

DARAY[®]

Medical



SL720

LED Minor Surgical Light

Operating & Installation Manual

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1. Introduction

Thank you for choosing a DARAY SL720 Minor Surgery light.
The SL720 light is specifically designed to meet the demanding needs of today's medical department whilst providing the finest quality design with superior performance, reliability and value.

This user & installation guide has been provided to give detailed descriptions covering the performance, operation and safety information of the device. It's recommended that users read through this manual before using the device so they are aware of how to operate the device and all of its features appropriately. It also contains all the information you need for the installation and maintenance of the light.

Restrictions and Liabilities

Information in this document is subject to change and does not represent a commitment by DARAY. Changes made to the information in this document will be incorporated in new editions of the publication. No responsibility is assumed by DARAY for the use or reliability of software or equipment that is not supplied by DARAY.

For further information on our product range and find out more about our company please visit www.DARAY.co.uk or call **0333 321 0971**

This product was designed & manufactured in Great Britain by:
DARAY Ltd.
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1.1 Supported Lights

The Following Models are supported in this Manual	
SL720 Minor surgery Light	SL720LC Ceiling Mounted Edition
	SL720LW Wall Mounted Edition

1.2 Technical Specifications

Light Source	LED
Light Intensity (Lux) @ 0.75m	12,500 - 77,000 Lux \pm 5%
Light Intensity (Lux) @ 1.0m	8,000 - 50,000 Lux \pm 5%
Colour Temperature (Kelvin)	3,600 - 5,500K \pm 500
Colour Rendering Index (CRI)	85 - 93
Colour Rendering (R9)	56 - 90
Light Field Diameter (D50)	100 - 180mm
Focusing Depth	800mm
LED Power	12W (12x1W LED's)
Input Power	30W
Output Supply Rating	24V DC
Input Supply Rating	100 - 240V AC 50/60Hz
Average Working Life	>50,000 hours

1.3 Pre-Installation Responsibilities

This document is a guide to the steps that need to be performed to correctly install the SL720 Minor surgery light. However, the work required to be performed is the responsibility of the owner or designated contractor/s.

All fixings between DARAY lights and the building super-structure must be approved by either the chief project engineer or an appropriate and competent structural assessor.

1.4 Component packing list

The components supplied by DARAY for fitting / installation should be the following items in the specified quantities.

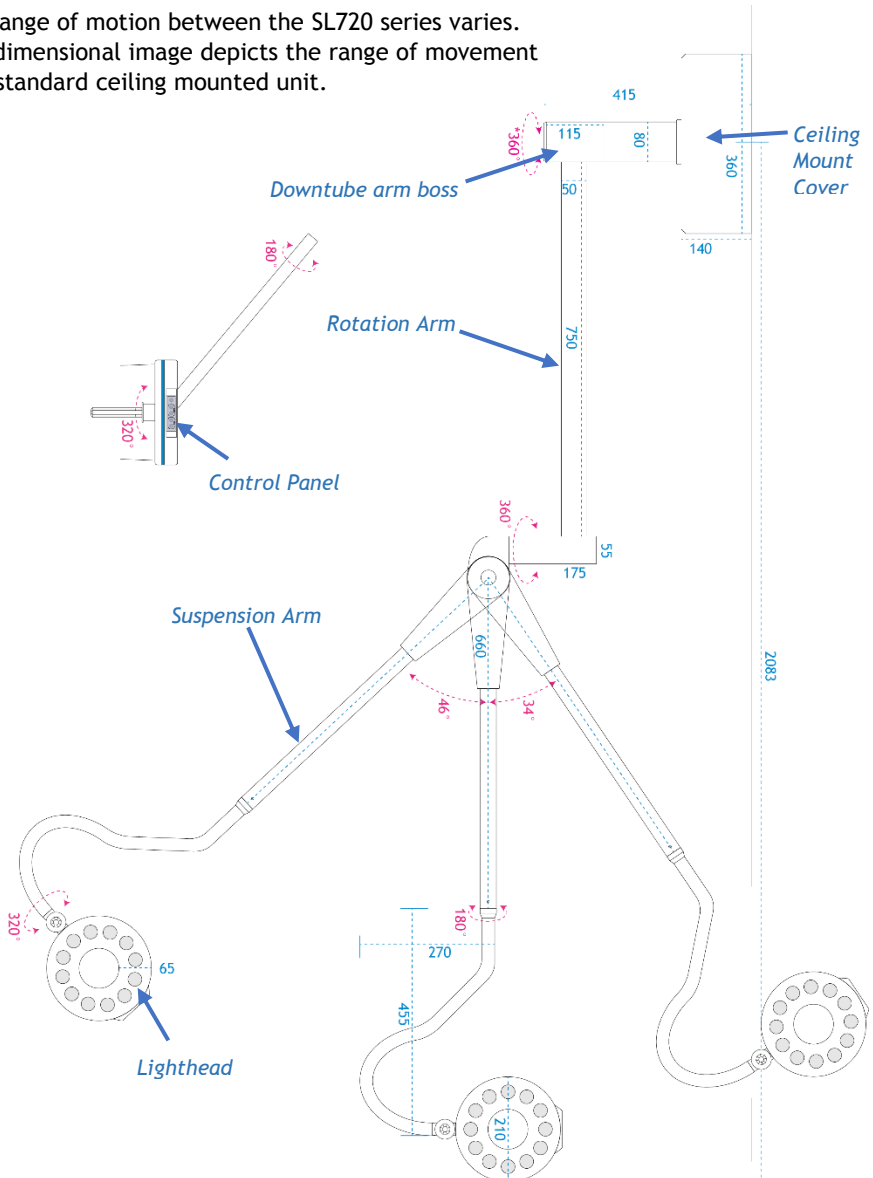
SL720 Ceiling Mounted Packing List	Qty.
Light head and hook arm	1
Ceiling mount with primary rotation arm	1
Suspension arm first section	1
User Manual	1
Removable Handle	1

SL720 Wall Mounted Packing List	Qty.
Light head and hook arm	1
Wall mount with primary rotation arm	1
Suspension arm first section	1
User Manual	1
Removable Handle	1

2. Operation

2.1 Range of Motion

The range of motion between the SL720 series varies. This dimensional image depicts the range of movement on a standard ceiling mounted unit.



2.2 Pre-Start Checks



Please check that the power cable is without visible damage, harsh folds, knots or cuts in the rubberised coating.



Users should not look directly into the light as it is bright and will illuminate when powering on.



When applicable, please check that the cable is fully inserted into the power socket, before switching the power on.



Please check (when applicable) that the head and arms are without visible damage, and all LED's are present in the lighthouse.

2.3 Battery Back-up (Optional)

The SL720 series has the capability of using a battery back-up system.

The battery should be conditioned before being used for the first time. Battery conditioning involves removing all the charge from the battery. Batteries should be conditioned regularly.

Condition a battery when the device is stored for long periods, or when the charge becomes noticeably shorter.

Follow the steps below to condition a battery:

1. Disconnect the battery from the light.
2. Attach the battery in need of conditioning to a suitable electrical supply.
3. Charge the device uninterrupted for up to 10 hours.
4. Disconnect the electrical supply and re-attach the battery to the light, allow the light (while disconnected from its primary power source) to run on the battery until it shuts off.
5. Charge the battery until full charged again.
6. The battery is now conditioned.

Batteries can deteriorate over time, meaning a reduction in their performance.

To check the performance of a battery, follow the steps below:

1. Charge the battery uninterrupted for 10 hours.
2. Disconnect the mains supply to the light and allow it to run on the battery until it shuts off.
3. The operating time of the light reflects the condition of the battery. If the operating time is significantly lower than when first purchased despite conditioning it, you will need to replace the battery.

2.4 Powering On & Variable Intensity

The SL720 uses a single button (on the side of the head) to power the light on and off.

Next to this switch are four buttons split into paired controls for variable intensity (LUM - Luminence) and colour temperature (TEM - Temperature); press the + button to increase light intensity or colour temperature and press the - button to reduce them.



2.5 Adjusting the Lighthead

For the wall and ceiling mounted SL720, the head is secured using a large white, balanced and adjustable arm system. The head itself has adjustable movement through a combination of tensioned hinge joints connecting the head to the arm system.

General movement of the head should be through the use of the removable handle located on the front of the head.

If the head's movement is incorrectly loose or stiff then you may need to adjust the tension in the joints using the grub screw system. Details of all tension adjustments can be found in the maintenance section of this user manual.



This lighthead and arm design incorporates anti-rotation stopping points, this is to prevent cable damage. Attempting to force the movement past these points may cause severe damage to the light.

3. Assembly Guide Section

3.1 Ceiling Mounted Version



The ceiling structure must be capable of handling a significant load.

The procedures below are detailed to a high level however *If in doubt please consult a qualified electrician.*

Minimum Room Requirements	The SL720 Series ceiling mounted light has a standard fixing height of 2.47m . The design works off a fixed plate system and has a large vertical motion.
Maximum Room Requirements	Please note, if the ceiling / fixing point of the light is above 2.57m then a customised ceiling mount may be required, (please contact DARAY for more information). If a suspended ceiling is in the room, you may need to construct a platform down to the required fixing height.
Live Electric Circuitry	All personnel working around live circuitry should be qualified and following proper procedures.
Heavy or Difficult fittings	Fitting the ceiling plate can be difficult and aspects of the fitting may require more than one person; this work should only be attempted by appropriate and competent personnel.
Existing Environmental Factors	When fitting, considerations have to be taken for existing services such as; fire alarms, vents, lights, etc. along with interior ceiling construction and any surrounding hazard.
Environmental Responsibility	Once our products are installed all packaging should be disposed of appropriately and recycled in accordance with local governing regulations. The normal life span of the SL720 series is up to ten years. We recommend the equipment should be discarded and recycled when reaching the end of its life.

These instructions are based on the assumption of a fresh fit into a room with no previous lighting structures. With installations onto sites with equipment already in place, we recommend that the previous lights' mounting plates be removed and the new ones fitted as if into a fresh fitting.

3.1.1 Attachment methods and void suspension

After confirming the structural stability of the fixing point it will be necessary to decide on the best installation technique for attaching the ceiling plate. There are various different methods for loading the plate onto the ceiling, some example methods that can be used are:

- **Bolted Directly into a structural slab and secured with chemical bonding**

This is our primary choice for mounting our lights to the ceiling structure, appropriate rawl bolts and chemical bonding should be used to secure the fitting.

- **Bolted to a Uni-strut Construct**

When using a uni-strut construct for mounting the ceiling plate, you should ensure that the uni-strut is cross braced to ensure it is secure and does not move.

- **Welded to structure**

The fixing plate is the component that would be welded to the structure; any welding must be assessed to be capable of handling a 500Kg load.

- **System anchored to composite deck**

A customised composite deck could be used either in conjunction with or as a replacement to the fixing plate. Any substitute parts must meet safety standards and be assessed by a competent structural assessor. The composite deck is designed to spread the weight of the light over an enlarged area.

- **System bolted to structure**

This system requires prior planning during the base construction phase of the ceiling above, bolts should be fed through the metal ceiling prior to the concrete base being poured. These bolts should be based on the fixing plate layout (available upon request from DARAY).

3.1.2 Lighting configuration

Dependant on the choice of attachment method, and whether the light is being attached in a void or directly onto an open surface ceiling; custom mounting aspects may be required.

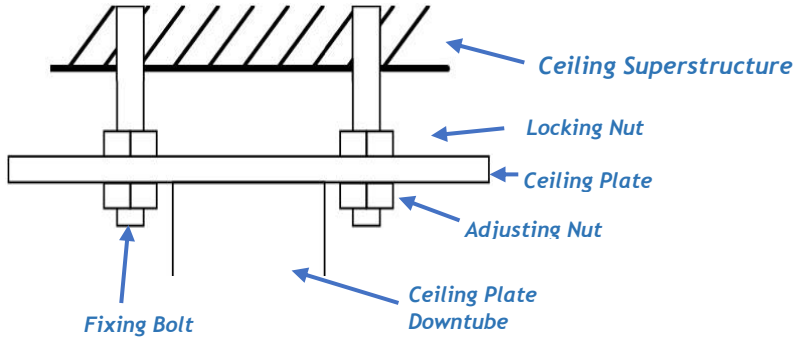
The standard SL720 has an integrated ceiling plate, downtube and rotation arm system which cannot be modified after leaving DARAY. If you require a customised SL720 for a different fixing height please contact DARAY to discuss options.

DARAY's standard mounting recommendation is to have the fixing plate directly bolted into the structure of an open surface ceiling and secured with chemical bonding whenever suitable.

Ultimately the mounting method used is the responsibility of the project engineer or fitter. This includes the specification of attachment hardware, lateral bracing and the suitability of the surface to be fixed to.

3.1.3 Installing the Ceiling plate

The location of the light should be decided by the end user / project manager or through schematical drawings. Once the location has been decided it will be necessary to first mark the location of the fixing points for the ceiling plate.

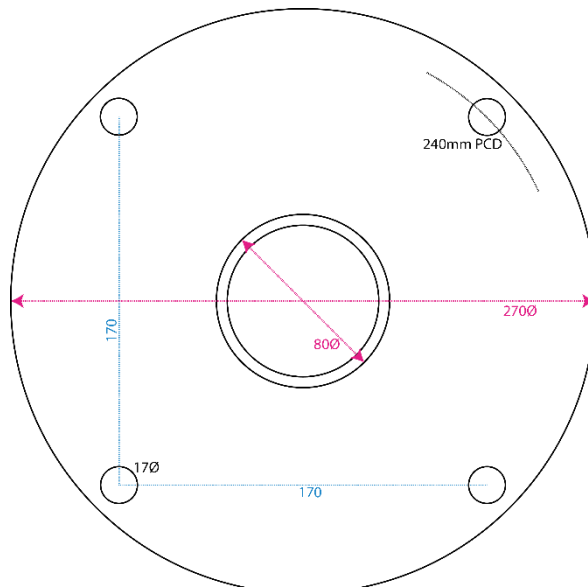


Depending on the choice of attachment method, fitting your ceiling plate will require bolts to be inserted into the ceiling superstructure. It is highly advisable that the plate being fixed to the ceiling, is secured with a minimum of 4 bolting points to ensure a complete and sturdy fit.

Once the fixings are fitted and secured, you will need to attach a locking nut to each bolt before attaching the ceiling plate.

The SL720 series integrates the ceiling plate, downtube and primary rotation arm all together as one piece, this will therefore be a minimum two man lift for safe installation of this unit. You will need to fit the ceiling plate to the fixings and attach a 2nd (adjusting) nut to the bolts.

Ceiling plate Dimensions



Once the ceiling plate and arm combination has been fitted, it will be necessary to ensure that it is balanced on both the vertical and horizontal planes. This can be achieved by adjusting the lowest level of nuts (the adjusting nut). Once this adjustment has been done tighten the top level of nuts down to the ceiling plate to lock the plate into position.

After any adjustment to the light it will be necessary to check that all fixings are still sound and that locking nuts are tight.

3.1.4 Wiring and transformer layout



Before working on electrical connections please make sure that the power to the light is switched off at the source and secured so that it will not be turned on during your work.



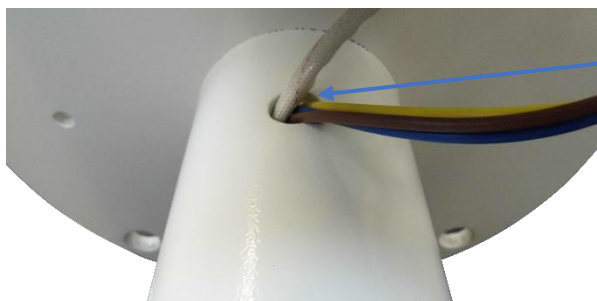
The mains power supply should meet IEC60245-1 requirements and should be fitted with a fixed master switch. (The switch should meet IEC328 requirements and the directional movement parts of the switch should meet IEC447 requirements and the symbols should meet IEC60601-1 requirements.)

Ideally the cable used to power the light should be of a 1.5mm twin and earth type. DARAY recommends that the power supplied uses an earthed switched fused spur, protected with a 3 amp fuse.

The wiring should be as follows:	
Live terminal	—→ brown wire.
Neutral terminal	—→ blue wire.
Earth terminal	—→ green/yellow wire.

The above wiring is for modern wiring applications (post 2000). On completion of the wiring, the next stage will be attaching the suspension arms to the ceiling mount.

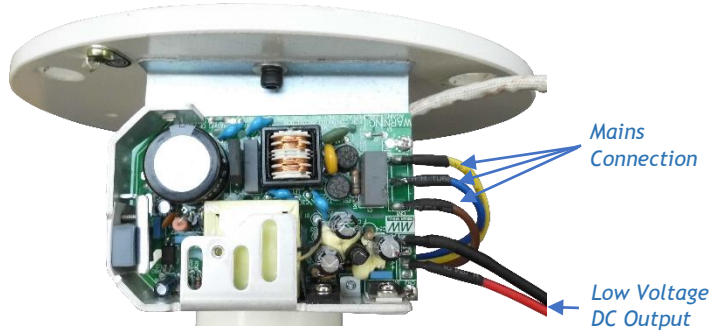
Before any cabling can be done you will need to feed the mains connection down through the ceiling plate and through a hole near the top of the mount, located behind the central transformer (indicated on the image below). There will already be low voltage cables from the arm system running through this hole.



Cables need to be fed through this hole

All cables leading to the transformer are pre-attached. The mains connection will need to be attached to the high voltage cables running off the transformer. **You will not need to conduct any electrical wiring on the transformer.**

The mains connection should be connected through a switched fused spur and is the only connection that you will need to wire in. All other connections in this light are low voltage DC connections that will be connected via the Molex plug connectors already fitted.



3.1.5 Primary rotation arm installation

The primary rotation arm is fitted to a 360 Degree arm boss system; the arm and arm boss section are supplied attached to the downtube and ceiling plate. This section is secured in place with 8 locking screws.

Before progressing onto fixing the other sections, ensure that the rotation arm is attached securely.



3.1.6 Suspension arm Installation

The Suspension arm uses an internal rotary system which allows the joint to have 360 degree rotation. To install the arm you will need to first remove the screws from each side of the arm joint spigot.



Warning, please observe the cable polarities and ensure that they match, incorrectly wiring the device will cause damage to the system

Connect the power cables and then push the suspension arm's spigot up into the rotation arm (ensuring you do not catch the wires), then re-insert the screws to secure it in place.

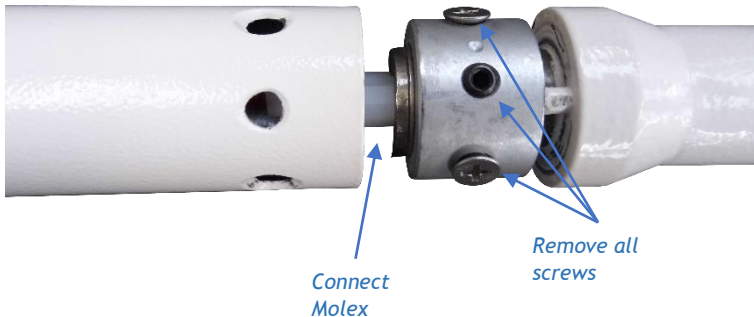


Warning, without the lighthouse attached, the suspension arm will spring upwards rapidly. Keep control of the arm at all times and avoid any obstructions in its path.



3.1.7 Hook arm and lighthouse Installation

The hook arm and lighthouse section needs to be attached to the suspension arm system. Remove all screws within the joint including the grub screw.



Connect the Molex points and whilst ensuring the cables do not get caught, insert the spigot into the arm. Align the holes and reinsert all screws. Be careful when inserting the grub screw, insert until hand tight then slacken the grub 1/4 of a turn.



3.1.8 Attaching the Ceiling Cover

The last aspect of fitting is to attach the ceiling mount cover.

The primary cover is split into 2 halves. You will need to place the two halves over the ceiling mount and secure them together using the screws provided.



Once the two halves of the primary cover are connected, you will be able to work this cover over the cabling and then slide the securing ring up the downtube to the ceiling mount cover then lock it in place.

Supply power to the mains connection and power the light on using the button located on the lighthouse. Check that all LED's illuminate.

The light can now be tested by applying power and checking the arms and head for smooth & correct movement. If the head is drifting, or if the movement of the arm is stiff, use a hex tool to adjust the tensions detailed in maintenance section of this manual. Your new DARAY light is now ready for use.

To gain full support of our warranty please fill in the warranty details online at <http://www.DARAY.co.uk/docs/warranty.php>

NOTE: The mains power supply should meet IEC60245-1 requirements.

3.2 Wall Mounted Version



The wall structure must be load bearing.

Power Supply	The SL720 wall mounted edition uses an IEC power connection located on the left side of the power box. Please take the length of the supplied IEC in consideration when deciding on the location and placement of your unit.
Heavy or Difficult fittings	Fitting the mounting plate can be difficult and aspects of the fitting may require more than one person; this work should only be attempted by appropriate and competent personnel.
Existing Environmental Factors	When fitting, considerations have to be taken for existing services such as; cabinets, vents, light switches, etc. along with interior wall construction and any surrounding hazard.
Environmental Responsibility	Once our products are installed all packaging should be disposed of and recycled appropriately and in accordance with local governing regulations. The normal life span of the SL720 series is up to ten years. We recommend the equipment should be discarded and recycled when reaching the end of its life.

These instructions are based on the assumption of a fresh fit into a room with no previous lighting structures. With installations onto sites with equipment already in place, we recommend that the previous lights' mounting plates be removed and the new ones fitted as if into a fresh fitting.

After concluding the structural stability of the wall structure it will be necessary to assess the construct and decide on the best course of action for installing the wall plate.

3.2.1 Attachment methods

The wall mount system is split into 3 parts, the fixing plate and primary arm boss, the suspension arm and the lighthead. Please note, the recommended installation height is with the bottom of the suspension arm's spigot joint being no lower than 1.9m.



Note: The wall mounting plate should only be installed on a load bearing wall.

3.2.2 Lighting configuration

DARAY's standard mounting recommendation is to have the wall plate directly bolted into the structure of an open surface when possible.

Ultimately the mounting method used is the responsibility of the project engineer or fitter. This includes the specification of attachment hardware, lateral bracing and the suitability of the surface to be fixed to.

3.2.3 Installing the wall plate

To install the wall plate you may need more than 1 person. Align the mount to the wall and mark your fixing points. Ensure the light is completely true on both the horizontal and vertical planes.

It is essential that this mount is true on both planes as otherwise it may cause the arms to swing in an uncontrollable manner.

With the fixing bolts secured, place a nut onto each of the fixings, then mount the plate onto the wall and secure in place with more nuts to lock the design in place.



3.2.4 Wiring and transformer layout

The SL720 Wall uses an enclosed transformer system which is attached to **1.5m of cable** and a standard type G style plug.



Note: this cable system is detachable along with the wall mount cover, disconnecting this may be useful when initially mounting the wall plate.

With the use of the pre-installed plug on the wall mounted SL720; you will be able to fully install the light without the need to perform any electrical wiring except for connecting the Molex plugs between the arms.

3.2.5 Primary rotation arm installation

This wall system has the primary rotation pre-attached into the wall plate / arm boss system and will not require separate installation.



3.2.6 Suspension arm Installation

With the wall mount and primary arm connected; the vertical suspension arm should be connected. This arm uses an internal rotary system which allows the joint to have 360 degree rotation. To install the arm you will need to first remove all the screws from each side of the arm joint spigot.



Warning, please observe the cable polarities and ensure that they match, incorrectly wiring the device will cause damage to the system

Connect the power cables and then align the screw holes in both sections with each other, then push the suspension arm's spigot up into the rotation arm (ensuring you do not catch the wires), then re-insert the screws to secure it in place.



Warning, without the lighthouse attached, the suspension arm will spring upwards rapidly. Keep control of the arm at all times and avoid any obstructions in its path.



3.2.7 Hook arm and lighthouse Installation

The hook arm and lighthouse section needs to be attached to the suspension arm system. Remove all screws within the joint including the grub screw.



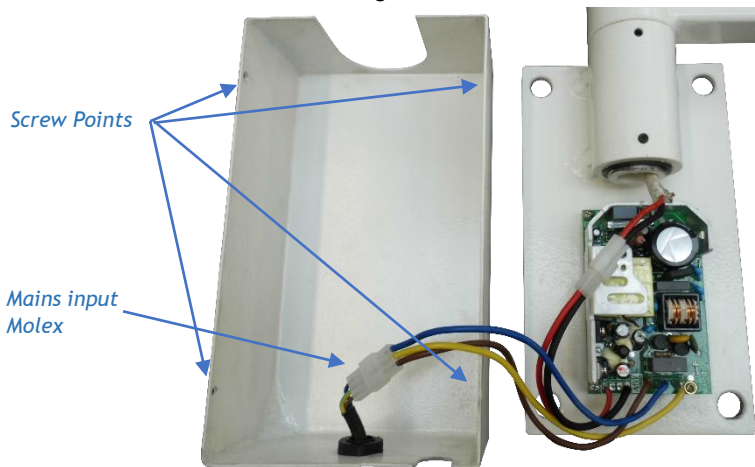


Connect the Molex points and whilst ensuring the cables do not get caught, insert the spigot into the arm. Align the holes and reinsert all screws. Be careful when inserting the grub screw, insert until hand tight then slacken the **grub 1/4** of a turn.

3.2.8 Attaching the Wall Cover

The last aspect of fitting is to attach the wall mount cover.

If previously disconnected re-attach the power lead to the transformer through the mains input Molex connection. Then, work the cover over the wall plate ensuring you do not catch the cabling. Once flush with the wall mount you will need to lock the cover in place using screws that will locate around the edges of the cover.



Supply power to the mains connection and power the light on using the button located on the lighthead. Check that all LED's illuminate.

The light can now be tested by applying power and checking the arms and head for smooth & correct movement. If the head is drifting, or if the movement of the arm is stiff, use a hex tool to adjust the tensions detailed in maintenance section of this manual. Your new DARAY light is now ready for use.

To gain full support of our warranty please fill in the warranty details online at <http://www.DARAY.co.uk/docs/warranty.php>

NOTE: The mains power supply should meet IEC60245-1 requirements.

4. Maintenance

The proposed maintenance is only a suggestion. Depending on the use of the product and the operating environment, this may need to be revised more often. DARAY would strongly recommend against “quick fixes” with tape, etc. If you cannot resolve a problem then please contact our helpline on **0800 878 9864** or email support@DARAY.co.uk

4.1 Maintenance schedule

Weekly checks should include:-	Range of movement testing, it should be light and easy to move throughout the range
	No visible signs of excessive wear.
Monthly checks to include:-	Check the downtube and tension screws for wear and report as necessary
Six monthly checks to include:-	Check all electrical connections are sound and that there is no visible cable wear.
	All fixings to be checked and be of sound construction.
	Check optional battery back-ups for deformities and overheating

4.2 Safety Precautions

- For all cleaning work, power off the equipment and where possible completely power off any mains connection, only minimal cleaning fluids should be used.
- Please do not look directly into the light source when illuminated.
- If the equipment is dented or scratched this should not impact the usability of our lights however we advise that you do not attempt to cover over any damage as this will impact upon the effectiveness of any cleaning you do. Simply use an alcohol based cleaning spray when cleaning and pay special attention to any damaged areas.



(When applicable) If there is damage to the power cable or if exposed wire is visible **DO NOT USE**



The SL720 is to be disassembled and maintained only by a qualified technician.

4.3 Product cleaning & care guidelines

The SL720 features BioProtect® antimicrobial coating on all painted surfaces and has a fully-enclosed head with an Ingress Protection (IP) rating of 54.

These guidelines are provided to help you maintain your equipment properly and prevent any damage. Use of incompatible cleaning chemicals can adversely affect the finish and physically damage the metal and plastic parts of the DARAY product, invalidating its warranty.

Please ensure these instructions are passed to the persons responsible for cleaning and they are followed before each use.

Manufacturers recommended cleaning method:


1. Turn off the power to the light, and where possible, unplug the mains socket.
2. Remove noticeable contamination. Pay special attention to the light head and handle.
3. Ensure the equipment is surface-cleaned and disinfected using an appropriate, non-abrasive cleaning agent (see recommended list below).
4. Dry all surfaces thoroughly with a clean cloth and check for damaged surfaces, discolouration and/or contamination.

NOTE: Some DARAY products feature our BioProtect® antimicrobial coating on painted finishes. This is designed to assist with infection control and is not a replacement for cleaning.


CAUTION: Our products are NOT waterproof. The equipment and accessories (included chargers and battery packs) MUST NOT at any point be saturated, to prevent water ingress. Use a damp cloth or saturated wipe if necessary. All electrical safety guidelines should be followed.

Any damage caused as a result of not following these guidelines will void any product warranty.

Below is a partial list of recommended surface agents:

- 
- Cavicide™ products
 - Isopropyl alcohol-based cleaners (<40% alcohol)
 - Ethyl alcohol-based cleaners (<40% alcohol)
 - Lysol® disinfectant
 - Other non-bleach and non-abrasive disinfectants or cleaners

DO NOT USE agents containing the following:

- 
- Organic, mineral and oxidizing acids (min. pH value 8.5)
 - Bases (max. acceptable pH value 8.5)
 - Oxidation agents (e.g. Hydrogen Peroxide)
 - Halogens (chlorine, iodine, bromide)
 - Aromatic/halogenized hydrocarbons
 - Bleach-based cleaners (e.g. Clorox™, Sterilox™)
 - Abrasive cleaners (e.g. Comet Cleaner™)
 - Acetone-based cleaners (e.g. nail polish remover, Goo-off™)
 - MEK (Methyl Ethyl Ketone)

If you are unsure whether you are using the correct cleaning fluids on your DARAY equipment, please feel free to get in touch with us for advice.

4.4 Fuses and their replacement

The ceiling mounted SL720 uses a transformer to control the power to the device. The system itself should be fitted into the mains via an earthed, switched fused spur.

We recommend a minimum supply fuse of **3 amps** however this will be affected and dependant on individual circumstances such as power systems used per country.

The ceiling mounted version has no user replaceable fuses located in it. For any internal transformer burnouts please contact DARAY.

The Wall mounted edition also uses a low voltage transformer to control the power to the light and does not contain any fuses.

4.5 Replacing the LED Bulbs

The LED bulbs in the SL720 are high quality and should not need to be replaced in the lifetime of the light, however if any bulbs need to be replaced, please consult a qualified electrician or contact a DARAY authorised service centre.

4.6 Adjustments

Rotation arm (ceiling version)

If the Rotation arm starts to drift then the ceiling mount system may have become uneven; to correct this issue you will need to adjust the relevant nuts on the ceiling mount, these are indicated in section **3.3.1** of the installation section in this user manual.

If the system is balanced then you can adjust the brakes on the rotation arm via the grub screw located on the opposite side of the arm boss.

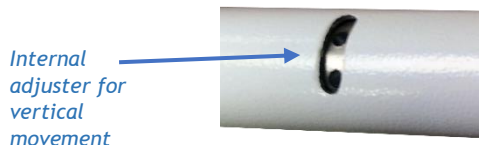


Suspension arm (all versions)

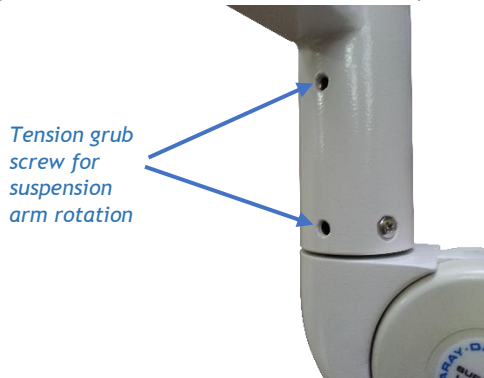
The suspension arms can be adjusted in several ways.

Its upward and downward movement is controlled with an internal rotary adjuster accessed through a cut in the top of the arm (3/4's of the way down from the spigot).

Slide the arm down to its lowest position, this will reveal the rotary adjuster. Insert a hex tool into one of the holes in this silver section and turn to the side to adjust the tension.

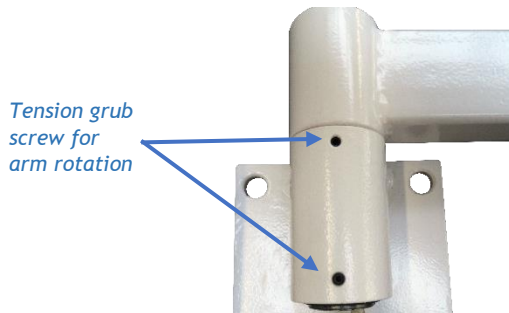


The horizontal rotation of the suspension arm is controlled by grub screws located on the connection point between the rotation arm and the suspension arm.



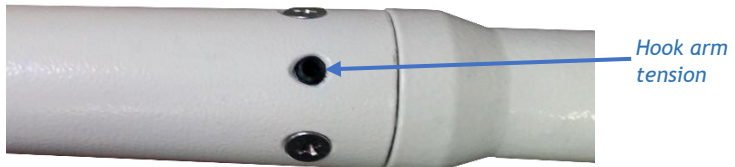
Rotation arm (Wall version)

If the Rotation arm starts to drift then the wall plate may have become uneven; to correct this issue you will need to adjust the relevant nuts on the mount fixings to balance the rotation arm. The rotation arm can also have its tension adjusted by using a flat blade tool in the grub screws located on each side of the arm boss.



Lighthouse arm (all versions)

The side turning movement of the lighthouse arm is controlled by the central tension screw as indicated here.



Lighthouse (all versions)

The tilting sideways movement of the lighthouse itself can be adjusted by using the tension screw located below the handle socket, near the base of the light as shown below.



Warning, without the lighthouse attached, the suspension arm will spring upwards rapidly. Keep control of the arm at all times and avoid any obstructions in its path.

Once all your required adjustments are complete, please check for correct movement. You should be able to place the light at its highest and lowest points with little to no drift/movement in the head once placed. We would recommend the lighthouse arm and head movements should not be overly tightened so they are stiff, and should not be overly loose which would cause drift.

4.6.1 Detaching Parts

De-contruction of the lights should be done following a reverse order of the instructions in section 3.



Warning, without the lighthouse attached, the suspension arm will spring upwards rapidly. Keep control of the arm at all times and avoid any obstructions in its path.



The SL720 is a completely enclosed lighthouse as such, the head should not be opened and is only serviceable by a DARAY Authorised service centre.

For any issues requiring internal service work on the SL720 please contact DARAY, as unauthorised work will **invalidate the warranty**.

5. Troubleshooting Guide

Problem	Possible Cause	Corrective Actions
No light output	On/Off button	Press the button on the side of the light to check if the light will power on (if not refer to power supply actions).
	Power supply	Wall & Mobile Version - Check the plug top adapter is plugged in and switched on at the power socket and the base of the light. Ceiling Version - Check the power is on at your power source control point (switched fused spur) and attempt to power the light on using the switch on the head. Continued failure may require testing the transformer (this will require the use of a voltmeter to confirm a measurement).
	Fuses	Visually check fuses then check continuity with a meter
	Cables	Check the visible wiring and make sure the DC connectors between the light and the transformer are fully connected.
Poor Light output	Control panel	Please check the variable intensity is not set to its minimum.
	Voltage in	Verify that the correct mains voltage and correct transformer is being used
	Voltage out	Verify correct secondary voltage at the end of the suspension arm
Light patch not focused	Light head	In the unlikely event that this happens, please contact DARAY
Uncontrolled drift sideways	Mounting plate not aligned	Ceiling Version - If the ceiling plate is not true or if the locking nuts have not been tightened; this may cause arm drift that cannot be controlled through the grub screw tension points. Please check the alignment of the plate and locking nuts, adjust as necessary. Wall Version - as with the ceiling version, if the wall plate is not true this may cause drift, if possible ensure that the plate is true, if it is not, please contact DARAY
	Loosened grub screw	If a screw has worked loose please check all grub screws and follow the tension adjustment procedure detailed in section 4.6.
Stiff movement	Overly tightened grub screws	Please check the grub screw connections as detailed in the adjustments section
	Greases	Joints should be greased as per maintenance instructions.



6. Warranty Information

6.1 Returns Policy

IMPORTANT!

Please fill out your warranty registration online at www.daray.co.uk/warranty or contact Daray by phone (0800 878 9864) or email support@darav.co.uk

DARAY's standard warranty is 12 months. However, this period may be extended to 3 years* free of charge by completing and submitting the warranty registration. For the specific warranty period for this product, please refer to the warranty symbol in the upper right of this page.

Year 1:	Warranty includes parts and labour (Return to Base)	*UK only
Year 2-3:	Parts only	

We want you to be completely satisfied with your purchase. If you need to return goods purchased from DARAY Ltd, please read the following information carefully. The DARAY Ltd returns policy provides guidance on when you can return goods we have supplied, and what you can expect from us once you do. To see our detailed returns policy and procedure visit www.daray.co.uk/returns

TYPE OF RETURN	REMEDY
DAMAGED GOODS Goods which are physically damaged on delivery	We must be notified within 24 hours of receipt.
Dead On Arrival (DOA) Goods which do not work	Goods which do not work on arrival or develop a fault within 28 days, we will advance replace the item.
GOODS DEVELOPING A FAULT Goods which have developed a fault within the warranty period.	If the fault develops after 28 days, but within the warranty period, we will initiate the returns procedure.
NON WARRANTY Goods which have developed a fault outside the warranty period.	If a fault develops outside the warranty period, we will initiate the returns procedure charges may be applicable.
OTHER Any situation which is not covered by any of the above.	We will always try to help, but we cannot normally offer a refund.

For additional clarification, please refer to our terms and conditions at www.daray.co.uk/terms. In a small number of cases, we may determine that a replacement would not work any better than the original product we supplied. In such cases we will only offer a refund rather than a replacement for qualifying returns.

Replacement bulbs and spare parts ordered on our website or from supplied part codes are not eligible for credit. We will accept returns and exchange for the correct item.

If your purchase an item incorrectly you can return it within 14 days and it can be exchanged for another product of equal or higher value, excluding transportation charges incurred. Goods and packaging must be returned in their original condition. Under no circumstances will goods be accepted for return if they are damaged, have been subjected to improper handling or abuse or have been used.

If you send us goods that do not qualify for return, you will invalidate your claim to any refund, and you will be obliged to compensate DARAY Ltd for the cost of return postage and any other reasonable costs incurred processing the goods. Your statutory rights are not affected.

6.2 Warranty Details

TERMS AND CONDITIONS OF WARRANTY


1. To qualify for this warranty you must register on www.daray.co.uk or return to Daray Ltd (Daray) the duly completed warranty-registration form accompanying the product.
2. Daray warrants this product (excluding lamp) against faulty material and workmanship during the period of the warranty. The period of warranty is the period stated on your warranty card and commences on the date of purchase of the product. In the event that the product is not in good working order Daray will provide, during the warranty period, a free repair service within the United Kingdom. The warranty is subject to proof of purchase being provided; therefore, you should retain your original receipt.
 - 2.1 The repair service consists of the provision of spare parts and/or replacement products (at Daray's discretion) which will be provided on an exchange basis and will either be new, equivalent to new or reconditioned. All replaced spare parts and products shall become the property of Daray.
 - 2.2 Daray's only obligation under this warranty is the provision of the service as set out above.
 - 2.3 All products are returned to Daray at the customer's cost and risk. Products to be returned should be adequately packed. For the address to send returns to please visit www.daray.co.uk
3. Daray's arrangements for providing service provided under this warranty may include the use of sub-contractors.
4. This warranty does not cover damage or defects in the Product caused by or resulting from:
 - Wilful neglect or negligence by anyone other than Daray;
 - Improper use, storage or handling of the product;
 - Use of non-Daray approved parts (such as replacement lamps) not compatible with the Product;
 - Fire, accident or disaster;
 - Use of non-Daray modifications other than in accordance with Daray's instructions;Attachment of fittings and accessories not approved by Daray;
Repairs, modifications carried out by service personnel not approved by Daray;
 - Damage caused by chemical corrosion from cleaning agents not approved by Daray.
 - Failure to use or install the product in accordance with the manufacturer's instructions.
5. Nothing in this warranty shall have the effect of restricting or excluding the liability of Daray in respect of:
 - a) Death and personal injury caused by the negligence of Daray, or for fraud;
 - b) Under the *Consumer Protection Act 1987* to a person who has suffered damage caused by a defective product or to a dependant or relative of such a person;
 - c) Direct damage to your property caused by the proven negligence of Daray.
6. This agreement does not give any rights other than those expressly set out above and in particular, Daray will not be responsible for any loss of income, profits or contracts or any direct or indirect consequential loss, damage caused to or suffered by the purchaser as a direct result of this agreement.
7. This warranty is offered (subject to these terms and conditions) in addition to, and does not affect your statutory rights.
8. Daray may disclose your details and other personal information to companies within the Daray group including any subsidiary company or sub-contractor of Daray for the purposes of performing our obligations hereunder.
9. You must not resell outside the UK any products supplied by Daray and covered by the *Export of Goods (Control) Order 1992* (or any law that replaces it) without obtaining all necessary licences. You also agree not to sell the product in the UK if you know or think that the person buying the product intends to export it without getting the necessary licences. You agree to impose similar conditions to these on anyone you sell the product to.
10. These conditions shall in all respect be governed and construed in accordance with English law and the exclusive jurisdiction of the English courts.


Product:

Serial No:

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Medical

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