



**MAC SPOT MS250-2
MOVING HEAD SPOT
USER MANUAL**



CE

Congratulations on purchasing this MAC SPOT MS250-2.

Thank you for extending your trust in our technology!

For reasons of safety and approval (CE) the personal reconstruction and/or modification of this product is prohibited. Please observe that damage caused by modifications performed manually to this device is not covered by the warranty.

This product leaves our works in a perfect condition. Please observe all notes in these operating instructions to warrant this condition and the safe operation of the product!

Any damage caused as a result of the non-compliance with these operating instructions leads to the expiration of any warranty claim. The manufacturer does not accept liability for any damage to property or for personal injury resulting from the improper handling of the product, or non-observance of the operating instructions.

Store these operating instructions in a safe place for later reference and pass them to any new holder when selling or lending or leaving this device in the hands of any other party.

Application According to Purpose

This product is a lighting effect which creates special light effects with one lamp. To generate these effects, the product must be connected to mains and a DMX-512 compatible controller.

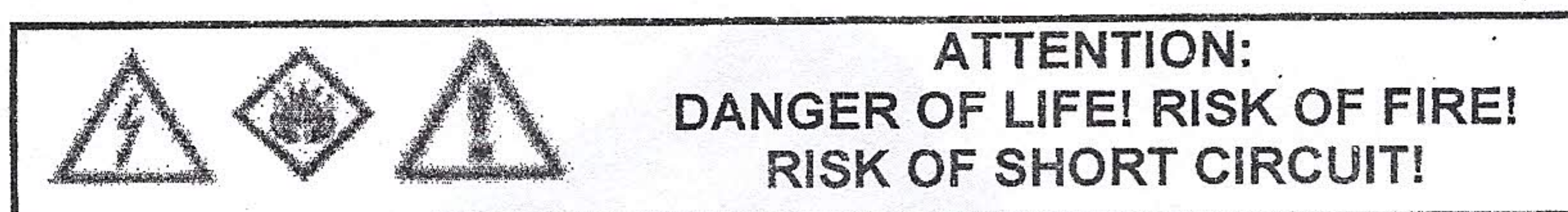
This product is designed for 230V, 50Hz A/C operation and exclusively for indoor use.

If used for any purpose other than described in these operating instructions, the device may suffer damage and the warranty expires. Also, any other use is linked with risks such as short circuits, fire, electrical shock, etc.

The manufacturer's serial number must never be removed as otherwise the warranty expires.

Notes on Safety

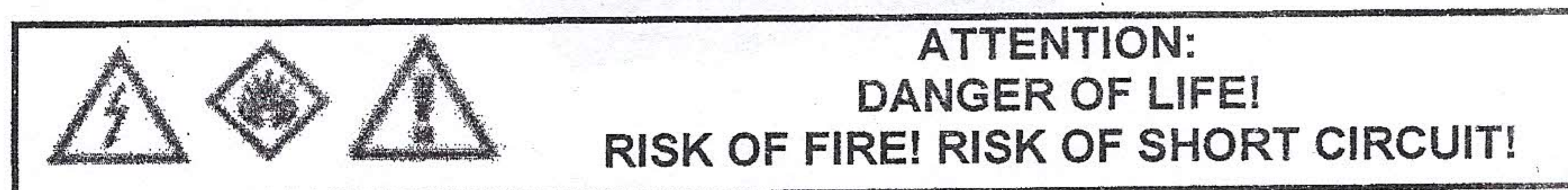
1. Before Operation



Prior to the initial operation of this product, please do the followings

- Read these operating instructions with great care;
- Study and observe all instructions carefully;
- Ensure that everybody and anybody involved in the installation, operation, transport and storage of this product is suitably qualified;
- Verify whether any visible damage was caused during transport. If the power cord, housing or the light are damaged, do not operate the device; contact your specialized dealer immediately.

2. Supply Voltage, Mains Cord and Connection to Mains



The handling of supply voltage, mains cords and connections to mains calls for particular care considering the risk from a life-threatening electric shock, the risk of fire and the risk of short circuits! Please observe the following notes in particular:

Products operating on supply voltage should be kept out of the reach of children. Therefore

ensure the permanent supervision if children are in the immediate vicinity of the product!

For commercial facilities the regulations on the prevention of accidents of the respective trade association must be observed. The operation of this equipment at schools, training facilities, and hobby or self-help workshops must be supervised responsibly by trained personnel.

Check the product regularly for any damage to the mains cord! Should you discover any damage to the mains cord, do not operate or disconnect this product! Secure the product against accidental operation and contact your specialized dealer!

Always separate the product from mains by holding the mains plug by the handling surface. Never disconnect by holding the line cord! Be sure to connect the product exclusively to 230 V, 50 Hz A/C!

Always ensure during installation, operation, transport and when storing the product that the mains cord is not exposed to possible mechanical damage, or damage caused by humidity, fluids, heat or cold!

The product's cable entry must not be exposed to stress from pull! Create the mains connection once the product has been installed only. Always connect the mains plug last!

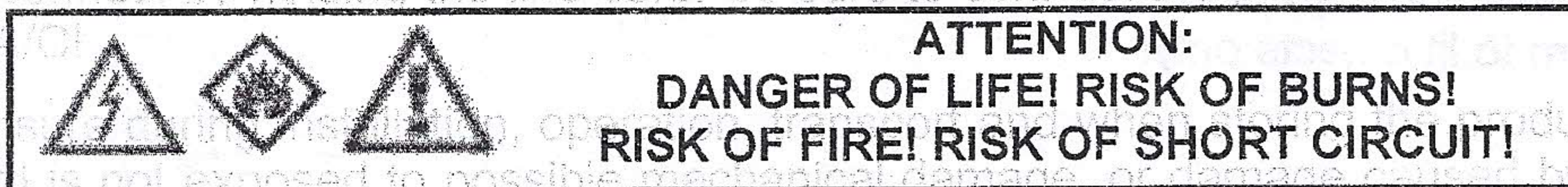
The product must only be connected to a proper outlet of the public supply grid. Connect the mains cord to suitable outlets only! Use extensions cords in compliance with specifications only! Do not allow the mains cord to come into contact with other cords!

Ensure during installation, operation, transport and storage that none of the cables are freely exposed! Never touch the mains cord, mains plug and outlets with wet or damp hands!

When not using the product, and prior to cleaning always disconnect the product from mains! To do so, hold the mains plug by the handling surface and never pull the mains cord!

Never connect the device to dimmer packs!

3. Housing



Always ensure during installation, operation, transport and when storing the product that no shocks or other forces impact the housing!

The housing must not touch onto any other devices or objects during operation!

Easily flammable materials, e.g. decoration material and other surfaces and objects, must maintain a minimum distance of 3m to the housing! Walls must maintain a minimum distance of 50cm to the housing! The device must be installed on a fireproof surface only (no carpet)! Always ensure a proper circulation of air.

Do not touch the housing during operation - it will heat up. The housing is safe to touch approx. 5 minutes following the end of operation!

The device must never be carried via the projector arms. Use the carrying handles only!

Fluids must not enter the housing as this could reduce the protective insulation and may trigger short circuits which may lead to fatal electric shocks! If fluids have entered, disconnect the mains plug immediately and secure the product against unintentional operation and contact your specialized dealer! Damage caused as a result of fluids entering the housing is exempt from warranty.

No metal parts or other items must enter the housing as this may reduce the protective insulation and may lead to fatal electric shocks! Always ensure during installation, operation, transport and when storing the product that no shocks or other forces impact the housing!


The housing must not touch onto any other devices or objects during operation!

Easily flammable materials, e.g. decoration material and other surfaces and objects, must maintain a minimum distance of 3m to the housing! Walls must maintain a minimum distance of 50cm to the housing! The device must be installed on a fireproof surface only (no carpet)! Always ensure a proper circulation of air.

Do not touch the housing during operation - it will heat up. The housing is safe to touch approx. 5 minutes following the end of operation!

insulation or trigger short circuits which may lead to fatal electric shocks! If metal parts or other items have entered, disconnect the mains plug immediately, secure the product against unintentional operation and contact your specialized dealer! Damage caused by metal parts or other items in the housing is exempt from warranty.

4. Operating Environment



ATTENTION:
DANGER OF LIFE! RISK OF BURNS!
RISK OF FIRE! RISK OF SHORT CIRCUIT!

The product must be operated and stored in a dry environment only! Splash water, rain, humidity, fog may reduce the protective insulation which may lead to fatal electric shocks! The limit value for relative humidity is 50% at 45° C. A minimum distance of 1.5m to a fog machine must be observed; fog saturation in the room must not reduce the visibility to below 10m.

The product must be operated at a temperature range of between -5 ° C and 45 ° C only. Protect the product against direct exposure to sunlight or other heat, such as from radiators! If the product is taken from a cold environment into a warm environment it must only be taken into operation once it has reached ambient temperature, since the condensation created by the difference in temperature may destroy the device!


Protect the product against dust! Dust may reduce the protective insulation, which may cause fatal electric shocks!

The product must be operated at altitudes ranging between 20m below and 3000m above sea level only!

The product must not be operated during thunder storms; risk of destruction from surge voltages!

The product must be operated at a minimum distance of 1.5 m to lit objects only!

5. Installation

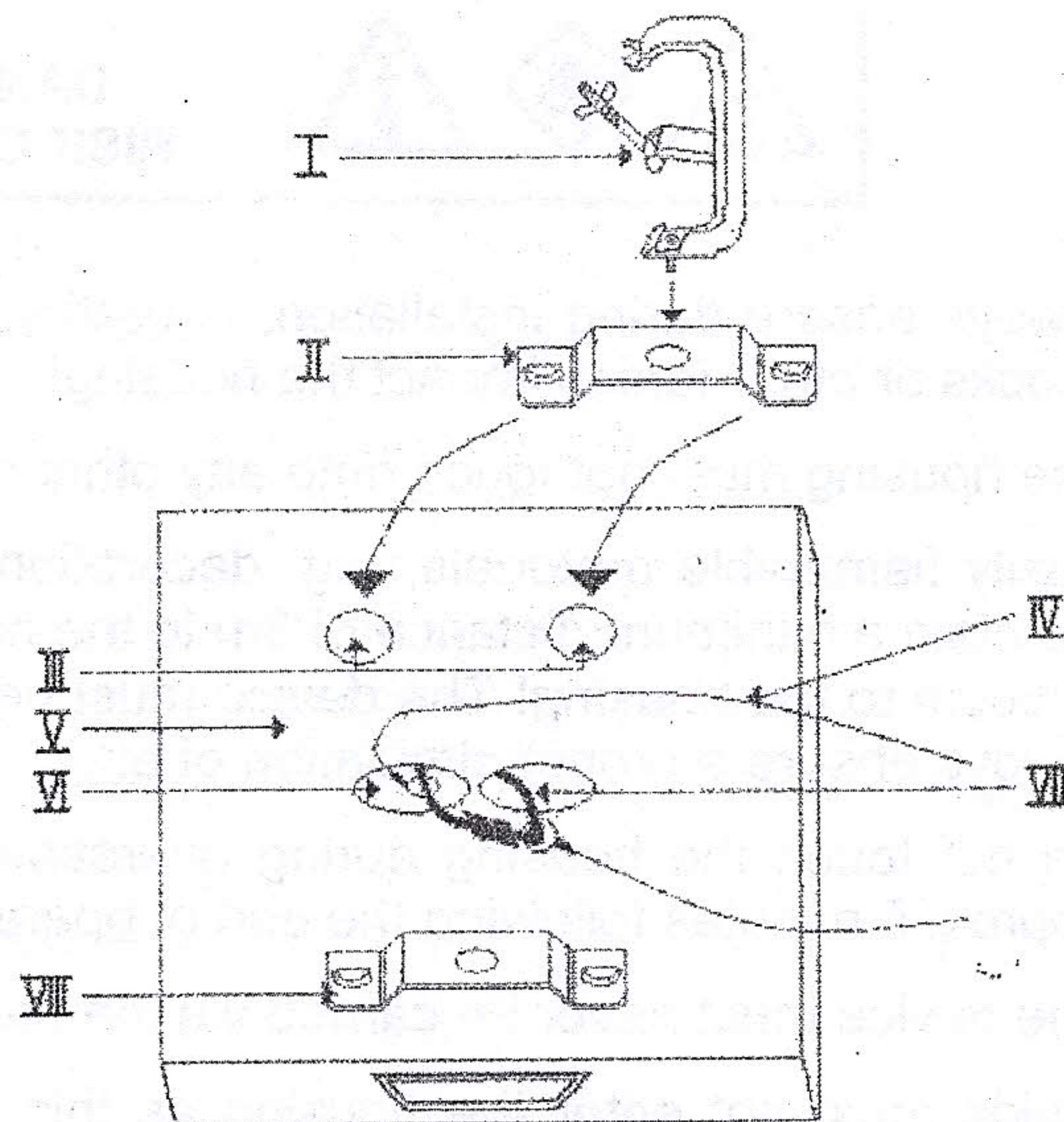


ATTENTION:
DANGER OF LIFE!

This product can be operated suspended or as a stand-alone system.

Undersurface

- I. Hook (not included in delivery)
- II. Omega bracket
- III. Screw thread
- IV. Safety arrester cable (not included in delivery)
- V. Housing
- VI. Fixture for safety arrester cable
- VII. Carabiner (not included in delivery)
- VIII. Omega bracket (screwed on)



Should your MAC MAH lighting effect show any signs of damage, do not install the device! In this case, have your lighting effect repaired by your specialized MAC MAH dealer. MAC MAH does not accept responsibility or liability for damage to property or personal injury resulting

from an improperly installation!

As a stand-alone system the device must be installed vertically on an absolute planar, firm, fireproof, shock- and vibration-free surface. The installation of this lighting effect must be carried out by trained and professional staff! The installation of this lighting must only be carried out with the appropriate materials!

The suspended installation of this lighting effect necessitates a suitable suspension system! The lighting effect must never be fixed swinging freely in the room. No individuals should linger underneath the lighting effect during suspended installation!

It is a must to install this device with a second independent fixture. Such second fixture must guarantee in the event of failure of the main fixture that no assembly parts will fall down. Use the fixture on the undersurface only.

The light effect unit must be attached via two certified hooks and omega bracket to a tie-bar system. Use the screw threads on the undersurface only.

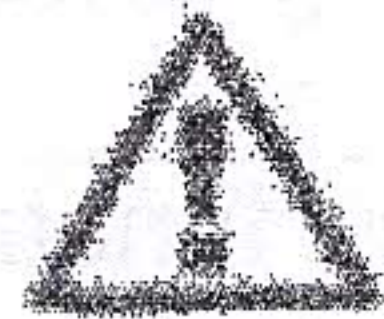
It must be ensured that an expert inspects the mechanical and safety-relevant installation prior to the initial operation and following major modifications, prior to the renewed operation. It must be ensured that an expert inspects the mechanical and safety-relevant installation at least once a year. It must be ensured that an expert inspects the mechanical installation and the installation of relevance to safety within the framework of an acceptance test at least every four years.

The installation fixture must be as such that it can withstand for a period of 60 minutes 10 times the load capacity without harmful deformation.

It is prohibited for any individual to unnecessarily stay or pass beneath the installation during any type of assembly work.

The light effect unit must be secured by a safety arrester cable if fly-mounted. The cable must withstand 12 times the weight of the light effect unit. Use arrester cables equipped with quick closing links. The dropping distance must not exceed 20 cm. Defect arrester cables or arrester cables that have already been exposed to stress must not be used.

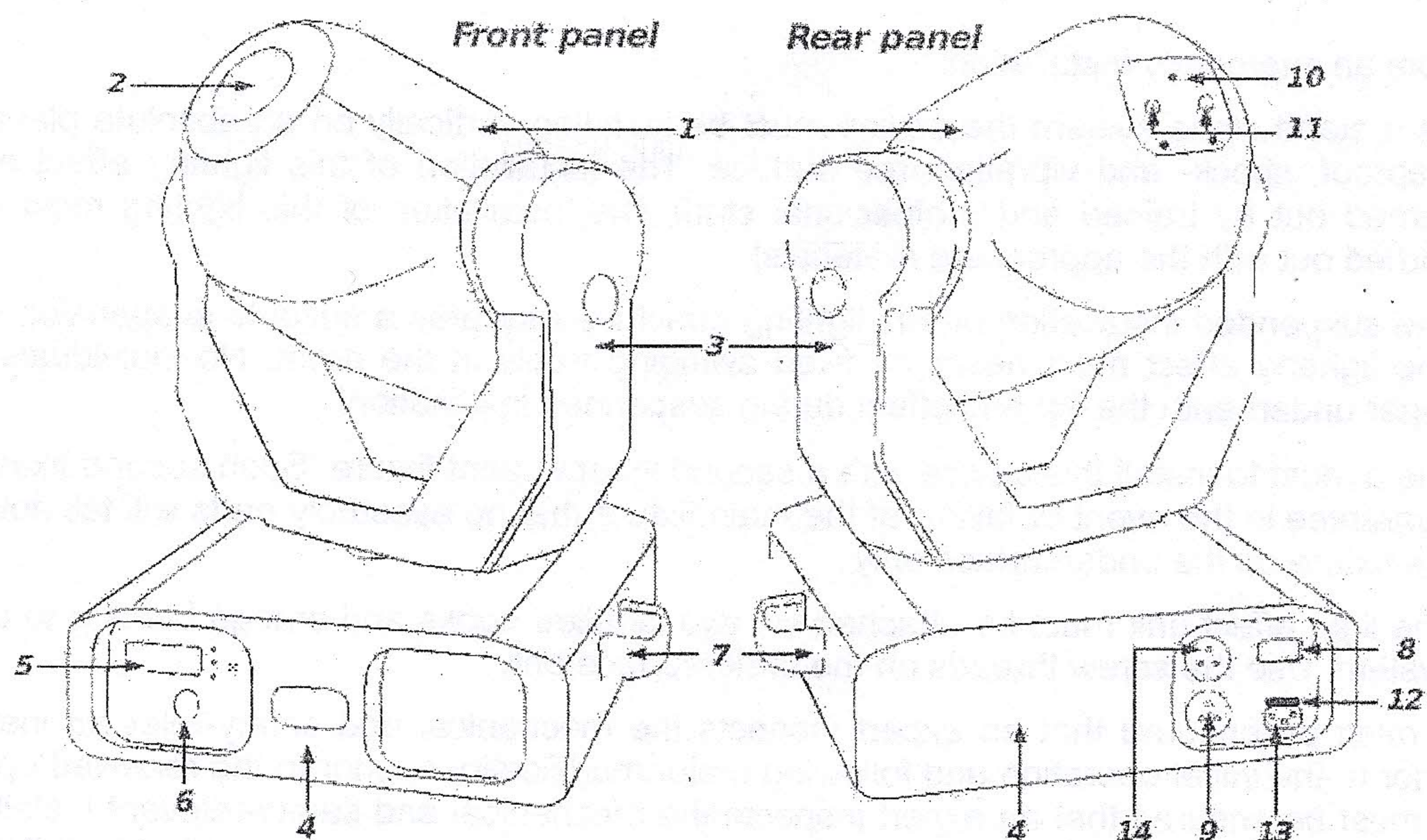
6. Operation



**ATTENTION:
RISK OF HEALTH!**

Controls

- | | |
|------------------------|----------------------|
| 1. Projector head | 10. Bulb compartment |
| 2. Objective lens | 11. Fixing Screw |
| 3. Projector arm | 12. Fuse |
| 4. Base | 13. Power supply |
| 5. Display | 14. DMX input |
| 6. Function key: MENU | 15. DMX output |
| 7. Function key: ENTER | 16. ON/ OFF switch |
| 8. Function key: UP | 17. Carrying handle |
| 9. Function key: DOWN | |



Link all DMX devices with a DMX-512 controller by using a standard, 3-pin DMX cable. Connect the output -14- of the first device with the input -9- of the second device and the output of the second device with the input of the third device and so on.

Connect the mains plug to an outlet and switch the device on -8-.

Operating the product for the first time may generate smoke and odour; this is not a defect. Avoid dis/connecting the product repeatedly and quickly from/with mains! Always wait 15 minutes prior to the next dis/connection!

The device starts not until a self-testing and starting time. If the moving head is ready to start, push and roll the function wheel -6-. The LCD display shows the options, as below:

When no DMX signal, there are two running modes:

No DMX Sound	Sound activation mode when no DMX signal. To obtain this function, please first disconnect DMX communication, then press the rolling wheel and turn it anti-clock-wise. Press again to confirm.
No DMX Auto	Auto running mode when no DMX signal. To obtain this function, please first disconnect DMX communication, then press the rolling wheel and turn it clock-wise. Press again to confirm.

DMX address:

Addr 001	To set DMX address for the fixture, please press the rolling wheel and turn it, clock-wise to increase value, anti to decrease. Press again to confirm.
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Pan/Tilt reverse

Reverse Tilt Y	Tilt movement reverse. Press rolling wheel and turn anti-clock-wise to obtain. Press again to confirm.
Reverse Tilt N	Tilt movement not reverse (obverse). Press rolling wheel and turn clock-wise to obtain. Press again to confirm.
Reverse Pan Y	Pan movement reverse. Press rolling wheel and turn anti-clock-wise to obtain. Press again to confirm.
Reverse Pan N	Pan movement not reverse (obverse). Press rolling wheel and turn clock-wise to obtain. Press again to confirm.

Chase speed

Chase Speed001	To set chase speed, press rolling wheel and turn it, clock-wise to increase value (faster), anti to decrease (slower). Press again to confirm.
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LED indicators

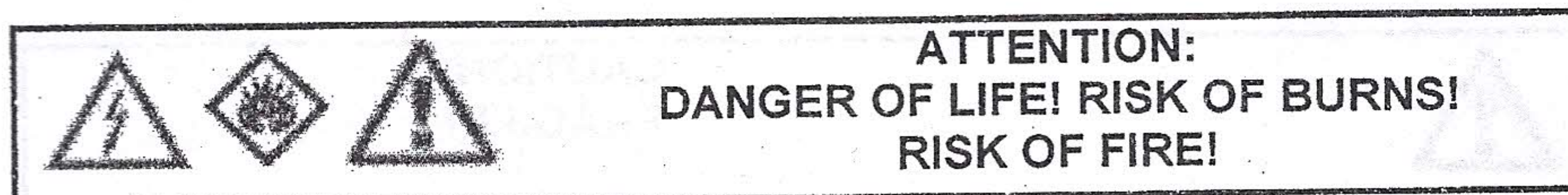
Red: Power on
 Yellow: DMX out (Sound/Auto mode)
 Green: DMX in

After the end of operation switch the device off and disconnect it from mains.

DMX Protocol

1	Strobe/Dimmer	0-127	Dimming from 0-100%
		128-247	Strobe from slow to fast
		248-255	Open
2	Color Wheel	0-127	7 colors + white
		128-255	Color rotation from slow to fast
3	Gobo Wheel	0-127	7 gobos (including one color glass gobo) + blank
		128-255	Gobo wheel continuously rotating
4	Gobo Rotation	0-131	Clockwise rotation from slow to fast
		132-255	Anti-clockwise rotation from slow to fast
5	Focus	0-255	[2m, +∞)
6	Prism	0-127	No function
		128-255	Prism Effect
7	Prism rotating	0-63	No function
		64-159	Anti-clockwise rotation from slow to fast
		160-255	Clockwise rotation from slow to fast
8	Pan/Tilt speed	0-255	Speed adjustment from fast to slow
9	Pan 540°	0-255	0-540° pan movement
10	Tilt 280°	0-255	0-280° tilt movement

7. Lamps



During operation, the lamps will reach temperatures of up to 200° C. Touching the lamps may cause serious burns! Objects coming into contact with the lamps during and shortly after operation may catch fire!

Disconnect the product from mains prior to installing or before changing a lamp! Allow a lamp to cool for approx. 15 minutes before exchanging it!

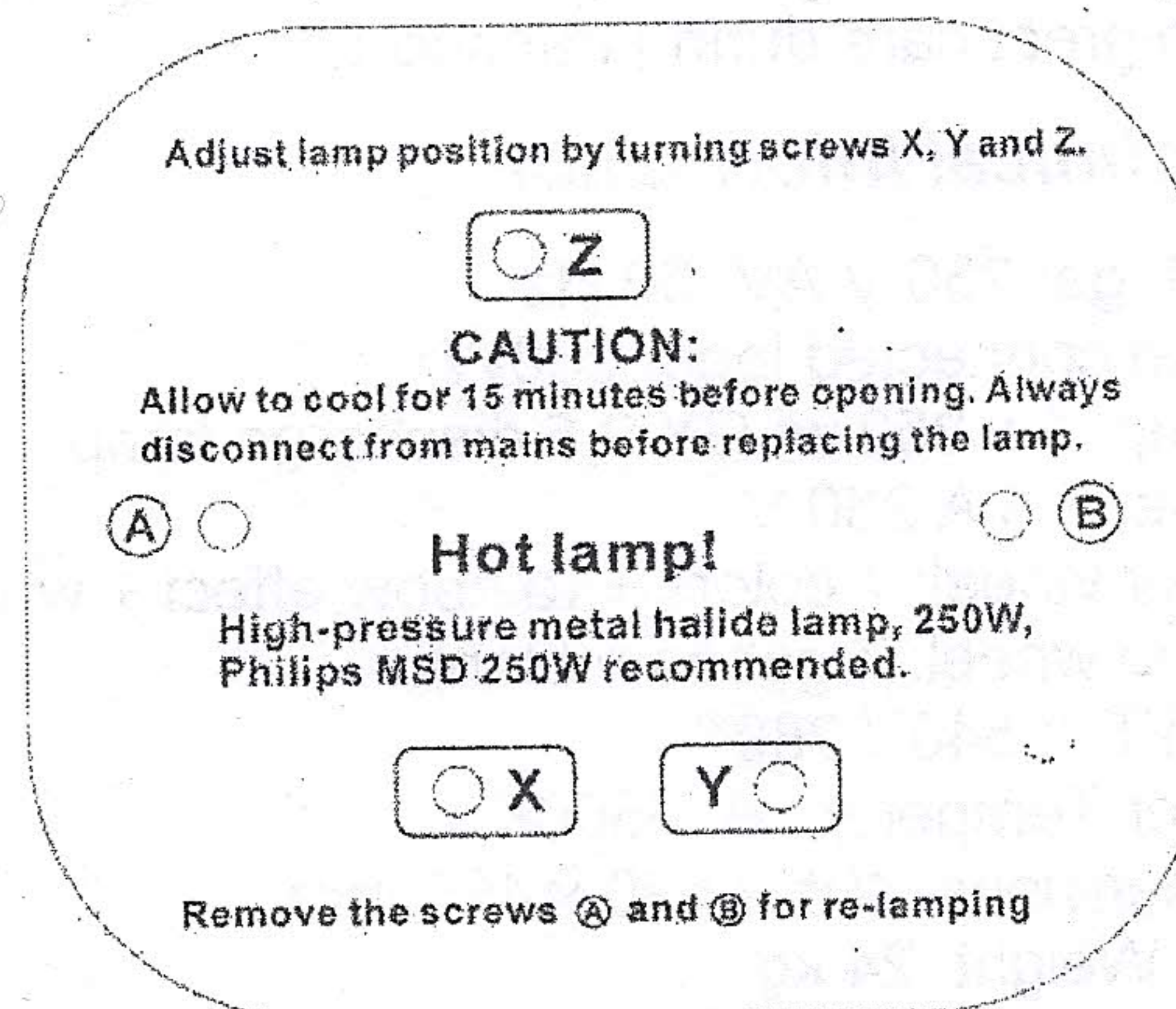
Never touch a lamp with bare hands! If damaged or deformed, a lamp must be exchanged!

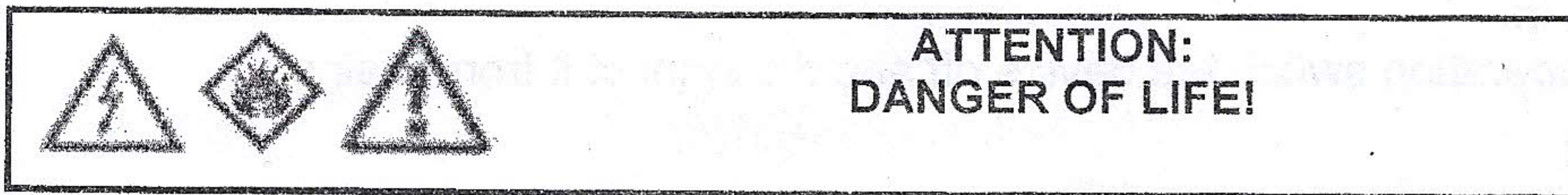
When exchanging the lamp be sure to use suitable lamps only. Lamps with greater performance generate excessive heat for the product; risk of fire! Damage resulting from the use of an unsuitable lamp is exempt from warranty!

Replace a lamp by unscrewing the fixing screws in top of the bulb compartment. Then you open the housing. Remove the lamp by pulling it carefully out of the socket. Install a lamp by putting it into the socket until it meets a resistance. Do not use any force - this could cause serious damage to the socket as well as the lamp! Close the compartment and tighten the screws.

Never connect the lighting effect to the mains prior with opened housing.

8. Fuse





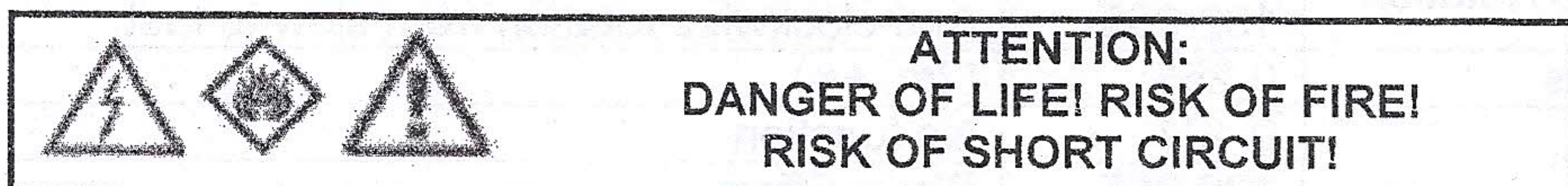
Disconnect the product from the mains prior before changing a fuse.

Only replace the fuse by a fuse of same type and rating! An incorrect fuse could damage or destruct the lighting effect.

Replace a fuse by levering the fuse holder cover with an appropriate screwdriver. Remove the old fuse and place the fuse inside the holder. Replace the fuse holder and insert it.

Never connect the lighting effect to the mains prior with opened housing.

9. Cleaning



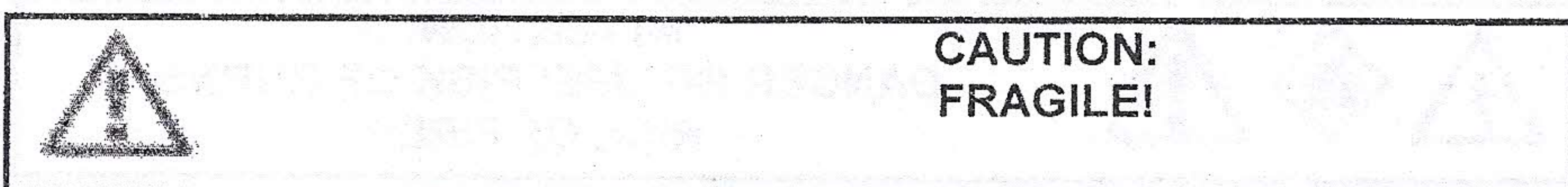
The product must be freed regularly from dust, other deposits and contamination as this may reduce the protective insulation, which may lead to a fatal electric shock!

Before cleaning, always disconnect the product from mains!

This product should be cleaned with a moist cloth only; never use aggressive cleaning agents, solvents or benzine for cleaning.

Ensure that the product is completely dry before operating it again after cleaning!

10. Transport



To avoid damage caused during transport, wrap the product in its original packaging only and handle it with great care during transport!

Technical Information

Voltage: 230 V AV, 50 Hz

Total connected load: 280W

Lamp: 1 x 250 w; GY 9,5 discharge lamp

Fuse: F 5 A 250 V

Color wheel: 7 colors + rainbow effect + white

Gobo wheel: 7 gobos + blank

Pan/Tilt: 540°/ 280°

Color Temperature: 6500K

Dimensions: 495 x 590 x 495 mm

Net Weight: 24 kg

Gross Weight: 28kg

Please note: All information is subject to change without prior notice.

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