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AIRFIELD LIGHTING  
SYSTEMS UK LTD

## DTS – AIRFIELD GROUND LIGHTING SYSTEMS

### DTS Uni-Directional Elevated Lights Sighting Device for Square Head Fittings

Part Code DTS-UEQSIGHT



## Operation & Maintenance Manual

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## Contents

- 1.0 History of Change
- 2.0 Warranty / Calibration
- 3.0 Contents
- 4.0 Installation
- 5.0 Spares Listing

### 1.0 History of Change

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### 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.

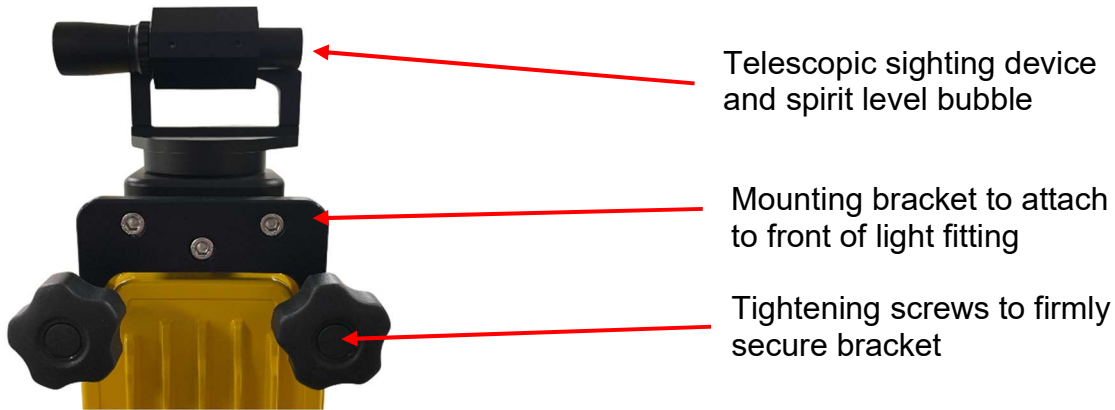
The satisfactory operation of the device depends upon the observance of the recommended setup and storage instructions given in this manual. Failure to do so will invalidate this warranty.

### 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 rectangular mounting bracket to affix to the top of the light fitting and clip over the front, 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.



(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 until after the sighting device is fitted. (Fig 2)

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

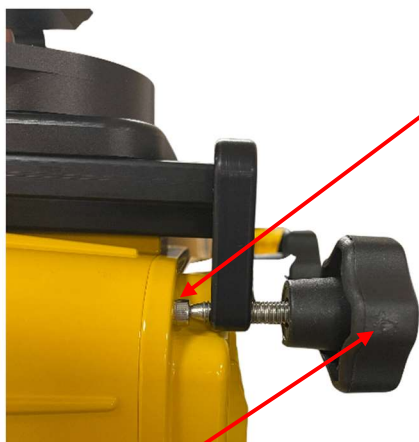


(Fig 2) DTS fitting



(Fig 3) Position the sighting device carefully over the top of the fitting

- b) The sighting device first attaches to the front of the light fitting, place the top of the bracket over the front rim for correct placement (Fig 3) then position the bracket flat to the top of the fitting. Hold the bracket securely so it does not fall off, at the rear of the device are two knobs that twist the screws into the locating heads already on the body of the fitting.



- c) Once the bracket is correctly placed over the front rim of the light fitting, twist the screws clockwise 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)

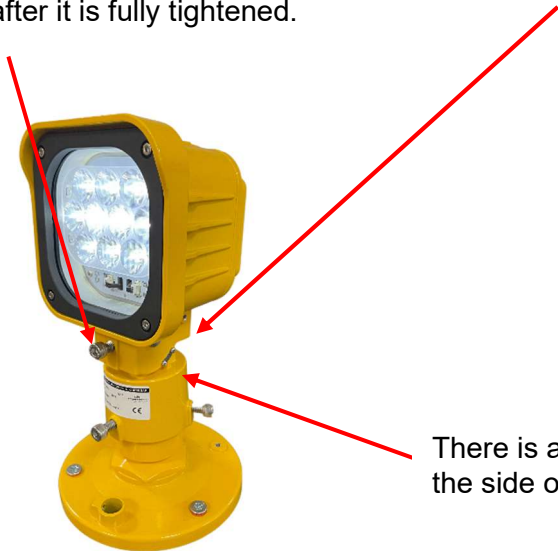
- h) To adjust the vertical angle required, slide the spirit level assembly forwards or backwards to align the marker at the top with the required angle visible through the window on the sighting device.



- 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 of the fitting, loosen the locking screw on the base of the unit then adjust the angle with the rear screw until the spirit level bubble is in position and then re-tighten the locking screw. Adjust each screw separately and in turn and check the spirit level once more after it is fully tightened.



There is an angle indicator marked on the side of the fitting as a guide only.

#### 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.

- The light including the mast adapter to be used must be placed in a workbench.
- The mast adapter must be placed completely vertically, checking this with a spirit level.
- The approach angle should be set in the same way as in the above paragraph.
- 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).
- This same marking should be made on the mast itself.
- When mounting the adapter with light on the mast, the two markings must be in line.
- The basic principle here is that the mast is installed correctly and completely level.
- 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 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.

