (Flash blindness, glare, afterimage, pain, burn etc)	
12. Deviations from flight track/path	Have there been any evasive maneuvers or changes in configuration or flight track/path due to the attack?	
13. Documentation	Note the date and time/duration of the attack and any of the above information for the further investigations of the Aviation Inspectors or law enforcement officers	