Patend Light
1200 HMI
Instruction Manual

Version 1.2

Elation Professional
4295 Charter Street
Los Angels CA 90058
e-mail: info@elationlighting.com
Web site: www.elationlighting.com

Contents

1 Introduction

Illustration 1-1

snaps

Sud- D-connector

aperture

eyelet

screw connection

Sub- D-connector

Safety-clips

Illustration 1-2

1.1 Safety Rules

The **PATEND-LIGHT 1200** is a High-Tech Product. To guarantee smooth operation, it is necessary to follow all safety rules.

1. Make sure that Head and Mirror of the **PATEND-LIGHT 1200,** can rotate without any mechanical problems and that all fan openings are clean and not blocked by anything.

2. Touching the head while moving can cause serious injuries

3. Unplug the **PATEND-LIGHT 1200** from the AC outlet before any service

4. It is necessary to wait at least 30 minutes after disconnecting the AC before you open the **PATEND-LIGHT 1200**. Please do not touch the Bulb if you are not absolutely sure it is cold. **-Danger of BURNING-**

5. The PATEND-LIGHT 1200 is provided with a protective switch to switch off the lamp when opening it. **Never Bridge this protective switch. This can cause serious damage to your retina.**

6. To allow a secure operation, follow the Installation guide described in chapter 2. Operating the **PATEND-LIGHT 1200** without suited safety aids like safety cables or clamps/hooks can increase the risk of an accident.

7. The installation should be done by a qualified technician only.

2   Installation

2.1 Mounting

To mount the **PATEND-LIGHT 1200** use the 8 threads M12 at the backside of the system or use the slide nuts at the side of the body.

2.1.1 Clamps (Hooks)

Mount clamps and/or hooks directly to the base plate.

Please make sure to use right sized clamps and hooks and fit them securely.

2.1.2 Mounting plate (optional) part #: MP-PATENT

For easy mounting you can purchase an optional mounting plate. The mounting plate consists of 2 light weight plates. 1 plate mounts on the truss, the second plate mounts on the fixture, the 2nd plate allows the **PATEND-LIGHT 1200** to easily slide onto the 1st plate.

The **PATEND-LIGHT 1200** is fully operational whether it stands, hangs or is mounted to the wall.

The **PATEND-LIGHT 1200,** when standing on the ground, requires an even surface. Make sure that the fan openings are not blocked by any circumstances.

2.2   Secure the Patend Light 1200

Always use safety cables to secure the **PATEND-LIGHT 1200,** use the eye bolt and slide nut provided on the side of the fixture.

2.3 Connectors

2.3.1 AC Connectors

230 Volt, 50 Hz

2.3.2 DMX

DMX 512 Standard input/output

Please see printing on the case for the right Pin usage!

[+] = Pin 3 / [-] = Pin 2 / [Ground] = Pin 3

The DMX- Address starts at the **PATEND-LIGHT 1200** at the DMX- Address [001] (from software version P 3.0).

This can be changed to the DMX- Start address [000]. For this hold the *Menu* and *Data+* key while switching on the **PATEND-LIGHT 1200.**

2.4 Fuses

The **PATEND-LIGHT 1200** electronic system is protected by a 5x20 T4A fuse 250V. The lamp is protected by a 5x20 T10A fuse 250V. Please see the printing on the **PATEND-LIGHT 1200,** for more details see Illustration 1-1 in Chapter 1

Disconnect AC outlet before changing a fuse !!!

3   The Menu Field
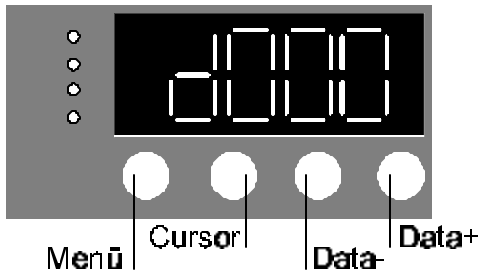
3.1   DMX- Channel Addressing

Right after turning on the **PATEND-LIGHT 1200** you can see the current DMX-Address. Choose this as follows.

Select the DMX-Level and press the menu key.

This level is called on automatically after turning on the **PATEND-LIGHT 1200**.

Select the figure you want to adjust by pressing the Cursor key.

The selected figure begins to flash.

Adjust the figure by pressing the Data+ or Data - key.

Confirm the DMX-Address by pressing the Menu key once.

If there is no DMX- Signal, a **(-)** will flash in the display.

The DMX-Address will be stored when switching off the PATEND-LIGHT 1200 !!!

3.2 Read outs of Lamp and Unit Running Time.

Select the time level by pressing the Menu key twice.

```
hour
```

Select the requested time by pressing the Cursor key,

3.2.1 Lamp Time 1

The current lamp time is shown alternating with LA 1. This is the total hours used in the current lamp.

```
LA 1
```

This time can be cleared by pressing the Data + and Data – keys at the same time. Usually done when adding a new lamp.

3.2.2 Lamp Time 2

The total lamp time is shown alternating with LA 2. this time can't be cleared. This is the total hours of all lamp lives.

```
LA 2
```

3.2.3 Life Time

The life time is shown alternating with LIFE. This is the total hours of usage for the entire fixture.

```
LIFE
```

3.3 The CODE Level

This level is accessed by authorized dealers only.

In this level you can adjust all functions. Also the change of Pan/Tilt high-byte and low-byte is possible.

3.4 The Test Level

The Test Level makes a function test or a self test procedure possible.

3.4.1 Self test Procedure

Select the requested test level by pressing the Cursor key.

Start the Self test program by pressing the Data+ key. The lamp can be started by pressing the Data+ and Data- keys for 5 seconds at the same time.

You have the following sections:

PR	Self test of all functions
PAN	Test Head movement
TILT	Test Mirror movement
PSA	Test Prism
DI	Test Dimmer
Shut	Test Shutter
CLr	Test Color wheel
GB1	Test Gobo wheel 1
GB2	Test Gobo wheel 2
IrIS	Test Iris
Gr1	Test Gobo rotation 1
FOCS	Test Focus
Gr2	Test Gobo rotation 2

Forward with the Data+ key. – Backward with the Data- key.

3.5 Temperature Control 1

If the temperature value deviates too much from the system standard, the lamp will turn off automatically.

Reconnection can only be made by authorized dealers.

4   Channel selection (Overview table)

Channel	Description		DMX-Value	Hex-Value	Value %
1) Head	Head position, High Byte (0°-360°)		0 - 255	0 - FF	0 – 100%
2) Head	Head position, Low Byte (0°-1,41°)		0 - 255	0 - FF	0 – 100%
3) Mirror	Mirror position, High Byte (0°-360°)		0 - 255	0 - FF	0 – 100%
4) Mirror	Mirror position, Low Byte(0°-1,41°)		0 - 255	0 - FF	0 – 100%
5) Speed Head	Speed Head, 1/8min - 7/sec		0 - 255	0 - FF	0 – 100%
6) Speed Mirror	Speed Mirror, 1/4min - 3/sec		0 - 255	0 - FF	0 – 100%
7) Special Function	**Head**	**Mirror**			
	Relative Movement		0	0	0%
	Pos < 360°	Pos < 360°	1 - 19	1 - 13	1 – 7%
	Pos > 360°	Pos > 360°	20 - 29	14 - 1D	8 – 11%
	Pos < 360°	Pos > 360°	30 - 39	1E -27	12 – 15%
	Pos > 360°	Pos < 360°	40 - 49	28 - 31	16 – 19%
	Rotation left	Pos < 360°	50 - 59	31 - 3B	20 – 23%
	Rotation left	Pos > 360°	60 - 69	3C - 45	24 – 27%
	Rotation right	Pos < 360°	70 - 79	46 - 4F	28 – 30%
	Rotation right	Pos > 360°	80 - 89	50 - 59	31 – 35%
	Pos < 360°	Rotation left	90 - 99	5A - 63	36 – 38%
	Pos > 360°	Rotation left	100 - 109	64 - 6D	39 – 42%
	Pos < 360°	Rotation right	110 - 119	6E - 77	43 – 46%
	Pos > 360°	Rotation right	120 - 129	78 - 81	47 – 50%
	Rotation left	Rotation left	130 - 139	82 - 8B	51 – 54%
	Rotation right	Rotation right	140 - 149	8C - 95	55 – 58%
	Rotation left	Rotation right	150 - 159	96 - 9F	59 – 62%
	Rotation right	Rotation left	160 - 254	A0 - FE	63 – 98%
	Reset without Shutter		254	FE	99%
	Reset for all Functions		255	FF	100%
8) Color	color 1 (white)		0 - 4	0 - 4	1%
	bi (white – green)		5 - 9	5 - 9	2 – 3%
	color 2 (green)		10 - 14	A - E	4 – 5%
	bi (green – red)		15 - 19	F - 13	6 – 7%
	color 3 (red)		20 -24	14 - 18	8 – 9%
	bi (red – dark blue)		25 - 29	19 - 1D	10 – 11%
	color 4 (dark blue)		30 - 34	1E - 22	12 – 13%
	bi (dark blue – yellow)		35 - 39	23 - 27	14 – 15%
	color 5 (yellow)		40 - 44	28 - 2C	16 – 17%
	bi (yellow – pink)		45 - 49	2D - 31	18%

Channel	Description	DMX-Value	Hex-Value	Value %
8) Color	color 6 (pink)	50 - 54	32 - 36	19 – 20%
	bi (pink – turquoise)	55 -59	37 - 3B	21 – 22%
	color 7 (turquoise)	60 - 64	3E - 40	23 – 24%
	bi (turquoise – orange)	65 - 69	41 - 45	25 – 26%
	color 8 (orange)	70 - 74	46 - 4A	27 – 28%
	bi (orange – cyan)	75 - 79	4B - 4F	29 – 30%
	color 9 (cyan)	80 - 84	50 - 54	31 – 32%
	bi (cyan – magenta)	85 - 89	55 - 59	33 – 34%
	color 10 (magenta)	90 - 94	5A - 5E	35 – 36%
	bi (magenta – white)	95 - 99	5F - 63	37 – 39%
	rotation cw slow – fast	128 - 191	80 - BF	50 – 74%
	Stop	192	C0	75%
	rotation ccw slow – fast	193 - 255	C1 - FF	76-100%
9) Gobow. 1	Gobo 1 (open)	0 - 9	0 - 9	0 – 3%
	Gobo 2 (rotation + posi)	10 - 19	A - 13	4 – 7%
	Gobo 3 (rotation + posi)	20 - 29	14 - 1D	8 – 11%
	Gobo 4 (fixed)	30 - 39	1E - 27	12 – 15%
	Gobo 5 (rotation + posi)	40 - 49	28 - 31	16 – 19%
	Gobo 6 (rotation + posi)	50 - 127	32 - 7F	20 – 50%
	rotation cw fast – slow	128 - 191	80 - BF	51 – 74%
	Stop	192	C0	75%
	rotation ccw slow – fast	193 - 255	C1 – FF	76-100%
10) Shutter	shutter open	0 - 9	0 – 9	0 – 3%
	shutter close 1	10 – 19	A – 13	4 – 7%
	shutter close 2	20 - 29	14 - 1D	8 – 11%
	shutter slow – fast	30 – 99	1E – 63	12 – 38%
	shutter close 1	100 – 250	64 – FA	39 – 98%
	shutter open	251 - 255	FB - FF	99-100%
11) Gobo 1	Stop	0 – 4	0 – 4	0 – 1%
Rotation 1	rotation cw slow – fast	5 – 24	5 – 18	2 – 9%
	Stop	25 – 29	19 – 1D	10 – 11%
	rotation ccw slow – fast	30 – 49	1E – 31	12 – 19%
	Stop	50 – 54	32 – 36	20 – 21%
	gobo position	55 - 255	37 – FF	22-100%
12) Iris	Iris 100% - 4% open	0 - 255	0 – FF	0 – 100%
13) Focus	min -. Max	0 - 255	0 – A	0 – 100%
14) Gobow. 2	Gobo 1 (open)	0 – 9	0 - 9	0 – 3%
	Gobo 2 (rotation)	10 – 19	A - 13	4 – 7%
	Gobo 3 (rotation)	20 – 29	14 - 1D	8 – 11%
	Gobo 4 (color correction filter)	30 – 39	1E - 27	12 – 15%
	Gobo 5 (rotation)	40 – 44	28 – 7B	16 – 17%
	Gobo 6 (rotation)	45 – 123	2D – 7B	18 – 49%

Channel	Description	DMX-Value	Hex-Value	Value %
	rotation cw slow . fast	124 – 191	80 - BF	50 – 74%
	Stop	192	C0	75%
	rotation ccw slow – fast	193 – 255	C1 - FF	76 – 100%
15) Gobo 2	Stop	0 – 15	0 - F	0 – 5%
Rotation	rotation cw slow – fast	16 – 143	10 - 8F	6 – 55%
	Stop	144	90	56%
	rotation ccw slow – fast	145 –255	91 - FF	57 – 100%
16) Prism	open	0 – 9	0 – 9	0 – 3%
	prism 1	10 – 19	A – 13	4 – 7%
	rot. cw prism 1 slow – fast	20 – 69	14 – 45	8 – 26%
	Stop	70	46	27%
	rot. ccw prism 1 slow – fast	71 – 119	47 – 77	28 – 46%
	Stop	120	78	47%
	Effect (frost fi lter)	121 - 129	79 – 81	48 – 50%
	prism 2	130 – 139	82 – 8B	51 – 54%
	rot. cw prism 2 slow – fast	140 – 189	8C – BD	55 – 73%
	Stop	190	BE	74%
	rot. ccw prism 2 slow – fast	191 – 239	BF – EF	75 – 93%
	Stop	240 – 255	F0 – FF	94 – 100%
17) Dimmer	close (0%)	0 – 9	0 – 9	0 – 3%
	close – open (0 – 100%)	10 – 249	A – F9	4 – 97%
	open (100%)	250 – 255	FA – FF	98 – 100%
Lamp on	Shutter (min 2 sec)	240 – 245	F0 – F5	94 – 96%
	dimmer	250 – 255	FA – FF	98 – 100%
Lamp on *(from software-version 2.2, this is also shown in the display)*	Shutter (min 2 sec) dimmer	240 – 255 250 – 255	F0 – FF FA – FF	94 – 100% 98 – 100%
Lamp off	shutter (min 2sec) dimmer iris (max 5sec)	246 – 250 0 – 9 x– 255- 0	F6 – FA 0 – 9 x - FF - 0	97 – 98% 0 – 3% x– 100 –0%
Lamp off *(from software-version 2.2, this is also shown in the display)*	shutter (min 2sec) dimmer iris (max 5sec)	230 – 250 0 – 9 x– 255- 0	E6 – FA 0 – 9 x - FF - 0	90 – 98% 0 – 3% x– 100 –0%

Relative Movement:

If DMX- Channel Nr.7 (Special) is on DMX- [000] you can control the **PATEND-LIGHT 1200** in **Relative Movement.** Therefore the Speed channels No. 5/6 must also be on DMX- [000] If you have a DMX- Value on one of these channels it is automatically on Absolute Movement. While programming circles or other movements please use the Absolute Movement.

5 Lamp Installation

For a hassle free Lamp Installation, it is absolutely necessary to follow all descriptions in this chapter step by step.

5.1 Safety Rules

- Unplug AC power connection

- Allow to cool (min. 30 minutes)

- Don't touch lamp with bare fingers.

- Install the lamp with the filler to the right direction. (see Illustration 5-1)

- Distance between lamp and lens holder must bee min. 5mm.

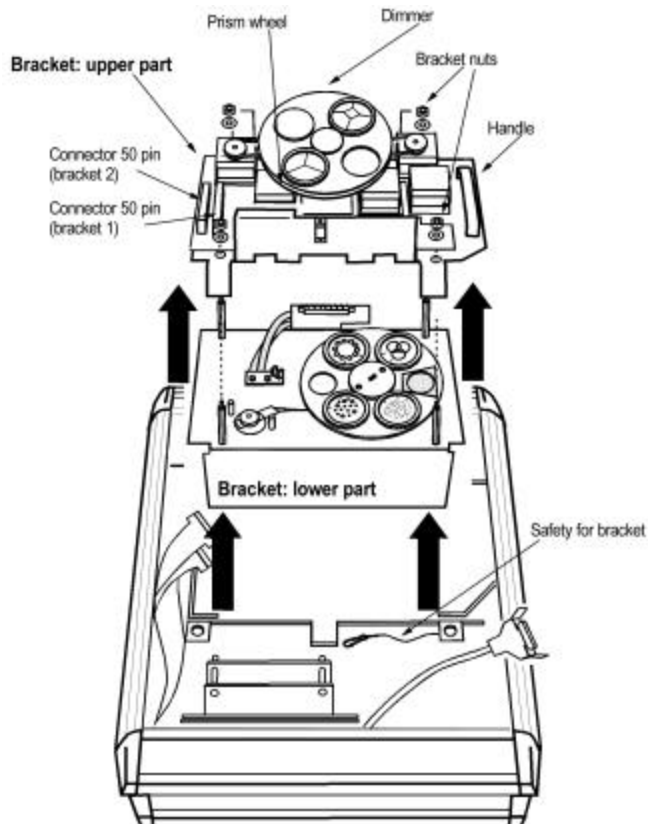- Close the **PATEND-LIGHT 1200** before you connect the AC power!
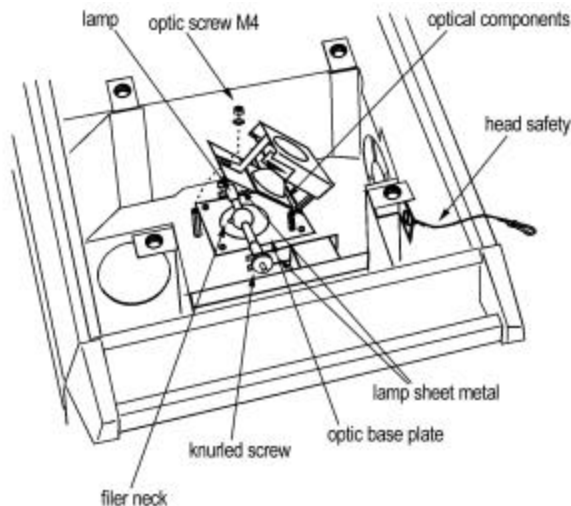
Illustration 5-1

5.2 How to Install lamp

Please see Illustration 1-1 and 5-1/2.

1. Unscrew screws on the head with 8mm wrench.

2. Press the two safety levers at the same time and lift carefully the head plate.

3. Remove Sub-D socket by pressing the safety clips. Hang out the safety loop and lift the head plate cautiously.

4. Remove the multiple pin strip 1 and 2.

5. Open the knurled screw of the Optical Slide.

6. Hang out the safety of the Optical Slide in.

7. Take out the Optical Slide in carefully.

8. Unscrew the M4 screw of the optical plate.

9. Open the upper part of the optical device.

10. Unscrew the HMI lamp nuts and change the lamp.

   The lamp filler must be placed according to the illustration !!!

11. Close the **PATEND-LIGHT 1200** in reverse order.

Attention: Make sure that the optical slide in fits in both grooves !!!

Illustration 5-2

6 Gobo Replacement

The PATEND-LIGHT 1200 is fitted with standard Gobos (37,5 mm, picture size 27,0 mm). To change one of these it is necessary to open the **PATEND-LIGHT 1200** and to remove the optical system.
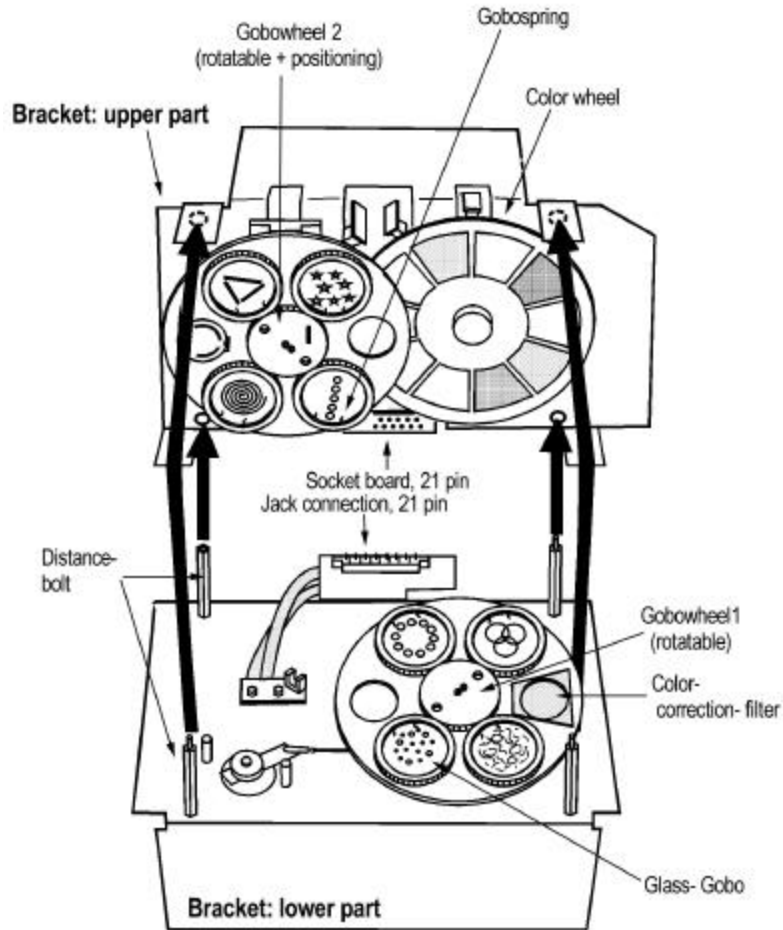
6.1 Safety Rules

- Unplug AC power connection
- Allow to cool (over 30 minutes)
- Don't touch lamp with bare fingers.
- Close the **PATEND-LIGHT 1200** before you connect the AC power!

6.2 How to replace the Gobos

Please see Illustration 1-1 and 6-1.

1. Unscrew screws on the head with 8mm wrench.
2. Press the two safety levers at the same time and lift carefully the head plate.
3. Remove Sub-D socket by pressing the safety clips. Hang out the safety loop and lift the head plate cautiously.
4. Remove the multiple pin strip 1 and 2.
5. Open the knurled screw of the Optical Screw.
6. Hang out the safety of the Optical Slide in.
7. Take out the Optical Slide in carefully.
8. Unscrew the 4 screws of the Optical Slide in.
9. Put down the upper part of the Optical Slide in head first.
10. Remove the little claps which holds the Gobos with a little screwdriver.
11. Change the Gobos and mount the claps aback to its position. Please make sure, that the Gobo fits correct.
12. Close the **PATEND-LIGHT 1200** in reverse order.

Gobowheel 2
(rotatable + positioning)

Gobospring

Color wheel

Bracket: upper part

Socket board, 21 pin
Jack connection, 21 pin

Distance-bolt

Gobowheel 1
(rotatable)

Color-correction- filter

Glass- Gobo

Bracket: lower part

Illustration 6-1

Attention: Make sure that the optical slide in fits in both grooves !!!

If you use Glass-Gobos make sure that the mirror side faces the lamp side.

7   Maintenance

The cleaning of the inner optical System, color filters, color correction filter and lenses should be done by qualified technician only! Contact your local **ELATION** Dealer for details.

DO NOT use strong detergents, acid etc. for cleaning the case.

7.1   Mirror and Optical System

Clean the **PATEND-LIGHT 1200** optical system with a moistened cloth and a little cleaner.

7.1.1   Cleaning the inside Mirror and the outside Optical System
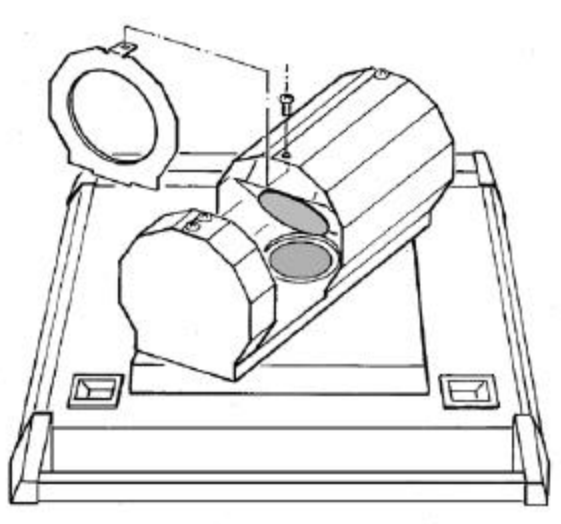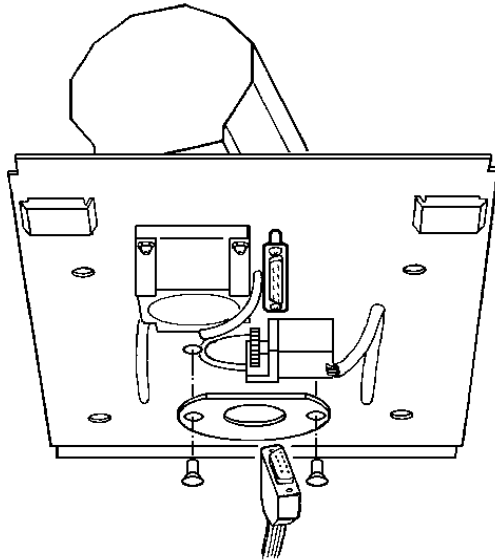

Illustration 7-1

Open the screws

Remove the Mirror Blind

7.1.2   Cleaning the outside Optical System

Illustration 7-2

1. Unscrew screws on the head with 8mm wrench.

2. Press the two safety levers at the same time and lift carefully the head plate.

3. Remove Sub-D socket by pressing the safety clips. Hang out the safety loop and lift the head plate cautiously.

4. Unscrew the two screws of the aperture.

5. Clean the lenses inside

6. Close the **PATEND-LIGHT 1200** in reverse order.

7.2   Ventilation System
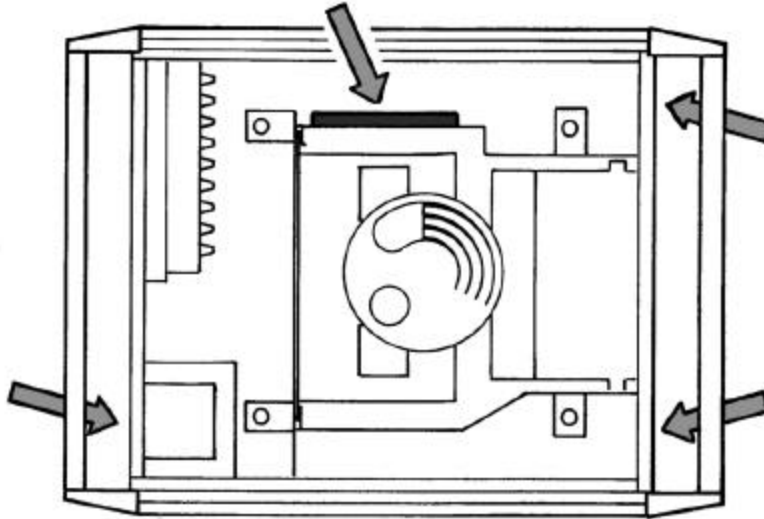
Illustration 7-3

It is necessary to clean the fan openings, air channels and fan gratings on a regular base (depending on environment).

8   Technical Data /Overview

- Supply Data 230V/10AT

- 1200 HMI W/S Lamp, bilateral based, with 750h Lamp Life

- Capacitor compensation

- DMX 512 Standard

- Angle of spread 16°

- weight 32 kg

- Dimensions: 566 x 434 x 395 mm

- **ROTO-Head**

  Min. 1 round per 8 minutes

  Max. 7 rounds per second

  0,02 degrees resolution

  14.00/25.000 Microsteps/360°