Color Spot 575 AT

at series

USER MANUAL

Version: 1.3

ROBE® Show Lighting s.r.o. • Czech Republic • www.robe.cz
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FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY BEFORE YOU INITIAL START-UP!

1. Safety instructions

Every person involved with installation and maintenance of this device have to:
- be qualified
- follow the instructions of this manual

CAUTION! Be careful with your operations. With a high voltage you can suffer a dangerous electric shock when touching the wires!

This device has left our premises in absolutely perfect condition. In order to maintain this condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

Important:
The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.

Please consider that damages caused by manual modifications to the device are not subject to warranty.

Never let the power-cord come into contact with other cables! Handle the power-cord and all connections with the mains with particular caution!

Make sure that the available voltage is not higher than stated on the rear panel.

Always plug in the power plug least. Make sure that the power-switch is set to off-position before you connect the device to the mains. The power-plug has to be accessible after installing the device.

Make sure that the power-cord is never crimped or damaged by sharp edges. Check the device and the power-cord from time to time.

Always disconnect from the mains, when the device is not in use or before cleaning it. Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.

This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth.

The electric connection, repairs and servicing must be carried out by a qualified employee. Do not connect this device to a dimmer pack.

Do not switch the fixture on and off in short intervals as this would reduce the lamp’s life.

During the initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective.

Do not touch the device’s housing bare hands during its operation (housing becomes hot)!
For replacement use lamps and fuses of same type and rating only.

CAUTION! EYEDAMAGES!
Avoid looking directly into the light source (meant especially for epileptics)!

2. Operating determinations

This device is a moving-head spot for creating decorative effects and was designed for indoor use only.

If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.
Never run the device without lamp!

Do not shake the device. Avoid brute force when installing or operating the device.

Never lift the fixture by holding it at the projector-head, as the mechanics may be damaged. Always hold the fixture at the transport handles.

When choosing the installation-spot, please make sure that the device is not exposed to extreme heat, moisture or dust. There should not be any cables lying around. You endanger your own and the safety of others!

The minimum distance between light-output and the illuminated surface must be more than 2 meters.

Make sure that the area below the installation place is blocked when rigging, derigging or servicing the fixture.

Always fix the fixture with an appropriate safety-rope. Fix the safety-rope at the correct holes only.

Only operate the fixture after having checked that the housing is firmly closed and all screws are tightly fastened.

The lamp must never be ignited if the objective-lens or any housing-cover is open, as discharge lamps may explode and emit a high ultraviolet radiation, which may cause burns.

The maximum ambient temperature 40° C must never be exceeded. Otherwise, the lamp is switched off and the fixture is out of operation for 5 minutes.

**CAUTION!** The lens has to be replaced when it is obviously damaged, so that its function is impaired, e.g. due to cracks or deep scratches!

Operate the device only after having familiarized with its functions. Do not permit operation by persons not qualified for operating the device. Most damages are the result of unprofessional operation!

**CAUTION!** The lamp has to be replaced when it is damaged or deformed due to the heat!

Please use the original packaging if the device is to be transported.

Please consider that unauthorized modifications on the device are forbidden due to safety reasons!

If this device will be operated in any way different to the one described in this manual, the product may suffer damages and the guarantee becomes void. Furthermore, any other operation may lead to dangers like short-circuit, burns, electric shock, burns due to ultraviolet radiation, lamp explosion, crash etc.

### 3. Description of the device

1. Moving head
2. Yoke
3. Base
4. Handle
4. Installation

4.1 Fitting the lamp

**DANGER ! Install the lamps with the device switched off only. Unplug from mains before !**

To insert the lamp MSR 575W/2 loosen the lamp cover at the rear of head (see the drawings ) by removing the 3 fastening screws which are marked „X,Y,Z“. Carefully pull out the cover with the lamp socket assembly. If changing the lamp, remove the old lamp from the socket. Insert the lamp to the socket. Do not install a lamp with a higher wattage! A lamp like this generates temperatures the device is not designed for. Damages caused by non-observance are not subject to warranty. Please follow the lamp manufacturer's notes! Do not touch the glass-bulb with bare hands during the installation! Make sure that the lamp is installed tightly into the lampholder system. Reclose the lamp cover and tighten the 3 screws.

Before striking the lamp, reset the “LAti” and “LASi” counter s in the menu of the Control Board, by pressing the “Up” and “Down” buttons in one time and then confirming with the Enter-button.
4.2 Lamp adjustment

The ColorSpot 575 AT lamp holder is aligned at the factory. Due to differences between lamps, fine adjustment may improve light performance. Strike the lamp, open the shutter and the iris, set the dimmer intensity onto 100% and focus the light on a surface (wall). Center a hot-spot (the brightest part of the image) by using the 3 adjustment screws „A, B, C“. Turn one screw after another a quarter-turn clockwise (counter-clockwise) to set the hot-spot in the center of the image. If you cannot detect the hot-spot, adjust the lamp until the light is evenly distributed.

4.3 Inserting / Exchanging colours and gobos

**DANGER!** Install the colours and gobos with the device switched off only. Unplug from mains before!

If you wish to use other forms and patterns as the standard gobos, or if colours are to be exchanged, open the top cover of the head by loosening 4 quarter-turn fasteners on the top cover.

**Colour wheel:**
Gently bend out the colour module to release it from the 3 distance slots and eject it from the pressing snap. Put the new colour module back under the pressing snap and push it to the distance slots.

**Stat. gobo wheel:**
Gently bend out the gobo module to release it from the 3 distance slots and eject it from the pressing snap. Put the new gobo module back under the pressing snap and push it to the distance slots.
Rotating gobo wheel:
Gently bend out the gobo module to release it from the distance slots and eject it from the pressing snap.
Press the ends of the fixation ring together with an appropriate tool and remove it from the gobo holder. Remove the gobo and insert the new gobo. Press the ends of the fixation ring together and insert it in the front of the gobo.
Put the gobo module back under the pressing snap and push it to the distance slots.

CAUTION!  The gobo holder with the magnet must be placed in the same position as it was placed before gobo replacement!

4.4 Replacing the 3-facet prism
Gently bend out the prism holder to release it from the fixative holes of prism module and eject it from the pressing snap.
Put the new prism holder back under the pressing snap and push it to the 3 fixative holes.

4.5 Connection to the mains

Verify the power supply settings before applying power!

If you wish to change the power supply settings, see the chapter below.
Connect the fixture to the mains with the enclosed power plug. If you need to install other power plug on the power cable, follow the identification table below.
The earth has to be connected!

Do not connect the fixture to a dimmer system!

The occupation of the connection-cables is as follows:

<table>
<thead>
<tr>
<th>Cable (EU)</th>
<th>Cable (US)</th>
<th>Pin</th>
<th>International</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown</td>
<td>Black</td>
<td>Live</td>
<td>L</td>
</tr>
<tr>
<td>Light blue</td>
<td>White</td>
<td>Neutral</td>
<td>N</td>
</tr>
<tr>
<td>Yellow/Green</td>
<td>Green</td>
<td>Earth</td>
<td></td>
</tr>
</tbody>
</table>
4.6 Changing the power supply settings-magnetic ballast

Both the transformer and the ballast must be connected correctly for the local AC voltage and frequency. The wrong settings can cause poor performance or damage of the moving head. The factory settings are printed next to the power switch.

If you want to change the power supply settings, follow the instructions:
1. Disconnect the fixture from AC power.
2. Remove the top base cover (closest to the power cord) by loosening the 9 screws.
3. Move the wire 1 on the transformer connection block to the position according to the desired voltage.
4. Move the wires 2 and 3 on the ballast connection block to the position according to the desired frequency (voltage).
5. Close the base before applying AC power.

Examples:

Power supply settings: 230V / 50Hz

**Transformer**

<table>
<thead>
<tr>
<th>12, 11</th>
<th>9, 8</th>
<th>6, 5</th>
<th>2, 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>240 V</td>
<td>230 V</td>
<td>208 V</td>
<td>0 V</td>
</tr>
</tbody>
</table>

**Ballast**

| 240V | 230V | 208V | 60Hz | 50Hz |

Power supply settings: 120V / 60Hz

**Transformer**

<table>
<thead>
<tr>
<th>11, 10</th>
<th>9, 8</th>
<th>7, 6</th>
<th>5, 4</th>
<th>2, 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>230 V</td>
<td>208 V</td>
<td>120 V</td>
<td>100 V</td>
<td>0 V</td>
</tr>
</tbody>
</table>

**Ballast**

| 240V | 230V | 208V | 60Hz | 50Hz |

To ballast 1

2

2
4.7 Rigging the fixture

**DANGER TO LIFE!**
*Please consider the respective national norms during the installation!*
*The installation must only be carried out by an authorized dealer!*

The installation of the projector has to be built and constructed in a way that it can hold 10 times the weight for 1 hour without any harming deformation.

The installation must always be secured with a secondary safety attachment, e.g., an appropriate catch net. This secondary safety attachment must be constructed in a way that no part of the installation can fall down if the main attachment fails.

When rigging, derigging or servicing the fixture staying in the area below the installation place, on bridges, under high working places and other endangered areas is forbidden.

The operator has to make sure that safety-relating and machine-technical installations are approved by an expert before taking into operation for the first time and after changes before taking into operation another time.

The operator has to make sure that safety-relating and machine-technical installations are approved by an expert after every four years in the course of an acceptance test.

The operator has to make sure that safety-relating and machine-technical installations are approved by a skilled person once a year.

The projector should be installed outside areas where persons may walk by or be seated.

**IMPORTANT! OVERHEAD RIGGING REQUIRES EXTENSIVE EXPERIENCE,** including (but not limited to) calculating working load limits, installation material being used, and periodic safety inspection of all installation material and the projector. If you lack these qualifications, do not attempt the installation yourself, but instead use a professional structural rigger. Improper installation can result in bodily injury and/or damage to property.

The projector has to be installed out of the reach of people.

If the projector shall be lowered from the ceiling or high joists, professional trussing systems have to be used. The projector must never be fixed swinging freely in the room.

**Caution:** Projectors may cause severe injuries when crashing down! If you have doubts concerning the safety of a possible installation, do NOT install the projector!

Before rigging make sure that the installation area can hold a minimum point load of 10 times the projector’s weight.

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**Danger of fire!** When installing the device, make sure there is no highly inflammable material (decoration articles, etc.) in between a distance of min. 0.5 m.

**Warning!** Use 2 clamps to rig the fixture on the truss. Follow the instructions mentioned at the bottom of the base. Make sure that the device is fixed properly! Ensure that the structure (truss) to which you are attaching the fixtures is secure.

The projector can be placed directly on the stage or rigged in any orientation on a truss without altering its operation characteristics.

For overhead use, always install a safety-rope that can hold at least 10 times the weight of the fixture. You must only use safety-ropes with screw-on carabiners. Pull the safety-rope through the two apertures on the bottom of the base and over the trussing system etc. Insert the end in the carabine and tighten the fixation screw.

**Fixation via the omega holders**
1. Bolt each clamp (1) to the omega holder (4) with M12 bolt and lock nut through the hole in the holder.
2. Fasten the omega holders on the bottom of the base by inserting both quick-lock fasteners (3) into the holes of the base and tighten fully clockwise.
3. Fasten the safety-rope (2) through the two apertures on the bottom of the base and over the trussing system.

**When installing fixtures side-by-side, avoid illuminating one fixture with another!**
DANGER TO LIFE! Before taking into operation for the first time, the installation has to be approved by an expert!

4.8 DMX-512 connection/connection between fixtures

The fixture is equipped with both 3-pin and 5-pin XLR sockets for DMX input and output. The sockets are wired in parallel. Only use a shielded twisted-pair cable designed for RS-485 and 3-pin or 5-pin XLR-plugs and connectors in order to connect the controller with the fixture or one fixture with another.

**DMX - output**

XLR mounting-sockets (rear view):

1 - Shield
2 - Signal (-)
3 - Signal (+)
4 - Not connected
5 - Not connected

**DMX-input**

XLR mounting-plugs (rear view):

1 - Shield
2 - Signal (-)
3 - Signal (+)
4 - Not connected
5 - Not connected

If you are using the standard DMX controllers, you can connect the DMX output of the controller directly with the DMX input of the first fixture in the DMX-chain. If you wish to connect DMX-controllers with other XLR-outputs, you need to use adapter-cables.

**Building a serial DMX-chain:**

Connect the DMX-output of the first fixture in the DMX-chain with the DMX-input of the next fixture. Always connect one output with the input of the next fixture until all fixtures are connected.

**Caution:** At the last fixture, the DMX-cable has to be terminated with a terminator. Solder a 120 Ohm resistor between Signal (−) and Signal (+) into a 3-pin XLR-plug and plug it in the DMX-output of the last fixture.

**Building a master/slave-chain:**

Connect the DMX-output of the master fixture in the data-chain with the DMX-input of the first slave. Always connect output with the input of the next slave until all slaves are connected (up to 9 fixtures).

**Caution:** It’s necessary to insert the XLR termination plug (with 120 Ohm) into the input of the master fixture and into the output of the last slave fixture in the link in order to ensure proper transmission on the data link.
### 5. DMX protocol - version 1.0

<table>
<thead>
<tr>
<th>Mode/Channel</th>
<th>Value</th>
<th>Function</th>
<th>Type of control</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 1 1 1 1</td>
<td>0 - 255</td>
<td>Pan</td>
<td>Pan movement by 530°</td>
</tr>
<tr>
<td>2 2 2 2 2</td>
<td>0 - 255</td>
<td>Pan Fine</td>
<td>Fine control of pan movement</td>
</tr>
<tr>
<td>3 3 3 3 3</td>
<td>0 - 255</td>
<td>Tilt</td>
<td>Tilt movement by 280°</td>
</tr>
<tr>
<td>4 4 4 4 4</td>
<td>0 - 255</td>
<td>Tilt fine</td>
<td>Fine control of tilt movement</td>
</tr>
<tr>
<td>5 5 5 5 5</td>
<td>0 - 255</td>
<td>Power/Special functions</td>
<td>Reserved</td>
</tr>
<tr>
<td></td>
<td>50 - 59</td>
<td>Pan/Tilt speed mode</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>60 - 69</td>
<td>Pan/Tilt time mode</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>70 - 79</td>
<td>Blackout while pan/tilt moving</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>80 - 89</td>
<td>Disabled blackout while pan/tilt moving</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>90 - 99</td>
<td>Blackout while colour wheel moving</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>100 - 109</td>
<td>Disabled blackout while colour wheel moving</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>110 - 119</td>
<td>Blackout while gobo wheel moving</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>120 - 129</td>
<td>Disabled blackout while gobo wheel moving</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>130 - 139</td>
<td>Lamp On, reset (total reset except pan/tilt reset)</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>140 - 149</td>
<td>Pan/Tilt reset</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>150 - 159</td>
<td>Colour wheels reset</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>160 - 169</td>
<td>Gobo wheels reset</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>170 - 179</td>
<td>Dimmer/Strobe reset</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>180 - 189</td>
<td>Focus/Zoom/Frost reset</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>190 - 199</td>
<td>Iris/Prism reset</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>200 - 209</td>
<td>Total reset</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>210 - 229</td>
<td>Reserved</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>230 - 239</td>
<td>Lamp Off</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>240 - 255</td>
<td>Reserved</td>
<td>step</td>
</tr>
<tr>
<td>6 6 6 6 6</td>
<td>0 - 9</td>
<td>Pan/Tilt macro selection</td>
<td>Disabled pan/tilt macro</td>
</tr>
<tr>
<td></td>
<td>10 - 31</td>
<td>Reserved</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>32 - 63</td>
<td>Figure of circle (from small to large)</td>
<td>proportional</td>
</tr>
<tr>
<td></td>
<td>64 - 95</td>
<td>Figure of horizontal eight (from small to large)</td>
<td>proportional</td>
</tr>
<tr>
<td></td>
<td>96 - 127</td>
<td>Figure of vertical eight (from small to large)</td>
<td>proportional</td>
</tr>
<tr>
<td></td>
<td>128 - 159</td>
<td>Figure of rectangle (from small to large)</td>
<td>proportional</td>
</tr>
<tr>
<td></td>
<td>160 - 191</td>
<td>Figure of triangle (from small to large)</td>
<td>proportional</td>
</tr>
<tr>
<td></td>
<td>192 - 223</td>
<td>Figure of five-pointed star (from small to large)</td>
<td>proportional</td>
</tr>
<tr>
<td></td>
<td>224 - 255</td>
<td>Figure of cross (from small to large)</td>
<td>proportional</td>
</tr>
</tbody>
</table>

**Notes:**

* Short times are not used for long tracks (e.g. 0.5 s for track 0-255 DMX). Times are restricted by mechanical parameters of the fixture.

** The switch-functions have priority to the equivalent functions in menu „Personality“ but the setting by DMX is not saved to the memory (after switching the fixture on, the setting from menu „Personality“ is loaded and after that can be changed by DMX value on the channel 6).

<table>
<thead>
<tr>
<th>DMX protocol</th>
<th>menu „Pers“</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 - 59</td>
<td>Pan/Tilt speed mode</td>
</tr>
<tr>
<td>60 - 69</td>
<td>Pan/Tilt time mode</td>
</tr>
<tr>
<td>70 - 79</td>
<td>Blackout while pan/tilt moving</td>
</tr>
<tr>
<td>80 - 89</td>
<td>Disabled blackout while pan/tilt moving</td>
</tr>
<tr>
<td>90 - 99</td>
<td>Blackout while colour wheel moving</td>
</tr>
<tr>
<td>100 - 109</td>
<td>Disabled blackout while colour wheel moving</td>
</tr>
<tr>
<td>110 - 119</td>
<td>Blackout while gobo wheel moving</td>
</tr>
<tr>
<td>120 - 129</td>
<td>Disabled blackout while gobo wheel moving</td>
</tr>
<tr>
<td>Mode/Channel</td>
<td>Value</td>
</tr>
<tr>
<td>--------------</td>
<td>-------</td>
</tr>
<tr>
<td>1 2 3 4</td>
<td>8 8</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>1 - 127</td>
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<tr>
<td></td>
<td>128 - 129</td>
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<td></td>
<td>130 - 255</td>
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<td>130 - 255</td>
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<tr>
<td>7 7 9 9</td>
<td>130 - 136</td>
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<td></td>
<td>137 - 143</td>
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<td>144 - 149</td>
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<td>150 - 156</td>
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<td>157 - 163</td>
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<td>177 - 183</td>
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<td>184 - 189</td>
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<td>190 - 215</td>
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<td>216 - 217</td>
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<td>218 - 243</td>
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<td>244 - 249</td>
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<td>250 - 255</td>
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<tr>
<td>8 10</td>
<td>0 - 255</td>
</tr>
<tr>
<td>9 8 11 10</td>
<td>130 - 136</td>
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<td>137 - 144</td>
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<td>145 - 151</td>
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<td>152 - 159</td>
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<td>160 - 166</td>
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<td>167 - 174</td>
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<td>175 - 181</td>
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<td>182 - 189</td>
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<td>190 - 215</td>
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<td>216 - 217</td>
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<td>218 - 243</td>
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<td></td>
<td>244 - 249</td>
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<tr>
<td></td>
<td>250 - 255</td>
</tr>
<tr>
<td>Mode/Channel</td>
<td>Value</td>
</tr>
<tr>
<td>-------------</td>
<td>-------</td>
</tr>
<tr>
<td>10 12</td>
<td>0 - 255</td>
</tr>
<tr>
<td>11 9 13 11</td>
<td>65 - 69</td>
</tr>
<tr>
<td>12 14</td>
<td>0 - 255</td>
</tr>
</tbody>
</table>

**Static gobo wheel**

*Continual Positioning*

0 - 255  *In range 0-64 DMX is possible fine gobo positioning - set value on channel 12 (14)*

0  Open/hole  proportional
7  Gobo 1 (15010608)  proportional
13 Gobo 2 (15010609)  proportional
19 Gobo 3 (15010700)  proportional
26 Gobo 4 (15010701)  proportional
32 Gobo 5 (15010702)  proportional
39 Gobo 6 (15010703)  proportional
45 Gobo 7 (15010704)  proportional
51 Gobo 8 (15010705)  proportional
58 Gobo 9 (15010706)  proportional
64 Open/hole  proportional

**Positioning**

65  Gobo 1  step
70  Gobo 2  step
75  Gobo 3  step
80  Gobo 4  step
85  Gobo 5  step
90  Gobo 6  step
95  Gobo 7  step
100 Gobo 8  step
105 Gobo 9  step

**Shaking gobos from slow to fast**

110 - 119  Gobo 1  proportional
120 - 129  Gobo 2  proportional
130 - 139  Gobo 3  proportional
140 - 149  Gobo 4  proportional
150 - 159  Gobo 5  proportional
160 - 169  Gobo 6  proportional
170 - 179  Gobo 7  proportional
180 - 189  Gobo 8  proportional
190 - 199  Gobo 9  proportional
200 - 201  Open/hole  proportional
202 - 211  Forwards gobo wheel rotation from fast to slow  proportional
222 - 223  No rotation  proportional
224 - 243  Backwards gobo wheel rotation from slow to fast  proportional
244 - 249  Random gobo selection by audio control  step
(SET microphone sensitivity in menu „Personality“)
250 - 255  Auto random gobo selection from fast to slow  proportional

**Rotating gobo wheel**

*Index* - set indexing on channel 14 (11/16/13)

0 - 3  Open/hole  step
4 - 7  Gobo 1 (15030017)  step
8 - 11  Gobo 2 (15040011)  step
12 - 15  Gobo 3 (15020149)  step
16 - 19  Gobo 4 (15020150)  step
20 - 23  Gobo 5 (15020151)  step
24 - 27  Gobo 6 (15020152)  step
28 - 31  Gobo 7 (15020153)  step
32 - 35  Gobo 1  step
36 - 39  Gobo 2  step
40 - 43  Gobo 3  step
44 - 47  Gobo 4  step
48 - 51  Gobo 5  step
52 - 55  Gobo 6  step
56 - 59  Gobo 7  step

**Rotation** - set rotation on channel 14 (11/16/13)

32 - 35  Gobo 1  step
36 - 39  Gobo 2  step
40 - 43  Gobo 3  step
44 - 47  Gobo 4  step
48 - 51  Gobo 5  step
52 - 55  Gobo 6  step
56 - 59  Gobo 7  step
<table>
<thead>
<tr>
<th>Mode/Channel</th>
<th>Value</th>
<th>Function</th>
<th>Type of control</th>
</tr>
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<td><strong>Shaking gobos from slow to fast</strong>&lt;br&gt;Index - set indexing on channel 14 (11/16/13)</td>
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<td>60 - 69</td>
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<td>100 - 109</td>
<td>Gobo 5</td>
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<td>Gobo 6</td>
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<td>14 11 16 13</td>
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<tr>
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<td>140 - 149</td>
<td>Gobo 2</td>
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<td>150 - 159</td>
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<td>170 - 179</td>
<td>Gobo 5</td>
<td>proportional</td>
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<td>Gobo 7</td>
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</tr>
<tr>
<td></td>
<td>200 - 201</td>
<td>Open/hole</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>202 - 221</td>
<td>Forwards gobo wheel rotation from fast to slow</td>
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</tr>
<tr>
<td></td>
<td>222 - 223</td>
<td>No rotation</td>
<td>step</td>
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<td>Backwards gobo wheel rotation from slow to fast</td>
<td>proportional</td>
</tr>
<tr>
<td></td>
<td>244 - 249</td>
<td>Random gobo selection by audio control</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>250 - 255</td>
<td>Auto random gobo selection from fast to slow</td>
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<tr>
<td>15 17</td>
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<td><strong>Gobo indexing and rotation</strong>&lt;br&gt;Gobo indexing - set position on channel</td>
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<td>0 - 255</td>
<td>Gobo indexing</td>
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<td></td>
<td>0</td>
<td>No rotation</td>
<td>step</td>
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<td></td>
<td>1 - 127</td>
<td>Forwards gobo rotation from fast to slow</td>
<td>proportional</td>
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<td>step</td>
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<td></td>
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<td>Backwards gobo rotation from slow to fast</td>
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<td>0 - 255</td>
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<td><strong>Prism</strong>&lt;br&gt;Open position (hole)</td>
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<td>1 - 127</td>
<td>3-facet rotating prism</td>
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<td>128 - 255</td>
<td><strong>Prism/gobo macros</strong>&lt;br&gt;128 - 135 Macro 1</td>
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<td></td>
<td>136 - 143</td>
<td>Macro 2</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>144 - 151</td>
<td>Macro 3</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>152 - 159</td>
<td>Macro 4</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>160 - 167</td>
<td>Macro 5</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>168 - 175</td>
<td>Macro 6</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>176 - 183</td>
<td>Macro 7</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>184 - 191</td>
<td>Macro 8</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>192 - 199</td>
<td>Macro 9</td>
<td>step</td>
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<tr>
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<td>200 - 207</td>
<td>Macro 10</td>
<td>step</td>
</tr>
<tr>
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<td>208 - 215</td>
<td>Macro 11</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>216 - 223</td>
<td>Macro 12</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>224 - 231</td>
<td>Macro 13</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>232 - 239</td>
<td>Macro 14</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>240 - 247</td>
<td>Macro 15</td>
<td>step</td>
</tr>
<tr>
<td></td>
<td>248 - 255</td>
<td>Macro 16</td>
<td>step</td>
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<td>0</td>
<td><strong>Prism rotation</strong>&lt;br&gt;No rotation</td>
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<td>1 - 127</td>
<td>Forwards rotation from fast to slow</td>
<td>proportional</td>
</tr>
<tr>
<td></td>
<td>128 - 129</td>
<td>No rotation</td>
<td>step</td>
</tr>
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<td>18 14 20 16</td>
<td>0</td>
<td>Frost</td>
<td>step proportional proportional proportional proportional</td>
</tr>
<tr>
<td>18 14 20 16</td>
<td>1 - 179</td>
<td>Frost from 0% to 100%</td>
<td>step proportional proportional proportional proportional</td>
</tr>
<tr>
<td>18 14 20 16</td>
<td>180 - 189</td>
<td>100% frost</td>
<td>proportional</td>
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<tr>
<td>18 14 20 16</td>
<td>190 - 211</td>
<td>Pulse closing from slow to fast</td>
<td>proportional</td>
</tr>
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<td>18 14 20 16</td>
<td>212 - 233</td>
<td>Pulse opening from fast to slow</td>
<td>proportional</td>
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<tr>
<td>18 14 20 16</td>
<td>234 - 255</td>
<td>Ramping from fast to slow</td>
<td>proportional</td>
</tr>
<tr>
<td>19 21</td>
<td>0 - 255</td>
<td>Frost fine</td>
<td>proportional</td>
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<tr>
<td>19 21</td>
<td>Iris</td>
<td>Fine frost</td>
<td>proportional</td>
</tr>
<tr>
<td>20 15 22 17</td>
<td>0 - 255</td>
<td>Iris</td>
<td>step proportional</td>
</tr>
<tr>
<td>20 15 22 17</td>
<td>1 - 179</td>
<td>From max.diameter to min.diameter</td>
<td>proportional</td>
</tr>
<tr>
<td>20 15 22 17</td>
<td>180 - 191</td>
<td>Closed</td>
<td>step</td>
</tr>
<tr>
<td>20 15 22 17</td>
<td>192 -219</td>
<td>Pulse opening from slow to fast</td>
<td>proportional</td>
</tr>
<tr>
<td>20 15 22 17</td>
<td>220 - 247</td>
<td>Pulse closing from fast to slow</td>
<td>proportional</td>
</tr>
<tr>
<td>20 15 22 17</td>
<td>248 - 249</td>
<td>Random pulse opening (fast)</td>
<td>step</td>
</tr>
<tr>
<td>20 15 22 17</td>
<td>250 - 251</td>
<td>Random pulse opening (slow)</td>
<td>step</td>
</tr>
<tr>
<td>20 15 22 17</td>
<td>252 - 253</td>
<td>Random pulse closing (fast)</td>
<td>step</td>
</tr>
<tr>
<td>20 15 22 17</td>
<td>254 - 255</td>
<td>Random pulse closing (slow)</td>
<td>step</td>
</tr>
<tr>
<td>21 23</td>
<td>0 - 255</td>
<td>Iris fine</td>
<td>proportional</td>
</tr>
<tr>
<td>22 16 24 18</td>
<td>Zoom</td>
<td>Iris fine</td>
<td>proportional</td>
</tr>
<tr>
<td>22 16 24 18</td>
<td>0 - 39</td>
<td>Zoom without focus correction</td>
<td>step</td>
</tr>
<tr>
<td>22 16 24 18</td>
<td>40 - 79</td>
<td>Zoom 15°</td>
<td>step</td>
</tr>
<tr>
<td>22 16 24 18</td>
<td>80 - 127</td>
<td>Zoom 18°</td>
<td>step</td>
</tr>
<tr>
<td>22 16 24 18</td>
<td>128 - 169</td>
<td>Zoom 22°</td>
<td>step</td>
</tr>
<tr>
<td>22 16 24 18</td>
<td>128 - 169</td>
<td>Zoom without focus correction</td>
<td>step</td>
</tr>
<tr>
<td>22 16 24 18</td>
<td>170 - 219</td>
<td>Zoom 15°</td>
<td>step</td>
</tr>
<tr>
<td>22 16 24 18</td>
<td>220 - 255</td>
<td>Zoom 18°</td>
<td>step</td>
</tr>
<tr>
<td>22 16 24 18</td>
<td>220 - 255</td>
<td>Zoom 22°</td>
<td>step</td>
</tr>
<tr>
<td>23 17 25 19</td>
<td>0 - 255</td>
<td>Focus</td>
<td>proportional</td>
</tr>
<tr>
<td>24 26</td>
<td>0 - 255</td>
<td>Focus fine</td>
<td>proportional</td>
</tr>
<tr>
<td>25 18 27 20</td>
<td>Shutter, Strobe</td>
<td>Coarse focus</td>
<td>proportional</td>
</tr>
<tr>
<td>25 18 27 20</td>
<td>0 - 31</td>
<td>Shutter closed</td>
<td>step</td>
</tr>
<tr>
<td>25 18 27 20</td>
<td>32 - 63</td>
<td>No function (Shutter open)</td>
<td>step</td>
</tr>
<tr>
<td>25 18 27 20</td>
<td>64 - 95</td>
<td>Strobe-effect from slow to fast</td>
<td>step</td>
</tr>
<tr>
<td>25 18 27 20</td>
<td>96 - 127</td>
<td>No function (Shutter open)</td>
<td>step</td>
</tr>
<tr>
<td>25 18 27 20</td>
<td>128 - 143</td>
<td>Opening pulse in sequences from slow to fast</td>
<td>proportional</td>
</tr>
<tr>
<td>25 18 27 20</td>
<td>144 - 159</td>
<td>Closing pulse in sequences from fast to slow</td>
<td>proportional</td>
</tr>
<tr>
<td>25 18 27 20</td>
<td>160 - 191</td>
<td>No function (Shutter open)</td>
<td>step</td>
</tr>
<tr>
<td>25 18 27 20</td>
<td>192 - 223</td>
<td>Random strobe-effect from slow to fast</td>
<td>proportional</td>
</tr>
<tr>
<td>25 18 27 20</td>
<td>224 - 255</td>
<td>No function (Shutter open)</td>
<td>step</td>
</tr>
<tr>
<td>26 19 28 21</td>
<td>0 - 255</td>
<td>Dimmer</td>
<td>proportional</td>
</tr>
<tr>
<td>26 19 28 21</td>
<td>0 - 255</td>
<td>Coarse gradual adjustment of the dimmer intensity from 0% to 100%</td>
<td>proportional</td>
</tr>
<tr>
<td>27 29</td>
<td>0 - 255</td>
<td>Dimmer fine</td>
<td>proportional</td>
</tr>
</tbody>
</table>

*** The function improves the image on the wall if the zoom changes (its effect is the best for gobos from rot. gobo wheel and for distance = 6 m)
6. Controller mode

The fixtures are individually addressed on a data link and connected to the controller. The fixtures respond to the DMX signal from the controller.

6.1 DMX addressing

The control panel on the front panel of the fixture allows you to assign the DMX fixture address, which is defined as the first channel from which the ColorSpot 575 AT will respond to the controller.

If you set, for example, the address to channel 18, the ColorSpot 575 AT will use the channel 18 to 34 for control (if mode 2 is selected).

Please, be sure that you don't have any overlapping channels in order to control each ColorSpot 575 AT correctly and independently from any other fixture on the DMX data link.

If two, three or more ColorSpot 575 AT are addressed similarly, they will work similarly.

For address setting, please refer to the instructions under „Addressing“ (menu „A001“).

Controlling:

After having addressed all ColorSpot 575 AT, you may now start operating these via your lighting controller.

Note: After switching on, the ColorSpot 575 AT will automatically detect whether DMX 512 data is received or not. If there is no data received at the DMX-input, the display will start to flash „A001“ with actually set address.

This situation can occur if:
- the 3 PIN (5pin) XLR plug (cable with DMX signal from controller) is not connected with the input of the ColorSpot 575 AT
- the controller is switched off or defective, the cable or connector is defective or the signal wires are swap in the input connector.

Note: It’s necessary to insert the XLR termination plug (with 120 Ohm) to the last fixture in the link in order to ensure proper transmission on the DMX data link.

6.2 Remotely controllable functions

Lamp

The ColorSpot 575 AT is to be operated with a Philips MSR 575/2.
A relay inside of the ColorSpot 575 AT allows you to switch on and off the lamp via the control panel or via your DMX-controller without affecting the rest of the lighting.

To switch On/Off the lamp, please refer to „Switching On/Off the lamp“ (menu „LAMP“).

Note: It is also important to note, that the discharge lamp is cold restrike types, that means, that they have to be cold before re-striking. For this reason, you have to wait 5 minutes (max. speed of fan must be adjusted) after having switched Off the lamp before you can switch it back „On“ again. If you try to switch „On“ the lamp within 5 minutes after having switched it „Off“, the ColorSpot 575 AT will store this information and automatically ignite the lamp when the 5 minutes period has expired. The message „HEAt“ will appear on the control panel display of the ColorSpot 575 AT. If the ignition of the lamp is seven times unsuccessful, on the display will appear „LA.Er“, meaning that the lamp could be damaged or even missed, or there could be a failure on the ignitor or ballast.

Colour 1-wheel

This wheel contains 9 dichroic filters and an open.

Colour 2-wheel

This wheel contains 8 replaceable „SLOT&LOCK“ dichroic filters + open. The colour-wheel can be positioned between two adjacent colours in any position. It is also possible to rotate the colour-wheel continuously at different speeds („Rainbow effect“ in both directions).

Static gobo-wheel

The static gobo wheel includes 9 replaceable „SLOT&LOCK“ metal gobos + open, gobo-shake function possible.

Rotating gobo-wheel

The rotating gobo-wheel includes 7 gobos rotating in both directions, indexable, replaceable „SLOT&LOCK“ dichroic glass gobos + open position.

3-facet rotating prism

The 3-facet replaceable prism rotating in both directions at different speeds.

Iris

Motorized iris for different beam diameter, variable pulse effects.

Frost

Separate, variable frost.
Focus, Zoom
Motorized focus enables the beam to be focused anywhere on stage at different beam angles 15°, 18°, 22°, provided by the special zoom.

Dimmer/Shutter/Strobe
Smooth 0 - 100 % dimming is provided by the combined mechanical dimmer/shutter unit. This unit may also be used for strobe effect (1 - 10 ashes per second)

Fans
The ColorSpot 575 AT is cooled by 4 axial fans - 3 in the projector head and one in the base. The speed of the fan (and of course the noise) can be continuously reduced if very quiet performance is required.

By the Control Board using the „FanS” function you can choose the 2 types of the fan speed operating modes.

7. Stand - alone mode

The fixtures on a data link are not connected to the controller but can execute pre-set programs which can be different for every fixture. To set the program to be played, see the „Stand-alone setting” (menu „St.AL.”).

„Stand-alone operation” can be applied to the single fixture (the program may be set to be the master /slave mode or controller mode) or to multiple fixtures operating synchronously.

Synchronous operation of multiple fixtures requires that they must be connected on a data link and of one of them is set as a master (master mode) and the rest as the slaves (slave mode). The slaves are assigned to SLA1-SLA9 and on the certain slave address can be connected only one fixture. To set the fixture as the master or slave, see the „Addressing” (menu „A001”).

If the master fixture runs a reset, switches On/Off the lamp or plays test (program), all slaves will execute these acts too (e.g. If the master fixture has switched the lamp off, no slaves can switch the lamp on!)
The master fixture starts simultaneous program start in the other slave fixtures. All fixtures have a definite, synchronized starting point when playing back their programs. The number of running program is the same in all slaves and depends on the master’s choice (menu „St.AL.”). Every fixture runs its program repeatedly, starting the program step No.1 when requested by the master.

For example:
If the slave fixture has a shorter program length, it will continuously repeat its program until the master fixture finishes its own program and restarts its program running (slave 1 - prog.step 3 will not be finished).
If the slave fixture has a longer program length, it will restart at prog. step 1 before it completes all its prog. steps (slave 2 - prog. step 5 will not be played) - see the picture below.

Note: Disconnect the fixtures from the DMX controller before master/slave operating, otherwise data collisions can occur and the fixtures will not work properly!
8. Control menu map

Default settings = Bold print

A001
- dM.Ad.
  - 001 : 512
- MA_SL.
  - d.Abl
  - MAST.
  - SLA.1
  - SLA.9

SL.Ct.

InFo
- Po.tl.
  - totl rSEt
- La.tl.
  - totl rSEt
- LA.St.
  - totl rSEt
- tEMP.
  - Cur.t.
    - boAr. HEAd
    - Hi.tE. boAr. HEAd
    - rSEt boAr. HEAd
- DM.in.
  - Pan (0-255)
  - F.dim (0-255)
- VErS.
  - IC1.b.
  - IC2.b.
  - IC3.b.
  - IC4.b.
  - IC1.L.
  - IC2.L.
  - IC1.r.
  - IC2.r.

PERS.
- r.PAn (On, Off)
- r.tilt (On, Off)
- dM.Pr. (Mod.1, Mod.2)
- La.Pr.
  - LA.Au. (On, Off)
  - d.L.O.F. (On, Off)
  - dM.On (On, Off)
  - dM.OF (On, Off)
  - LA.dE. (0..1..90 s)
- En.Sn. (On, Off)
  - dISP.
    - turn (On, Off)
    - d.On (On, Off)
    - d.Int. (20...100)
9. Control menu

The control panel situated on the front panel of the base offers several features. You can simply set the DMX address, read the number of the lamp or unit hours, switch On and Off the lamp, run test, make a reset and also use many functions for setting fixture behaviour.

Control elements on the control board:
- [MODE] button-leaves menu without saving changes.
- [ENTER] button- enters menu, confirms adjusted values and leaves menu.
- [UP] button and [DOWN] button- moves between menu items on the the same level, sets values.

After switching the fixture on, the display shows the initial screen:  

Use [UP], [DOWN] to browse through the menu. To select a function or submenu, press [ENTER].

9.1 Fixture Address

Use this menu to set the DMX address of the fixture or set the fixture as a Master (Slave).

- dM.Ad. - DMX addressing. Select this submenu to set DMX start address.
- MA.SL. - Master/slave addressing. Select this submenu to set the fixture as a Master or Slave (Slave1- Slave 9). Option „d.AbL“ deactivates master/slave setting.

9.2 Slave control

This function allows you to control the slaves from the master’s control panel in a master/slave operation. Select this function from the main menu and press [ENTER]. Browse the list of all connected slaves („SL.C.1“ - „SL.C.9“) by pressing [UP] or [DOWN]. Select the desired slave and press [ENTER]-button. The matching slave control panel is available from the master control panel.

If no slave is connected to the master, massages „SL.C.1“, „SL.C.2“, „SL.C.3“... „SL.C.9“ still round repeat.

Note: This function is available from the master fixture only.

9.3 Fixture informations

Use this menu to read an useful information about the fixture.

- Po.ti. - Power on time. Select this submenu to read the number of operation hours.
  - totL - The function shows the total number of the operation hours since the ColorSpot 575 AT has been fabricated.
  - rSEt - The function shows the number of the operation hours that the ColorSpot 575 AT has been powered on since the counter was last reset. In order to reset this counter to 0 you have to hold [UP] and [DOWN] and press the [ENTER].

- La.ti. - Lamp on time. Select this submenu to read the number of the operation hours with the lamp on.
  - totL - The function shows the total number of the operation hours with the lamp on since the ColorSpot 575 AT has been fabricated.
  - rSEt - The function shows the number of the operation hours with the lamp on that the ColorSpot 575 AT has been powered on since the counter was last reset. In order to reset this counter to 0 you have to hold [UP] and [DOWN] and press the [ENTER].

- LA.St. - Lamp strikes. Select this submenu to read the total number of the lamp strikes.
  - totL - The function shows the total number of the lamp strikes since the ColorSpot 575 AT has been fabricated.
  - rSEt - The function shows the number of the lamp strikes since the counter was last reset. In order to reset this counter to 0 you have to hold [UP] and [DOWN ] and press the [ENTER].

- tEMP - Fixture temperatures. Select this submenu to read the fixture temperatures (°C). Please note that the outside temperature should not exceed 40° C.
  - Cur.t. - Current fixture temperatures.
    - boAr. - Current temperature on the main board in the base of the fixture. Temperatures below 66°C are not critical. 66°C and more lead to the lamp being switched off and the fixture goes to „low power mode“. Before switching the lamp on again (after 5 minutes), run a total fixture reset.
    - HEAd - Current temperature of the head inside. Temperatures below  83°C are not critical. 83° C and more lead to the lamp being switched off and the fixture goes to „low power mode“. Before switching the lamp on again (after 5 minutes), run a total fixture reset.
  - Hi.tE. - Maximum fixture temperatures.
    - boAr. - The function shows the max. temperature on the main board since the ColorSpot 575 AT has been fabricated.
    - HEAd - The function shows the max.temperature of the head inside since the ColorSpot 575 AT has been fabricated.
  - rSEt - Maximum resetable temperatures.
    - boAr. - The function shows the maximum temperature on the main board since the counter was last reset. In order to reset the counter to 0 you have to hold [UP] and [DOWN] and press the [ENTER].
**HEAD** - The function shows the maximum temperature of the head inside since the counter was last reset. In order to reset the counter to 0 you have to hold [UP] and [DOWN] and press the [ENTER].

**DM.In. - Readout of DMX values.** Select this function to read DMX values (0-255) of each channel received by the fixture.

- **PAn** - a coarse pan movement
- **F.PAn** - a fine pan movement
- **tilt** - a coarse tilt movement
- **F.tilt** - a fine tilt movement
- **SpEd** - a pan/tilt speed
- **P.t.SE.** - a pan/tilt macro selection
- **P.t.SP.** - a pan/tilt speed
- **Func.** - a special function
- **Col.1** - a colour wheel 1
- **F.Co.1** - a fine colour wheel 1
- **Col.2** - a colour wheel 2
- **F.Co.2** - a fine colour wheel 2
- **S.Gob.** - a static gobo wheel
- **F.S.Go.** - a fine static gobo wheel
- **r.Gob.** - a rotating gobo wheel
- **G.rot.** - a gobo indexing and rotation
- **F.G.ro.** - a fine gobo indexing
- **Pris.** - a prism
- **P.rot.** - a prism rotation
- **FroS.** - a frost filter
- **F.Fro.** - a fine frost
- **Iris** - an iris
- **F.Iri.** - a fine iris
- **Zoom** - a zoom
- **F.Foc.** - a fine focus
- **Foc.** - a focus
- **Stro.** - a shutter, strobe
- **dimr** - a dimmer
- **F.dim.** - a fine dimmer

**VERs. - Software version.** Select this function to read the software version of processors:

- **IC1.b.** - Main processor on the main board in the fixture base
- **IC2.b.** - Pan processor on the main board in the fixture base
- **IC3.b.** - Tilt processor on the main board in the fixture base
- **IC4.b.** - EEprom on the main board in the fixture base
- **IC1.L.** - Processor 1 in the left arm of the fixture
- **IC2.L.** - Processor 2 in the left arm of the fixture
- **IC1.r.** - Processor 1 in the right arm of the fixture
- **IC2.r.** - Processor 2 in the right arm of the fixture

**PERS. 9.4 Personality**

Use this menu to modify ColorSpot 575 AT operating behavior.

- **r.PAn** - Pan reverse. Select this function to invert the pan movement.
- **r.tilt** - Tilt reverse. Select this function to invert the tilt movement.
- **DM.Pr.** - DMX presetting. Select this function to set desired effects assigning to the channels. Please refer to the chapter "DMX protocol" for detail description.

- **LA.Pr.** - Lamp presetting. Select this menu to change the lamp „behaviour”.
  - **LA.Au.** - Select this function to turn the lamp on automatically after switching the fixture on.
  - **d.L.OF.** - Select this function to switch off the lamp via DMX.
  - **dM.On** - This function allows you to strike the lamp automatically after 26 seconds if DMX signal is present on the data link. If the ignition is unsuccessful (e.g. lamp is too hot), the fixture will try to ignite the lamp after next 26 s. This process will repeat until the lamp lights.
  - **dM.OF.** - This function allows you to switch Off the lamp automatically after 2 minutes if DMX signal is missing on the data link.
  - **LA.dE.** - Lamp ignition delay. This function allows you to set the time delay (0-90s) before the lamp will be ignited. This setting will not affect starting the lamp direct from the control panel (menu „Lamp On/Off”).
  - **En.Sn.** - Switching on/of the lamp light sensor. Select this function to switch the lamp light sensor on or off. The option „On” is for the standard operation.

**Important:** The option „Off” is for „emergency operation” only if the lamp light sensor is defective and you will wait for a service intervention! If the lamp light sensor is switched off and at switching the lamp on the electronics will still try to ignite the lamp until it shines (even when the lamp is damaged or absent), on this account some electronics parts could be damaged!

- **Disp.** - Display adjusting. This function allows you to change the display settings.
  - **turn** - Select this function to turn the display by 180°.
  - **d.On** - This function allows you to keep the display on or to turn off automatically 2 minutes after last pressing any button on the control panel.
  - **d.Int.** - Select this function to adjust the display intensity (20-min.,100-max.).
  - **bl.Co.** - Blackout during movement correction. Select this function to enable the blackout during the head movement correction (if the moving head lost its right pan/tilt position for a short moment).

- **FEEd.** - Pan/Tilt feedback. This function allows to return the mowing head to the required pan/tilt position after changing the position by external force (e.g. by stroke).
**Mi.SE.** - Microphone sensitivity. Select this function to adjust the microphone sensitivity from 1 (maximum) to 20 (minimum). If the sensitivity is correctly adjusted, the upper segment of the first digit blinks in the bass beat.

Examples:

- **Underexited**
  - - 12

- **Right level**
  - - 12

- **Overexited**
  - - 12

  (upper segment blinks via the bass rhythm)

**Fan.S.** - Fan speed operating modes. By using this function you can choose 2 types of the fan speed operating modes.

- **Auto.** - The fans automatically raise their speed in order to control inside temperature of the head, if the temperature inside increases about certain level (the low fan speed reduces the cooling of the lighting). This cycle can repeat several times until the temperature inside is on a suitable level.
- **High.** - The cooling fans work on max. speed (max. cooling). This mode we recommend for high ambient temperature (30°C and more).

**P.t.Mo.** - Pan/tilt movement mode. Use this menu to set the character of the pan/tilt movement.

- **ti.Mo.** - Time mode. Pan and tilt will move with different speeds and they will come at the same time to end point (pan and tilt sets its optimal speed).
- **SP.Mo.** - Speed mode. Pan and tilt will move with the same speed as adjusted by the channel 5 (Pan/Tilt speed). E.g. pan will come to the end point and wait for tilt, which has longer track.

**A.blc.** - Automatic blackout. Use this function if you wish to close the light output during effect changes.

**P.t.M.** - This function closes the light output during pan/tilt changes.

**Col.M.** - This function closes the light output during colour wheel 1/wheel 2 changes.

**Gob.M.** - This function closes the light output during gobo wheel 1/wheel 2 changes.

**In.Po.** - Init effect positions. Select this function to adjust all effects to the desired initial positions. After switching the fixture on (if DMX is not connected), all effects will move to initial positions. Use the [UP] and [DOWN] buttons to select desired channel and press [ENTER]. Set the effect to the desired position using [UP] and [DOWN] buttons and confirm by pressing [ENTER]. After having adjusted required effects, select „Stor.” to save all initial values to the memory.

**dF.SE.** - Default Settings. Select this option to reset all fixture personalities to the default values.

### 9.5 Lamp On/Off

Use this option in order to switch on/off the lamp. It is also important to note, that the lamp is cold restrike type, that means, that it has to be cold before striking.

### 9.6 Manual mode

Select this menu to call up presetted positions of channel effects or direct control channel effects.

**PrE.C.** - Presetted effect control. Select this menu to call up presetted positions of the channel effects.

**Man.C.** - Manual effect control. Select this menu to control effects by control buttons on the control board.

- **PAn** - a coarse pan movement
- **F.PAn** - a fine pan movement
- **tilt** - a coarse tilt movement
- **F.tilt** - a fine tilt movement
- **SpEd** - a pan/tilt speed
- **P.t.SE** - a pan/tilt macro selection
- **P.t.SP** - a pan/tilt speed
- **Func.** - a special function
- **Col.1** - a colour wheel 1
- **F.Co.1** - a fine colour wheel 1
- **Col.2** - a colour wheel 2
- **F.Co.2** - a fine color wheel 2
- **S.Gob.** - a static gobo wheel
- **F.S.Go.** - a fine static gobo wheel
- **r.Gob.** - a rotating gobo wheel
- **G.rot.** - a gobo indexing and rotation
- **F.G.ro.** - a fine gobo indexing
- **Pris.** - a prism
- **P.rot.** - a prism rotation
- **Frot.** - a frost filter
- **FroS.** - a frost filter
- **Iris.** - an iris
- **F.Iri.** - a fine iris
- **Zoom.** - zoom
- **Foc.** - a focus
- **F.Foc.** - a fine focus
- **Stro** - a shutter, strobe
- **dimr** - a dimmer
- **F.dim.** - a fine dimmer

### 9.7 Test sequences

Use this menu to to run a special demo-test sequences without an external controller, which will show you some possibilities of using ColorSpot 575 AT.

**Mod. 1** - Mode 1. This mode is suitable for projections on the wall, ceiling or ground without any head movement.

**Mod. 2** - Mode 2. This mode uses all ColorSpot 575 AT functions including pan/tilt movement and therefore is good for a complete introduction of the fixture.
9.8 Stand-alone setting

Use this menu to set options for stand-alone mode as a selection of the playing program, programming and modifying current programs.

**Audi** - Music trigger. Select this function to enable the sound control of the running programs via the built-in microphone. **Auto** - Presetting playback. This function allows you to select the program which will be played in the stand-alone mode after switching the fixture on. Selected program will be played continuously in a loop.

**d.Abl** - The option disables „Auto” function.

**tEst** - The option will start built-in test program.

**PrG. 1** - The option will start created program No. 1
**PrG. 2** - The option will start created program No. 2
**PrG. 3** - The option will start created program No. 3

**Note:** If the fixture operates in the controller mode (DMX controller is connected) and any program from this menu is selected, in this case the fixture will not respond to the DMX controller after switching on and will play selected program.

**PLAY** - Playing program. Select this menu to run a built-in program or the 3 freely-programmable programs in a loop.

**tEst** - The option starts built-in test program.

**PrG.1** - The option starts created program No. 1
**PrG.2** - The option starts created program No. 2
**PrG. 2** - The option starts created program No. 3

Select the program you wish and press [ENTER]. The selected program starts running. By Pressing [ENTER] again is possible to pause the program running.

**Edit** - Editing program. Select this menu to edit or create the program. The ColorSpot 575 AT has one built-in program and the 3 free programs, each up to 99 steps. Each program step has a step time. Step time-the time, during which effects last in the current step.

If the fixture is set as a master, then you may edit any program in the slaves. You can’t edit programs on the slave fixtures from their control panels if the master fixture is switched on and connected to the slaves (editing is possible by the master control panel only).

**Procedure:**
1. Press [UP] or [DOWN] to select the program you want to edit („PrG.1” - „PrG.3”) and press [ENTER].
2. Press [UP] or [DOWN] to select the desired fixture („MASt.” - „SLA.9”) and press [ENTER]-button.
3. Press [UP] or [DOWN] to select the desired program step („St.01” - „St.99”) and press [ENTER]-button.
4. Press [UP] or [DOWN] to select the desired item and press [ENTER]-button. Now you can edit by [UP] or [DOWN] buttons the DMX value (0-255) for selected item:

   - **P.End.** a total number of the program steps (value 1-99). **This value you must set before start programming** (e.g. if you want to create program with the 10 steps, set P.End=10).
   - **Pan** a pan movement
   - **tilt** a tilt movement
   - **SpEd** a pan/tilt speed
   - **P.t.SE.** a pan/tilt macro selection
   - **P.t.S.P.** a pan/tilt macro speed
   - **Func.** a special function
   - **Col.1** a colour wheel 1
   - **Col.2** a colour wheel 2
   - **F.Co.1** a fine colour wheel 1
   - **F.Co.2** a fine colour wheel 2
   - **S.Gob.** a static gobo wheel
   - **F.S.Go.** a fine static gobo wheel
   - **r.Gob.** a rotating gobo wheel
   - **G.ro.** a gobo indexing and rotation
   - **F.G.ro.** a fine gobo indexing
   - **P.r.** a prism
   - **Pris.** a prism
   - **F.r.** a prism rotation
   - **F.ro.** a prism rotation
   - **FroS.** a frost filter
   - **F.Fro.** a fine frost
   - **Iris** an iris
   - **F.Iri.** a fine iris
   - **Zoom** a zoom
   - **Foc.** a focus
   - **F.Foc.** a fine focus
   - **Foc.** a focus
   - **Stro.** a shutter, strobe
   - **dimr** a dimmer
   - **F.dim.** a fine dimmer
   - **S.tim.** a step time, value 0.1-25.5 seconds
   - **COPY.** a copying the current prog. step to the next prog. step. If the last prog. step is copied to the next prog. step, parameter „P.End” is increased about one by itself (except step 99).

5. Press [ENTER]-button to confirm adjusted value.
6. Press [MODE]-button, select next prog. step and repeat this procedure (steps 4 - 6).

9.9 Reset functions

This option enables the ColorSpot 575 AT to index all effects (functions) and return to their standard positions.
9.10 Special functions

Use this menu for special services like adjusting lamp or adjusting effects.

**LA.Ad. - Lamp adjustment.** This function can be used when you make the fine adjustment of the lamp. If you select this function, all effects will be canceled, shutter will be opened and the dimmer intensity will be set onto 100%. By using the options „PAn, tilt, Foc.” you can focus the light on a flat surface (wall) and perform the fine lamp adjustment.

**Code - Code.** This function contains identification hexadecimal code (0000-FFFF) for the fixture, which is used for the master/slave operation.

**AdJ. - Effect adjustment.** By this function you can calibrate and adjust the effects to their standard/right positions. Disconnect the DMX controller from the fixture and select „AdJ.” menu. The display shows step by step effects by which you can adjust the fixture to the required position before the function calibration (DMX controller must be disconnected). When the positioning is finished, select „F.CAL.” and press [ENTER]:

1. **Calibration via the control board**

Disconnect DMX controller from the fixture. Press [ENTER] and use [UP] and [DOWN] in order to display the following items: „Col.1, Col.2, S.Gob., r.Gob.G.rot., Iris, dimr” for very smooth function calibration. Select one of them, press [ENTER] and use the [UP] and [DOWN] in order to adjust their right value from 0 to 255. Then press [ENTER] to confirm or [MODE] to cancel and return to the menu. This can be repeated for each calibration parameter if it is required. When the calibration is finished, it is necessary to use the „A.res” function in order to write the calibration values to the memory (EPROM) and to make a reset in order to check the newly adjusted positions of the colour, gobo wheels and dimmer. When the reset of the fixture is finished, the display will show the „F.CAL” message. Press [ENTER] to repeat the calibration or [MODE] to return to the „AdJ.” menu.

2. **Calibration via the external controller**

Connect the DMX controller to the fixture, press [ENTER] and the [UP] and [DOWN] buttons in order to display the following items: „Col.1, Col.2, S.Gob., r.Gob.G.rot., Iris, dimr”. Select one of them and press [ENTER]. Now you can calibrate this effect by your controller. The DMX calibration protocol is described in the table mentioned below.

**DMX calibration protocols:**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Mode 1</th>
<th>Mode 2</th>
<th>Mode 3</th>
<th>Mode 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>„Col.1” - Colour wheel 1</td>
<td>channel 28</td>
<td>channel 20</td>
<td>channel 30</td>
<td>channel 22</td>
</tr>
<tr>
<td>„Col.2” - Colour wheel 2</td>
<td>channel 29</td>
<td>channel 21</td>
<td>channel 31</td>
<td>channel 23</td>
</tr>
<tr>
<td>„S.Gob.” - Static gobo wheel</td>
<td>channel 30</td>
<td>channel 22</td>
<td>channel 32</td>
<td>channel 24</td>
</tr>
<tr>
<td>„r.Gob.” - Rotatinggobo wheel</td>
<td>channel 31</td>
<td>channel 23</td>
<td>channel 33</td>
<td>channel 25</td>
</tr>
<tr>
<td>„G.rot.” - Gobo rotation</td>
<td>channel 32</td>
<td>channel 24</td>
<td>channel 34</td>
<td>channel 26</td>
</tr>
<tr>
<td>„Iris” - Iris</td>
<td>channel 33</td>
<td>channel 25</td>
<td>channel 35</td>
<td>channel 27</td>
</tr>
<tr>
<td>„dimr” - Dimmer</td>
<td>channel 34</td>
<td>channel 26</td>
<td>channel 36</td>
<td>channel 28</td>
</tr>
</tbody>
</table>

After having calibrated required effects, press [ENTER] to confirm (or [MODE] to cancel and return to the menu without reset by the „A.res” function) and use the „A.res” function in order to write the calibration values to the memory (EPROM) and to make a reset in order to check the new adjusted positions of the colour, gobo and effect wheels.

10. **Low power mode**

This mode omits fixture reset after switching the fixture on and lowers motor powers of the fixture. „Power down mode” is useful in special case, e.g. if the fixture is in a flight case and you want to set its DMX address without taking it out from the case. To enter „Power down mode”, press and hold [UP] and [DOWN] and at the same time switch on the Power switch. The following message appears on the display: „P.d.Mo.”

Press [ENTER] to activate „Low power mode” without fixture reset. Now you can set features and behaviour of the fixture by using „A001” menu and „Pers.” menu. If you want to go „normal operation mode”, execute fixture reset.

**Note:** All motors (except pan and tilt motors) in „Low power mode” are deactivated and switching the lamp on from the control panel is blocked.
11. Error and information messages

**HEAt**
This message appears if you try to switch on the lamp within 5 minutes after having switched it off (the lamp is too hot). The message will appear on the display if the lamp doesn’t ignite within 28 seconds. The ColorSpot 575 AT will store this information and automatically ignite the lamp when the 5 minutes period has expired.

**Caution:** The message is disabled if the lamp light sensor (function „En.Sn.”) is switched Off (only if the lamp was turned Off and On within 5 minutes, the message „HEAt” will appear).

**LA.Er.**
The ignition of the lamp is seven times unsuccessful (the „HEAt” message appeared six times before), and the display shows „LA.Er.” meaning that the lamp could be damaged or even missed, the fixture is overheating (this can occur if the ambient temperature is 40° C or more) or there could be a failure on the ignitor or ballast. Please place or replace the lamp, check the ambient temperature or contact your dealer if the situation was not caused by the lamp.

**Caution:** The message is disabled if the lamp light sensor (function „En.Sn.”) is switched Off.

**Mb.Er.**
This message informs you that the main PCB does not communicate correctly with the Control Board.

**C.I.Er.** (color-wheel 1 error)
This message will appear after the reset of the fixture if the magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the stepping-motor is defective (or its driver circuit on the main PCB). The color-wheel is not located in the default position after the reset.

**C.2.Er.** (color-wheel 2 error)
This message will appear after the reset of the fixture if the magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the stepping-motor is defective (or its driver circuit on the main PCB). The color-wheel is not located in the default position after the reset.

**r.G.Er.** (rotating gobo-wheel error)
The message will appear after the reset of the fixture if the magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the stepping-motor is defective (or its driver circuit on the main PCB). The rotating gobowheel is not located in the default position after the reset.

**i.G.Er.** (rotating gobo indexing error)
The message will appear after the reset of the fixture and if the magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the stepping-motor is defective (or its driver circuit on the main PCB). The rotating gobo is not located in the default position after the reset.

**S.G.Er.** (static gobo-wheel error)
This message will appear after the reset of the fixture if the magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the stepping-motor is defective (or its driver circuit on the main PCB). The static gobowheel is not located in the default position after the reset.

**Ir.Er.** (iris error)
This message will appear after the reset of the fixture if the magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the stepping-motor is defective (or its driver circuit on the main PCB). The iris is not located in the default position after its reset.

**Pt.Er.**
This error message informs you that the fixture was overheating (occurred if the ambient temperature is 40° C or more) and that the relay switched off the lamp. This message will appear on the display until the temperature will be on a suitable level, then the display will show the message „HEAt” meaning the lamp is too hot (explanation see above).

**Fr.Er.**
This message will appear if the frequency of the main is not standard 50 or 60 Hz. This message can appear as a result of the interference during the lamp starting (if the lamp or igniter is old) or as a result of the interference by neighbouring devices. **In these cases the message does not affect the fixture operating!**

**Sn.Er.**
This message appears if the lamp lighting sensor is failed.

**PoEr**
This message will appear if the fixture was shortly disconnect from the main.

**PA.Er.** (Pan-yoke movement error)
This message will appear after the reset of the fixture if the yoke’s magnetic-indexing circuits malfunction (sensors failed or magnet missing) or the stepping motor is defective. (Or its driving IC on the main PCB). The yoke is not located in the default position after the reset.

**ti.Er.** (TILT-head movement error)
This message will appear after the reset of the fixture if the head's magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the stepping motor is defective. (Or its driving IC on the main PCB). The head is not located in the default position after the reset.

**MA.Er.** (Master error)
The message informs you that the fixture was addressed as a master and DMX signal is connected to its input. Disconnect the DMX controller from fixture’s input and address the fixture as the master again.

**.M.Er.** (Temperature measuring error)
The message informs you that the communication between the head and the main board in the fixture base was cut off (or the head temperature sensor is defective) and the lamp was automatically switched off.
12. Technical specifications

Power supply:
EU-model: Voltage: 208/230/240V AC, 50/60Hz ~
Fuse: T 6.3A@230V

US-model: Voltage: 100/120/208/230/240V AC, 50/60Hz ~
Fuse: T 10A@120V
Power consumption: 760 VA

Lamp: Philips MSR 575/2, 95V/575W GX-9.5

Optical System:
- High luminous-efficiency glass reflector
- Focus lens and multistep zoom lenses system
- Beam angles: 15°, 18°, 22°
- All lenses are anti-reflection coated

Beampath:

Lamp: MSR 575W/2

15° radiation angle

18° radiation angle

22° radiation angle
Colours:
Colour wheel 1: 9 dichroic filters + open
Colour wheel 2: 8 replaceable ‘SLOT&LOCK’ dichroic filters (including 3200 K and UV filter) + open

Static gobo wheel:
9 replaceable ‘SLOT&LOCK’ metal gobos plus an open position, outside diameter=26.9mm, image diameter=22.5mm, aluminium, thickness=0.5 mm

Rotating gobo wheel:
- 6 dichroic glass gobos and one glass gobo rotating in both directions at different speeds
- Gobo indexing
- Rotating gobo-wheel cont. rotation
- Multicolor dichroic glass gobos: outside diameter=26.8mm, thickness=1.1mm, high temperature borofloat or better glass, image diameter=22 mm
- Glass gobo: outside diameter=26.8 mm, max. thickness=4mm, high temperature borofloat or better glass
- All rotating gobos are easily replaceable

Strobe:
Strobe effect with variable speed (max.15 ashes per second)

Dimmer:
Smooth dimmer from 0 - 100 %

Prism/Frost filter:
3-facet-prism (rotating in both directions at different speeds) can be replaced with another prism

Frost filter:
Separate, variable frost filter

Focus/Zoom:
- Remotely controllable via DMX
- Motorized multi-step zoom with three different apertures (15°, 18°, 22°)

Iris:
Motorized (steplessly adjustable) iris for different beam diameters

Motors:
16 high quality stepping-motors controlled by microprocessors

Electronics:
- Addressing, special functions setting, effects calibration via control panel with 4-digit LED display
- Readout fixture and lamp usage, receiving DMX values, temperature, etc
- Built-in analyzer for easy fault finding, error messages
- Remotely switching of the lamp
- Built-in demo sequences
- Black-out while head moving or gobo/color changing
- Silent fans cooling, remotely controllable speed of fans
- Self-resetable thermo-fuse
- Master/slave operation
- Digital serial input DMX-512
- 4 control-channels presettings (27, 19, 29, 21 control channels)

Pan/Tilt:
- Pan movement range 530°
- Tilt movement range 280°
- Max. Pan speed 157.27°/sec.
- Max. Tilt speed 108.95°/sec.
- Pan/tilt control accuracy: 0.00415°/0.00415°
- 16 bit movement resolution
- Automatic Pan / Tilt position correction
- Remotely controllable speed of pan/tilt movement for easy programming
- Movement control: tracking and vector

Rigging:
- Stands directly on the floor
- Mounts horizontally or vertically with 2 Omega brackets
- 2 truss orientation
- Safety chain/cord attachment point

Temperatures:
- Maximum ambient temperature: 40° C
- Maximum housing temperature: 80° C
Minimum distances:
- Min. distance from flammable surfaces: 0.7m
- Min. distance to lighted object: 2.0m

Dimensions (mm)

Weight (net):
- EU version: 32 kg
- US version: 36 kg

Accessories
- Accessories gobo-set 12 .................... 15050021
- Omega holder (2 pieces) .................... 99010420

13. Maintenance and cleaning

It is absolutely essential that the fixture is kept clean and that dust, dirt and smoke residues must not build up on or within the fixture. Otherwise, the fixture’s light-output will be significantly reduced. Regular cleaning will not only ensure the maximum light-output, but will also allow the fixture to function reliably throughout its life.

A soft lint-free cloth moistened with any good glass cleaning fluid is recommended, under no circumstances should alcohol or solvents be used!

DANGER!
Disconnect from the mains before starting any maintenance work

The front objective lens will require weekly cleaning as smoke residues tend to build up quickly. The cooling-fans should be cleaned monthly.
The gobos may be cleaned with a soft brush. The interior of the fixture should be cleaned at least annually using a vacuum-cleaner or an air-jet.
The dichroic colour-filters, the gobo-wheel and the internal lenses should be cleaned monthly.
There are no serviceable parts inside the device except for the lamp and the fuse.
Please refer to the instructions under “Fitting/Exchanging the lamp”.
Maintenance and service operations are only to be carried out by authorized dealers.

Replacing the fuse
If the lamp burns out, the fine-wire fuse of the device might fuse, too. Only replace the fuse by a fuse of the same type and rating.
Before replacing the fuse, unplug mains lead.

Procedure:
1) Unscrew the fuseholder on the rear panel of the base with a fitting screwdriver from the housing (anticlockwise).
2) Remove the old fuse from the fuseholder.
3) Install the new fuse in the fuseholder.
4) Replace the fuseholder in the housing and fix it.