

als

AIRFIELD LIGHTING
SYSTEMS UK LTD

DTS – AIRFIELD GROUND LIGHTING SYSTEMS

DTS Uni-Directional Elevated Lights Sighting Device

Part Code DTS-UESIGHT



Operation & Maintenance Manual

Document Number: **MAN010 – REV D**

Contents

Airfield Lighting Systems UK Limited
Aviation House, Russel Gardens, Wickford, Essex, SS11 8BF
Tel +44 1702 547562 Fax +44 1702 533962 Web www.alsukltd.co.uk Email sales@alsukltd.co.uk

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1.0 History of Change

Page	Revision	Description	Checked	Approved	Date
All	A	Manual Released	AK	DJ	06/04/2021
All	B	Updated	TLS	AK	18/10/2021
All	C	Uni-directional changes	DJ	AK	21/10/21
All	D	High Masts 4.1.2 new section	DJ	AK	15/03/22
All	E	Telescope focus	DJ	AK	06/06/23

2.0 WARRANTY

Airfield Lighting Systems UK LTD, (ALS), guarantee their sighting devices for a period of two years against faulty components.

ALS products are constructed using high performance materials. The use of replacement parts or other materials not obtained from or approved by the company, may lead to impaired performance or reduced service life. The warranty given by Airfield Lighting Systems will be invalidated if non-approved replacement parts are used.

The device should be returned to ALS for alignment calibration every 2 years or sooner if any damage has occurred or the unit has been dropped.

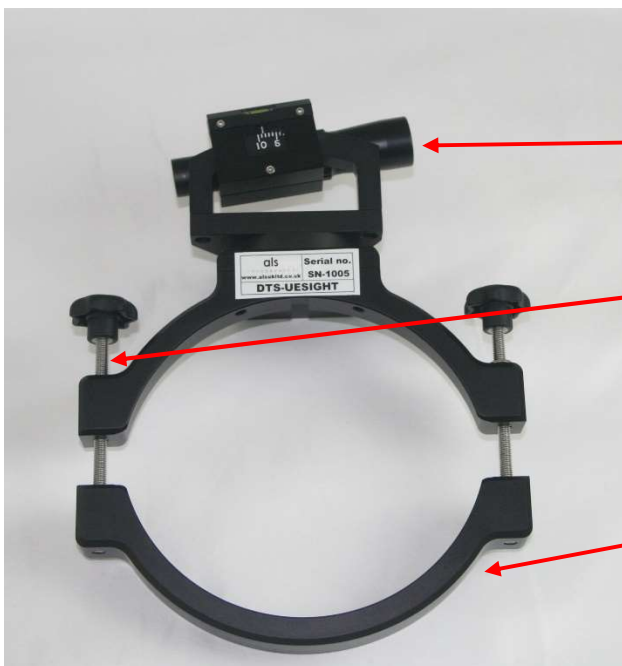
The satisfactory operation of the device depends upon the observance of the recommended setup and storage instructions given in this manual. Failure to do so will invalidate this warranty.

3.0 CONTENTS

Please carefully read and observe all safety related warnings throughout this manual. Failure to do so could result in damage to the device / light fitting and serious injury if the Airfield light is incorrectly installed.

Please observe all local site and regional safety requirements before commencing work on any Airfield. Installation and operation of the sighting device must only be carried out by qualified and competent persons.

The Sighting Device consists of a circular mounting bracket and positioning studs, hand-tightening screws, a telescopic sight (marked with angles for field vision), a gauge to see the angle of adjustment and spirit level bubble to confirm the correct angle is set.



Telescopic sighting device and spirit level bubble

Tightening screws to firmly secure bracket

Mounting bracket to attach to front of light fitting

(Fig 1)

4.0 INSTALLATION

First remove all the items from the box and check all the components are present as shown in Figure 1.

The light fitting is set at 2.5° in the factory, but this should be checked on site. There is no need to adjust the fixing screws on the neck of the fitting pole until after using the sighting device is fitted. (Fig 2)

- a) Commence mounting the bracket to the light fitting (Fig 3)



(Fig 2) DTS fitting



(Fig 3) align the brackets concaved area to this screw

- b) The sighting device first attaches to the front of the light fitting, place the top of the bracket over the screw for correct placement (Fig 3) then position the bracket flat to the front of the fitting. Hold the bracket securely so it does not fall off until both tightening screws are fully tightened on both sides.



- c) Once the bracket is correctly placed over the front rim of the light fitting, twist the screws clockwise over the front rim to secure the sighting device on to the light fitting.



4.1 SETTING THE SIGHTING DEVICE

- a) The DTS light fitting is Uni-directional and must be set up precisely. After its installation on the Airfield, please adjust the angle of azimuth and sight to complete installation prior to any operation by Aircraft.
- b) When the sighting device is fully secured on the light it is ready to be adjusted.
- c) The sighting device can be used in four directions (Front/Rear/Left/Right) for alignment with other fittings on the Runway or sighting reference. The telescopic sight rotates 90 degrees at a time on the top of the DTS fitting to allow setting.
- d) Good practice is to take another fitting in the same direction of the light and use this as a target to aim the sighting device at.
- e) Adjust the wheel on the telescope so it is in focus for you.



- f) Check to determine the angle required to local regulations i.e. ICAO, EASA, CAP168 etc

- g) The sighting device can be adjusted to a positive or negative toe-in of 1.5°, 2°, 3°, 3.5°, 4°, 4.5° or 5° by looking into the telescope



(Fig 4)

- h) To adjust the angle required, slide the spirit level assembly forwards or backwards to align the marker at the top with the required angle visible through the window on the sighting device.



- i) Check the spirit level bubble on the top of the sighting device, if it is level then no adjustment is required and the fitting is ready to be used.



- j) To change the angle, adjust the locking screws on the base of the unit until the spirit level bubble is in position and then re-tighten them. Adjust each screw separately and in turn i.e. do not tighten one fully first then the next one, adjust them all equally so as to not move the final setting.



4.1.2 SETTING THE SIGHTING DEVICE - HIGH MASTS

When using tall masts, it can be difficult to align the light onto the upright mast. In that case, the light can be aligned before raising the mast.

- a) The light including the mast adapter to be used must be placed in a workbench.
- b) The mast adapter must be placed completely vertically, checking this with a spirit level.
- c) The approach angle should be set in the same way as in the above paragraph.
- d) To set the azimuth, the mast adapter with the light must be marked at 0 degrees (the light itself possibly with a certain angle for the toe-in).
- e) This same marking should be made on the mast itself.
- f) When mounting the adapter with light on the mast, the two markings must be in line.
- g) The basic principle here is that the mast is installed correctly and completely level.
- h) To be sure of a correct setting of the lights, a flight inspection must always be carried out after installation.

4.2 STORAGE OF THE DEVICE

- a) Once the sight has been removed, please return to the protective bag and box for security to store the device before use again.
- b) The sighting device should be stored indoors at room temperature.

5.0 SPARES

All individual items shown in Fig 1 are available as serviceable parts and can be ordered from ALS.

This includes the screws and mounting bracket. The telescope and mount are one complete piece.

