



# PILOT 575

PR-2575

This product manual contains important information about the safe installation and use of this projector. Please read and follow these instructions carefully and keep this manual in a safe place for future reference.

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Please note that as part of our ongoing commitment to continuous product development, specifications are subject to change without notice. Whilst every care is taken in the preparation of this manual we reserve the right to change specifications in the course of product improvement. The publishers cannot be held responsible for the accuracy of the information herein, or any consequence arising from them.

Every apparatus is tested completely and packed properly by the manufacturer. Please make sure the packing and/or the apparatus are in good condition before your installation and use. Should there be any damage caused by transportation, consult your dealer and do not use the apparatus. But any damage caused by improper use will not be assumed by the manufacturer and/or dealer.

## ACCESSORIES

THESE ITEMS ARE PACKED TOGETHER WITH THE PROJECTOR

- G clamps (2 PCS)
- 3-pin XLR plug (1 PCS); 3-pin XLR socket (1 PCS)
- Safety cords (2 PCS)
- Spare glass gobos (3 PCS)
- This manual (1 PCS)
- clamps (Options) (2PCS)

## INTRODUCTION

Thank you for purchasing our product PILOT 575, PR-2575.

This product manual contains important information about the safe installation and use of this projector. Please read and follow these instructions carefully and keep this manual in a safe place for future reference.

PILOT 575 is an innovative projector with an elegant housing, which is of Pan's and Tilt's locks for maintenance and high quality fans free from noise. The projector has 2 types of clamps for mounting at any direction and position. Which complies to CE norms and standards and uses international protocol DMX 512.

The projector uses MSR575 discharge lamp and high quality optical system, which produces bright and beautiful light beam and has 60% output lumen more than the similar products with the same power consumption. The projector features effects of strobe, frost light, mixed colours and rainbow, so it is suitable for applications in TV station, disc, singing and dancing stage, nightclub, etc.

## SAFE USAGE OF THE PROJECTOR

When unpacking and before disposing of the carton check there is no transportation damage before using the projector. Should there be any damage caused by transportation, consult your dealer and do not use the apparatus.

The projector is for indoor use only, IP20. Use only in dry locations. Keep this device away from rain and moisture, excessive heat, humidity and dust. Do not allow contact with water or any other liquids.

The projector is not designed or intended to be mounted directly on to inflammable surfaces. 

The projector is only intended for installation, operation and maintenance by qualified personnel.

The projector must be installed in a location with adequate ventilation, at least 50cm from adjacent wall surfaces. Be sure that no ventilation slots are blocked.

Do not project the beam onto inflammable surfaces, minimum distance is 3m.  3m 

Avoid direct exposure to the light from the lamp. The light is harmful to the eye.

Do not attempt to dismantle and/or modify the projector in any way.

Electrical connection must only be carried out by qualified personnel.

Before installation, ensure that the voltage and frequency of power supply match the power requirements of the projector.

It is essential that each projector is correctly earthed and that electrical installation conforms to all relevant standards.

Do not connect this device to any other types of dimmer apparatus.

Make sure that the power-cord is never crimped or damaged by sharp edges. Never let the power-cord come into contact with other cables. Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.

Keep the lamp clean. Do not touch the lamp glass with bare hand.

The projector should always be installed with a secondary safety fixing. A safety cord is supplied for this; it should be attached as shown in "installing the projector" section.

The lamp used in this projector is a Philips MSR575 discharge lamp. After switching off don't attempt to restart the projector until lamp has cooled, this will require approx 15 minutes. Switching the lamp on and off at short intervals will reduce the life of both the lamp and the projector. But occasional breaks will prolong the life of the lamp and projector.

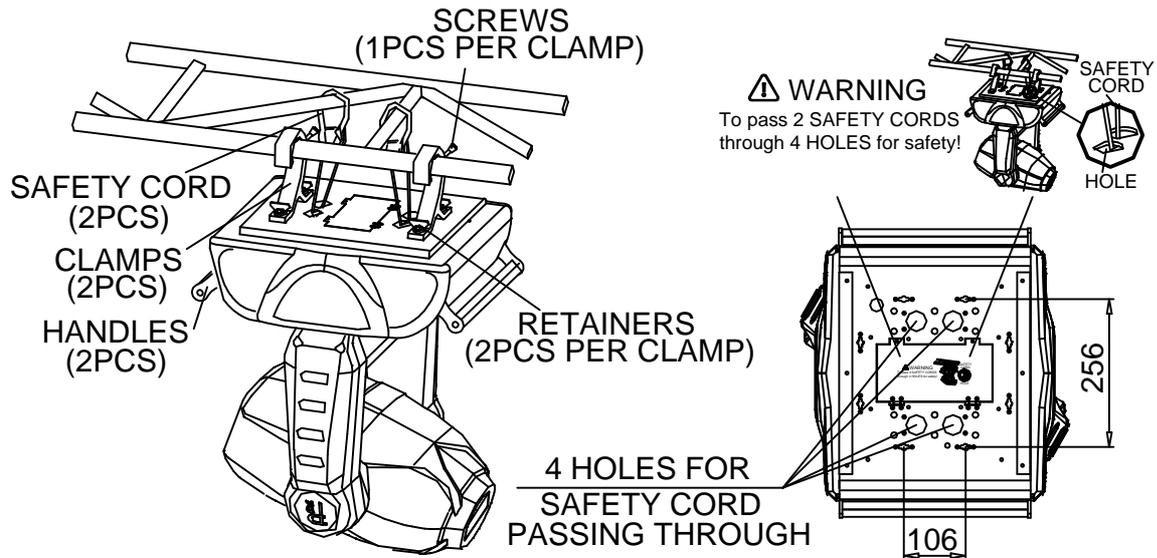
Never run the projector without a lamp.

There is no user serviceable parts inside the projector do not open the housing and never operate the projector with the covers removed.

**Always disconnect from the mains, when the device is not in use or before cleaning it or before attempting any maintenance work.**

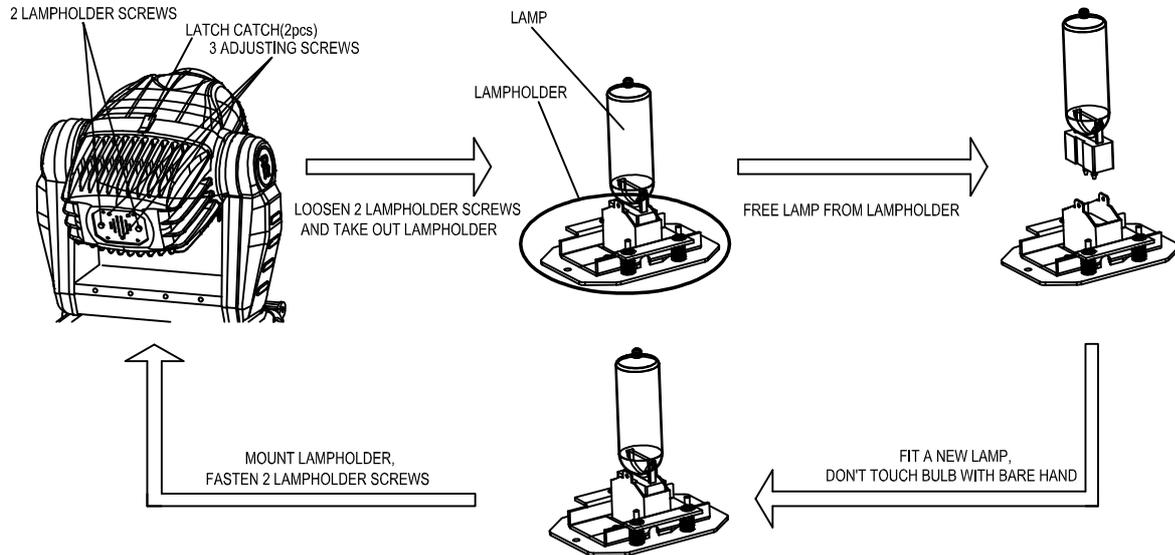
If you have any questions, don't hesitate to consult your dealer or manufacturer.

## INSTALLING THE PROJECTOR



Take 2 clamps and 2 safety cords out from the package and mount 2 clamps on the underside of fixture with 2 retainers attached to each clamp. Hang the fixture on the structure and fasten the screws attached to each clamp. (Watch the **WARNING** on the underside of the base as shown above) **To pass 2 SAFETY CORDS through 4 HOLES for safety!** Always ensure that the projector is firmly anchored to avoid vibration and slipping whilst functioning. Always ensure that the structure that you are going to mount the projector is secure and is strong enough to support a weight of PILOT 575. **WARNING: The projector MUST be lifted or carried by the HANDLES instead of clamps.**

## FITTING THE LAMP



Lock tilt before fitting/replacing the lamp.  
 (Do the way as shown in the above figure)  
 Loosen 2 lampholder screws as shown in the above figure and take out the lampholder.  
 Free worn-out lamp from lampholder.  
 Fit a new lamp and insert it with lampholder into the fixture, then fasten 2 lampholder screws.  
 After the fitting is done, turn the projector on and 5 minutes later adjust 3 adjusting screws to focus for the best light output.

**Notes: don't touch the bulb of the new lamp with bare hand so as not to influence the beam output.**

**WARNING: The MSR series are high-pressure lamps with external igniters (⚠). Care should always be taken when handling these lamps. Always read the manufacturers "Instructions for use" enclosed with the lamp.**

## POWER SUPPLY - MAINS

Connect the power cord as follows:

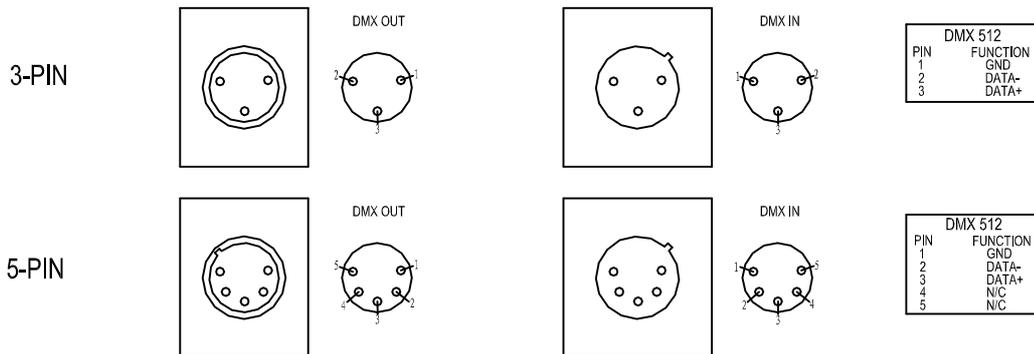
- L (live) =brown
- E (earth) =yellow/green
- N (neutral) =blue

Use the plug provided to connect the mains power to the projector paying attention to the voltage and frequency marked on the panel of the projector. It is recommended that each projector be supplied separately so that they may be individually switched on and off.

### IMPORTANT

**It is essential that each projector is correctly earthed and the electrical installation conforms to all relevant standards. Power consumption of the PILOT 575 is 780W.**

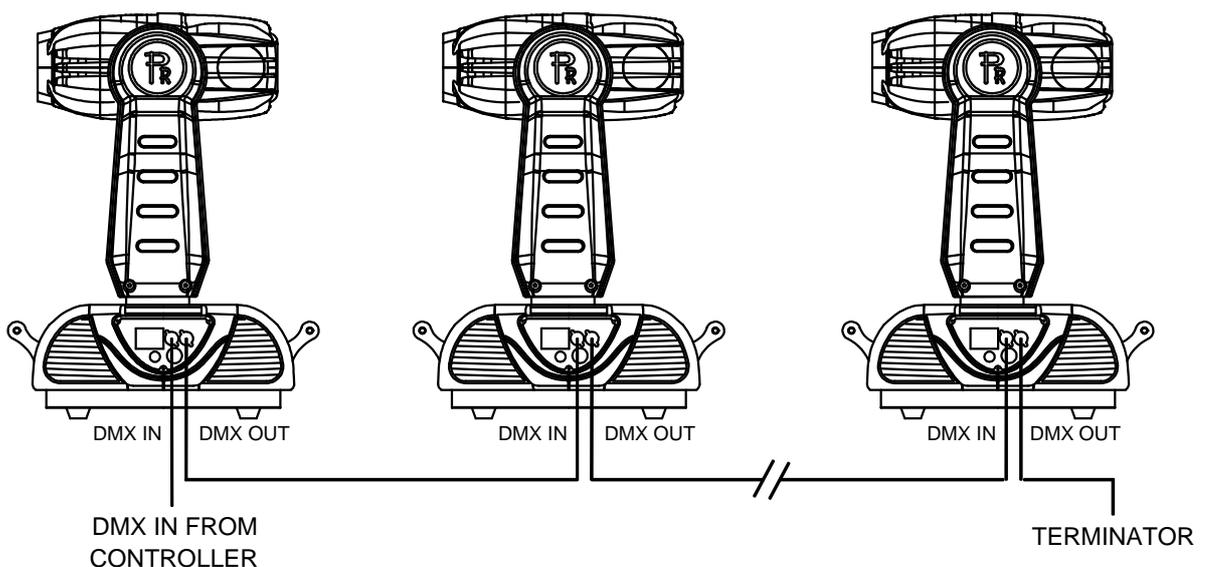
## CONTROL CONNECTIONS



Connection between controller and projector and between one projector and another must be made with 2 core-screened cable, with each core having at least a 0.5mm diameter. Connection to and from the projector is via cannon 3 pin (which are included with the projector) or 5 pin XLR plugs and sockets. The XLR's are connected as shown in the figure above.

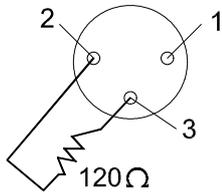
Note: care should be taken to ensure that none of the pins touch the metallic body of the plug or each other. The body of the plug is not connected in any way. The PILOT 575 accepts digital control signals in protocol DMX512 (1990).

Connect the controller's output to the first fixture's input, and connect the first fixture's output to the second fixture's input and connect the rest fixtures in the same way. Eventually connect the last fixture's output to a DMX terminator as shown in the figure below.



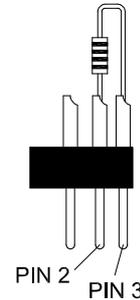
## DMX TERMINATOR

In the Controller mode, at the last fixture in the chain, the DMX output has to be connected with a DMX terminator. This prevents electrical noise from disturbing and corrupting the DMX control signals. The DMX terminator is simply an XLR connector with a 120Ω (ohm) resistor connected across pins 2 and 3, which is then plugged into the output socket on the last projector in the chain. The connections are illustrated below.

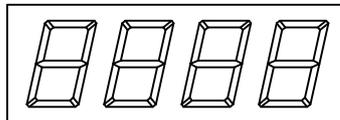


### DMX TERMINATOR CONNECTION

Connect a 120Ω(OHM) resistor across pins 2 and 3 in an XLR plug and insert into the DMX OUT socket on the last unit in the chain.



## SETUP OPTIONS - PROJECTOR CONFIGURATION



FUNC DOWN UP ENTER

Projector configuration can be set conveniently via pressbutton switch and digital display. Turn the projector on and the digital display will show DMX address you set and save last time and it can be reset and saved again as you please.

Press button **UP** or **DOWN** if you want to browse through the various Setup Options.

Press button **ENTER** to save your settings or enter the next menu. Press button **UP** or **DOWN** to shift the display between **On** and **OFF** or change the display of address.

Press button **FUNC**, it will return to the upper menu one by one. The display will return automatically to the function of address display if you stay for about 60 seconds defaulted.

## TO SET THE DMX START ADDRESS

Each PILOT 575 must be given a DMX start address so that the correct projector responds to the correct control signals. This DMX start address is the channel number from which the projector starts to "listen" to the digital control information being sent out from the controller. The PILOT 575 has 19 channels, so set the No. 1 projector's address 001, No. 2 projector's address 020, No. 3 projector's address 039, No. 4 projector's address 058, and so on.

Launch the projector. Press button **ENTER** more than 5 seconds to unlock panel.

Press button **FUNC** to **Addr**; press button **ENTER**, it will display address; press button **UP** and **DOWN**, you can set the address; press button **ENTER** to confirm.

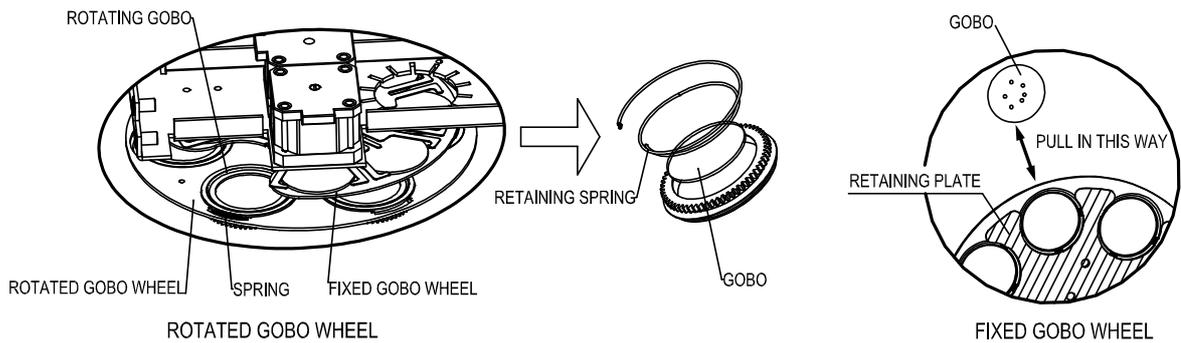
## FUNCTIONS DISPLAY

| Information on panel: "PR 575 Add 001" is the state of the apparatus. Which is displayed in 4 frames and "001" is address. |                                    |                 |                                      |                 |                                      |                 |                                      |                                    |  |  |               |  |
|--|------------------------------------|-----------------|--------------------------------------|-----------------|--------------------------------------|-----------------|--------------------------------------|------------------------------------|--|--|---------------|--|
| 1 <sup>st</sup> level  | Operation                          | 2 <sup>nd</sup> | Operation                            | 3 <sup>rd</sup> | Operation                            | 4 <sup>th</sup> | Operation                            | Description                        | Remark                                 |  |               |  |
| Addr   | Address menu, "Enter" access       | 001 (DMX)       | "Down", "Up" option; "Enter" confirm |                 |                                      |                 |                                      | Set address                        | Default: 001                           |  |               |  |
|  |                                    | RST ?           | "Enter" confirm; "Fun" abort         |                 |                                      |                 |                                      | Warm reset                         |  |  |               |  |
| MOdE   | Mode menu, "Enter" access          | dMX             | "Down", "Up" option; "Enter" confirm |                 |                                      |                 |                                      | DMX mode                           | Default: dMX; reserved                 |  |               |  |
|  |                                    | MSTR            |                                      |                 |                                      |                 |                                      | Master in "MASTER/SLAVE" mode      |  |  |               |  |
|  |                                    | SLAV            |                                      |                 |                                      |                 |                                      |                                    |  | Slave in "MASTER/SLAVE" mode                   |               |  |
|  |                                    | STAT            |                                      |                 |                                      |                 |                                      |                                    |  |  |               |  |
| CNFG   | Configuration menu, "Enter" access | HRES            | "Enter" access                       | ON              | "Down", "Up" option; "Enter" confirm |                 |                                      | Extension channel valid when ON    | Default: ON                            |  |               |  |
|  |                                    |                 |                                      | OFF             |                                      |                 |                                      | Extension channel invalid when OFF |  |  |               |  |
|  |                                    | CTRL            | "Enter" access                       | ON              | "Down", "Up" option; "Enter" confirm |                 |                                      |                                    | DMX "control" channel valid when ON    | Default: ON                                    |               |  |
|  |                                    |                 |                                      | OFF             |                                      |                 |                                      |                                    | DMX "control" channel invalid when OFF |  |               |  |
| OPTN   | Option menu, "Enter" access        | LAMP            | "Enter" access                       | CTRL            | "Down", "Up" option; "Enter" confirm |                 |                                      | CTRL                               | Default: CTRL                          |  |               |  |
|  |                                    |                 |                                      | dMX             |                                      |                 |                                      |                                    |  | DMX  |               |  |
|  |                                    |                 |                                      | ON              |                                      |                 |                                      |                                    |  | ON   |               |  |
|  |                                    | COLR            | "Enter" access                       | STEP            | "Enter" access                       | STEP            | "Down", "Up" option; "Enter" confirm |                                    |  | Colour wheel linear rotation invalid when STEP | Default: STEP |  |
|  |                                    |                 |                                      |                 |                                      | LIN             |                                      |                                    |  |  |               | Colour wheel linear rotation valid when LIN  |
|  |                                    |                 |                                      |                 |                                      | STEP            | "Down", "Up" option; "Enter" confirm |                                    |  |  |               | Gobo wheel linear rotation invalid when STEP |
|  |                                    | ON              | "Enter" access                       | LIN             | "Enter" access                       | LIN             | "Down", "Up" option; "Enter" confirm |                                    |  | Gobo wheel linear rotation valid when LIN      | Default: STEP |  |
|  |                                    |                 |                                      |                 |                                      | OFF             | "Down", "Up" option; "Enter" confirm |                                    |  |  |               | Pan inversely rotate when ON                 |
|  |                                    |                 |                                      |                 |                                      | ON              | "Down", "Up" option; "Enter" confirm |                                    |  |  |               | Tilt inversely rotate when ON                |

| 1 <sup>st</sup> level | Operation                  | 2 <sup>nd</sup>                  | Operation                       | 3 <sup>rd</sup>                               | Operation   | 4 <sup>th</sup> | Operation                                   | Description  | Remark                                       |                                 |
|-----------------------|----------------------------|----------------------------------|---------------------------------|---|---|-----------------|---|--|--|---------------------------------|
| INFO                  |                            | dISP                             | "Enter" access                  | ON  | "Down", "Up" option;<br>"Enter" confirm                 |                 |   |  | Default: ON;<br>reserved                     |                                 |
|                       |                            |                                  |                                 | OFF   |   |                 |   |  |  |                                 |
|                       |                            |                                  |                                 | dIM   |   |                 |   |  |  |                                 |
|                       |                            | dVIN                             | "Enter" access                  | OFF   | "Down", "Up" option;<br>"Enter" confirm                 |                 | Normal display when OFF                     |  |  | Default: OFF;<br>reserved       |
|                       |                            |                                  |                                 | ON  |   |                 | Upside-down display when ON                 |  |  |                                 |
|                       |                            |                                  |                                 | dFLT  |   | "Enter" access  | OFF   |  |  |                                 |
|                       | ON                         |                                  | Reset and load defaults when ON |   |   |                 |   |  |  |                                 |
|                       | L/HR                       | "Enter" access                   | Display time                    | "Down", "Up" access                           | RST?  |                 | "Enter" confirm;<br>"Fun" abort             | Display lamp's age or reset & clear up   |  |                                 |
|                       | T\HR                       |                                  | Display time                    |   |   |                 | Display apparatus's age; couldn't reset now |  |  |                                 |
|                       |                            | Information menu, "Enter" access | TEMP                            | "Enter" access                                | MSTR  | "Enter" access  | Display temp.                               |  | Display digital driver PCB's temp.           | Display apparatus's information |
|                       |                            |                                  |                                 |   | dRV1  |                 | Display temp.                               |  | Display motor driver PCB 's temp.            |                                 |
|                       |                            |                                  |                                 |   | dRV 2   |                 | Display temp.                               |  | Display motor driver PCB 's temp.            |                                 |
|                       |                            |                                  |                                 |   | bASE  |                 | Display temp.                               |  | Display Pan & Tilt driver PCB's temp.        |                                 |
|                       |                            |                                  | VER                             | "Enter" access                                | HEAd  | "Enter" access  | N/A   |  | Display temp. of apparatus's head; reserved  |                                 |
| MSTR                  |                            |                                  |                                 |   | "Enter" access  |                 | Display rev.                                |  | Display rev. of digital driver PCB's program |                                 |
| dRV1                  |                            |                                  |                                 |   |   |                 | Display rev.                                |  | Display rev. of Motor driver PCB 's program  |                                 |
| dRV 2                 |                            |                                  |                                 |   |   |                 | Display rev.                                |  | Display rev. of Motor driver PCB 's program  |                                 |
| P\T                   | "Enter" access             | Display rev.                     |                                 | Display rev. of Pan&Tilt driver PCB's program |   |                 |   |  |  |                                 |
| PWR                   |                            | Display rev.                     |                                 | Display rev. of power PCB's program           |   |                 |   |  |  |                                 |
| TEST                  | Debug menu, "Enter" access | SET                              | "Enter" access                  | OFF   | "Down", "Up" option;<br>"Enter" confirm;<br>"Fun" abort |                 |   | Access debug mode when ON to debug Pan & Tilt; abort from debug mode and reset when OFF. | Default: OFF                                 |                                 |
|                       |                            |                                  |                                 | ON  |   |                 |   |  |  |                                 |

Note: The 4 buttons "Fun, Down, Up, Enter" are locked; if want to operate them, press button "Enter" and stay over 5 seconds to unlock.

## REPLACING GOBOS



Lock Tilt.

Free 2 latch catches on the cover and slip off the front cover. You could see the structure as shown in the above figure.

For gobos replacement on the rotated gobo wheel: take an appropriate tool to tug up spring and take out the rotating gobo with its holder; tug the head of retaining spring up and engage your another hand to take the retaining spring out; take the gobo out; fit a new gobo and fit the retaining spring; fit the lampholder. Notes: the gobo cannot be touched with bare hand; be careful of the gobo when the replacement is underway and don't drop it.

For gobos replacement on the fixed gobo wheel: turn the rotated gobo wheel to a proper position first; take out a gobo from the fixed gobo wheel carefully; fit a new gobo. Note: if the gobo is a glass one, it should be touched with glabrous, clean and soft tissue or cloth matted between hand and glass instead of with bare hand.

Close the front cover and fasten 2 latch catches.

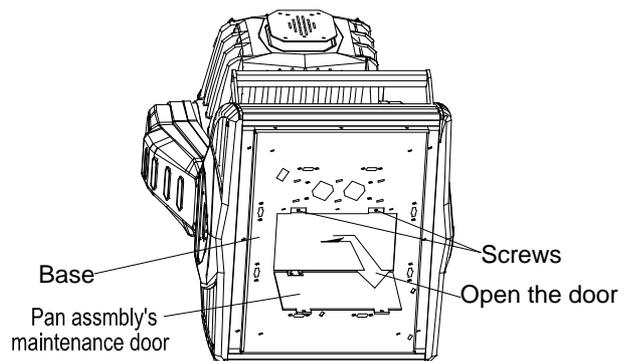
## CHANGING BELTS

### Pan's belts

Free 2 screws on Pan assembly's maintenance door and open the door; change the belts; close the door and fasten the screws.

### Tilt's belts

The common users replacing the belts is not recommended.



## DMX CONTROL CHANNEL FUNCTIONS

The PILOT 575 uses 19 DMX channels. They are listed in the following table.

| Channel | Function                                     | DMX Value | Description                                  |
|---------|--|-----------|--|
| 1       | Strobe                                       | 000-009   | Blackout                                     |
|         |  | 010-020   | Open   |
|         |  | 021-034   | Strobe 1                                     |
|         |  | 035-048   | Strobe 2                                     |
|         |  | 049-062   | Strobe 3                                     |
|         |  | 063-076   | Strobe 4                                     |
|         |  | 077-090   | Strobe 5                                     |
|         |  | 091-104   | Strobe 6                                     |
|         |  | 105-118   | Strobe 7                                     |
|         |  | 119-132   | Strobe 8                                     |
|         |  | 133-146   | Strobe 9                                     |
|         |  | 147-160   | Strobe 10                                    |
|         |  | 161-174   | Strobe 11                                    |
|         |  | 175-188   | Strobe 12                                    |
|         |  | 189-202   | Strobe 13                                    |
|         |  | 203-216   | Strobe 14                                    |
|         |  | 217-230   | Strobe 15                                    |
| 231-244 | Strobe 16                                    |           |  |
| 245-255 | Open   |           |  |
| 2       | Dimmer                                       | 000-255   | 0 to 100% dimming                            |
| 3       | Iris   | 000-255   | Linear adjust iris from open to closed       |
| 4       | Fixed Gobos                                  | 000-020   | Clear  |
|         |  | 021-040   | Gobo 1                                       |
|         |  | 041-060   | Gobo 2                                       |
|         |  | 061-080   | Gobo 3                                       |
|         |  | 081-100   | Gobo 4                                       |
|         |  | 101-120   | Gobo 5                                       |
|         |  | 121-140   | Gobo 6                                       |
|         |  | 141-160   | Gobo 7                                       |
|         |  | 161-167   | Clockwise rotation in speed 1 (slowest)      |
|         |  | 168-175   | Clockwise rotation in speed 2                |
|         |  | 176-183   | Clockwise rotation in speed 3                |
|         |  | 184-191   | Clockwise rotation in speed 4 (fastest)      |
|         |  | 192-223   | Stop rotating                                |
|         |  | 224-231   | Anti-clockwise rotation in speed 1 (slowest) |
|         |  | 232-239   | Anti-clockwise rotation in speed 2           |
|         |  | 240-247   | Anti-clockwise rotation in speed 3           |
| 248-255 | Anti-clockwise rotation in speed 4 (fastest) |           |  |
| 5       | Pan rotation                                 | 000-255   | Pan rotation from 0 to 540°                  |

|         |                                     |         |  |
|---------|-------------------------------------|---------|--|
| 6       | Tilt rotation                       | 000-255 | Tilt rotation from 0 to 270°   |
| 7       | Focus                               | 000-255 | Linear adjust iris from near to far  |
| 8       | Zoom                                | 000-050 | Clear  |
|         |                                     | 051-101 | Angle 1 ( wide )   |
|         |                                     | 102-152 | Angle 2 ( narrow )   |
|         |                                     | 153-203 | CTB  |
|         |                                     | 204-255 | CTO  |
| 9       | Colour Wheel<br>1                   | 000-016 | White. Note: stay 5 seconds while DMX value is 5, 6 or 7, the function reset perform |
|         |                                     | 017-024 | White/colour filter 1  |
|         |                                     | 025-032 | Colour filter 1  |
|         |                                     | 033-040 | Colour filter 1/colour filter 2  |
|         |                                     | 041-048 | Colour filter 2  |
|         |                                     | 049-056 | Colour filter 2/colour filter 3  |
|         |                                     | 057-064 | Colour filter 3  |
|         |                                     | 065-072 | Colour filter 3/colour filter 4  |
|         |                                     | 073-080 | Colour filter 4  |
|         |                                     | 081-088 | Colour filter 4/colour filter 5  |
|         |                                     | 089-096 | Colour filter 5  |
|         |                                     | 097-104 | Colour filter 5/colour filter 6  |
|         |                                     | 105-112 | Colour filter 6  |
|         |                                     | 113-120 | Colour filter 6/white  |
|         |                                     | 121-127 | White  |
|         |                                     | 128-133 | Clockwise rotation in speed 1  |
|         |                                     | 134-139 | Clockwise rotation in speed 2  |
|         |                                     | 140-145 | Clockwise rotation in speed 3  |
|         |                                     | 146-151 | Clockwise rotation in speed 4  |
|         |                                     | 152-157 | Clockwise rotation in speed 5  |
|         |                                     | 158-163 | Clockwise rotation in speed 6  |
|         |                                     | 164-169 | Clockwise rotation in speed 7  |
|         |                                     | 170-175 | Clockwise rotation in speed 8  |
|         |                                     | 176-181 | Clockwise rotation in speed 9  |
|         |                                     | 182-187 | Clockwise rotation in speed 10   |
|         |                                     | 188-195 | Stop rotating  |
|         |                                     | 196-201 | Anti-clockwise rotation in speed 1   |
|         |                                     | 202-207 | Anti-clockwise rotation in speed 2   |
|         |                                     | 208-213 | Anti-clockwise rotation in speed 3   |
|         |                                     | 214-219 | Anti-clockwise rotation in speed 4   |
|         |                                     | 220-225 | Anti-clockwise rotation in speed 5   |
|         |                                     | 226-231 | Anti-clockwise rotation in speed 6   |
| 232-237 | Anti-clockwise rotation in speed 7  |         |  |
| 238-243 | Anti-clockwise rotation in speed 8  |         |  |
| 244-249 | Anti-clockwise rotation in speed 9  |         |  |
| 250-255 | Anti-clockwise rotation in speed 10 |         |  |
| 10      |                                     | 000-016 | White  |

|         |                                     |         |   |
|---------|-------------------------------------|---------|---|
|         | Colour Wheel<br>2                   | 017-024 | White/colour filter 1                         |
|         |                                     | 025-032 | Colour filter 1                               |
|         |                                     | 033-040 | Colour filter 1/colour filter 2               |
|         |                                     | 041-048 | Colour filter 2                               |
|         |                                     | 049-056 | Colour filter 2/colour filter 3               |
|         |                                     | 057-064 | Colour filter 3                               |
|         |                                     | 065-072 | Colour filter 3/colour filter 4               |
|         |                                     | 073-080 | Colour filter 4                               |
|         |                                     | 081-088 | Colour filter 4/colour filter 5               |
|         |                                     | 089-096 | Colour filter 5                               |
|         |                                     | 097-104 | Colour filter 5/colour filter 6               |
|         |                                     | 105-112 | Colour filter 6                               |
|         |                                     | 113-120 | Colour filter 6/white                         |
|         |                                     | 121-127 | White   |
|         |                                     | 128-133 | Clockwise rotation in speed 1                 |
|         |                                     | 134-139 | Clockwise rotation in speed 2                 |
|         |                                     | 140-145 | Clockwise rotation in speed 3                 |
|         |                                     | 146-151 | Clockwise rotation in speed 4                 |
|         |                                     | 152-157 | Clockwise rotation in speed 5                 |
|         |                                     | 158-163 | Clockwise rotation in speed 6                 |
|         |                                     | 164-169 | Clockwise rotation in speed 7                 |
|         |                                     | 170-175 | Clockwise rotation in speed 8                 |
|         |                                     | 176-181 | Clockwise rotation in speed 9                 |
|         |                                     | 182-187 | Clockwise rotation in speed 10                |
|         |                                     | 188-195 | Stop rotating                                 |
|         |                                     | 196-201 | Anti-clockwise rotation in speed 1            |
|         |                                     | 202-207 | Anti-clockwise rotation in speed 2            |
|         |                                     | 208-213 | Anti-clockwise rotation in speed 3            |
|         |                                     | 214-219 | Anti-clockwise rotation in speed 4            |
|         |                                     | 220-225 | Anti-clockwise rotation in speed 5            |
|         |                                     | 226-231 | Anti-clockwise rotation in speed 6            |
|         |                                     | 232-237 | Anti-clockwise rotation in speed 7            |
|         |                                     | 238-243 | Anti-clockwise rotation in speed 8            |
| 244-249 | Anti-clockwise rotation in speed 9  |         |   |
| 250-255 | Anti-clockwise rotation in speed 10 |         |   |
| 11      | Rotating<br>Gobo Wheel              | 000-043 | Clear   |
|         |                                     | 044-085 | Gobo 1  |
|         |                                     | 086-128 | Gobo 2  |
|         |                                     | 129-170 | Gobo 3  |
|         |                                     | 171-212 | Gobo 4  |
|         |                                     | 213-255 | Gobo 5  |
| 12      | Gobo<br>Rotation                    | 000-120 | (Rotating gobo) 0~540° index                  |
|         |                                     | 121-127 | (Rotating gobo) clockwise rotation in speed 1 |
|         |                                     | 128-135 | (Rotating gobo) clockwise rotation in speed 2 |
|         |                                     | 136-143 | (Rotating gobo) clockwise rotation in speed 3 |
|         |                                     | 144-151 | (Rotating gobo) clockwise rotation in speed 4 |
|         |                                     | 152-159 | (Rotating gobo) clockwise rotation in speed 5 |

|         |  |         |  |
|---------|--|---------|--|
|         |  | 160-167 | (Rotating gobo) clockwise rotation in speed 6      |
|         |  | 168-175 | (Rotating gobo) clockwise rotation in speed 7      |
|         |  | 176-183 | (Rotating gobo) clockwise rotation in speed 8      |
|         |  | 184-191 | (Rotating gobo) stop rotating                      |
|         |  | 192-199 | (Rotating gobo) anti-clockwise rotation in speed 8 |
|         |  | 200-207 | (Rotating gobo) anti-clockwise rotation in speed 7 |
|         |  | 208-215 | (Rotating gobo) anti-clockwise rotation in speed 6 |
|         |  | 216-223 | (Rotating gobo) anti-clockwise rotation in speed 5 |
|         |  | 224-231 | (Rotating gobo) anti-clockwise rotation in speed 4 |
|         |  | 232-239 | (Rotating gobo) anti-clockwise rotation in speed 3 |
|         |  | 240-247 | (Rotating gobo) anti-clockwise rotation in speed 2 |
|         |  | 248-255 | (Rotating gobo) anti-clockwise rotation in speed 1 |
| 13      | Prisms                                     | 000-051 | Clear  |
|         |  | 052-102 | Prism 1  |
|         |  | 103-153 | Prism 2  |
|         |  | 154-204 | UV effect  |
|         |  | 205-255 | Frost  |
| 14      | Prism Rotation                             | 000-120 | (Prism) 0~540° index                               |
|         |  | 121-127 | (Prism) clockwise rotation in speed 1              |
|         |  | 128-135 | (Prism) clockwise rotation in speed 2              |
|         |  | 136-143 | (Prism) clockwise rotation in speed 3              |
|         |  | 144-151 | (Prism) clockwise rotation in speed 4              |
|         |  | 152-159 | (Prism) clockwise rotation in speed 5              |
|         |  | 160-167 | (Prism) clockwise rotation in speed 6              |
|         |  | 168-175 | (Prism) clockwise rotation in speed 7              |
|         |  | 176-183 | (Prism) clockwise rotation in speed 8              |
|         |  | 184-191 | (Prism) stop rotating                              |
|         |  | 192-199 | (Prism) anti-clockwise rotation in speed 8         |
|         |  | 200-207 | (Prism) anti-clockwise rotation in speed 7         |
|         |  | 208-215 | (Prism) anti-clockwise rotation in speed 6         |
|         |  | 216-223 | (Prism) anti-clockwise rotation in speed 5         |
|         |  | 224-231 | (Prism) anti-clockwise rotation in speed 4         |
|         |  | 232-239 | (Prism) anti-clockwise rotation in speed 3         |
|         |  | 240-247 | (Prism) anti-clockwise rotation in speed 2         |
| 248-255 | (Prism) anti-clockwise rotation in speed 1 |         |  |
| 15      | Pan & Tilt Speed ( extended function )     | 000-255 | Adjust Pan&Tilt speed                              |

|    |   |         |  |
|----|---|---------|--|
| 16 | Pan Fine<br>(16Bit)<br>( extended<br>function )   | 000-255 | Adjust Pan in 16Bit resolution           |
| 17 | Tilt Fine<br>(16Bit)<br>( extended<br>function )  | 000-255 | Adjust Tilt in 16Bit resolution          |
| 18 | Gobo<br>Rotation Fine<br>( extended<br>function )   | 000-255 | Adjust gobo rotation in 16Bit resolution |
| 19 | Control<br>( when<br>extended<br>functions are<br>invalid, shift<br>this channel<br>to 15 <sup>th</sup><br>channel. ) | 000-048 | Reserve                                  |
|    |   | 049-080 | Reset                                    |
|    |   | 081-112 | Reserve                                  |
|    |   | 113-144 | Turn lamp off ( stay 10 seconds )        |
|    |   | 145-223 | Reserve                                  |
|    |   | 224-255 | Turn lamp on ( see remark below )        |

**Remark:**

If you intend to turn on/off the lamp via the 19<sup>th</sup> channel of the controller, don't attempt to push the handle of 19<sup>th</sup> channel to value 224-255 immediately after turning it off, or push the handle to value 224-255 to wait it cooling. Under these 2 circumstances, the lamp can not be turned on. The right operation is: turn it off---cool down---push the handle to turn it on.

## MAINTENANCE

If the projector's lens becomes damaged or broken it should be replaced. If the lamp becomes damaged or deformed in any way it must be replaced. If the light from the lamp appears dim this would normally indicate that it is reaching the end of its life and it should be changed at once, aged lamps run to the extremity of their life might explode. If the projector does not function, check the fuses on the power socket of the projector, they should only be replaced by fuses of the same specification (200/220/230/240V: 6.35x32 T7A/250V; 100/120V: 6.35x32 T15A/250V). On the PCBs inside the projector there are also 3 fuses. They are 1 fuse F2A / 250V 5mmx20mm on Pan and Tilt PCB and 2 fuses F2A / 250V 5mmx20mm on 2 SLAVE PCBs. Should these be damaged call a qualified technician before replacement. The projector has thermal protection device that will switch off the projector in case of overheating, should either of these operation, check that the fans are not blocked, and if they are dirty clean them before switching on the projector again. Check that the fans are operational, if not call a qualified technician.

**Any maintenance work should only be carried out by qualified technicians.**

## LUBRICATION

To ensure the continuous rotation of the rotating gobos and linear motion of the lens for focusing, it is recommended that the bearings for the rotating gobos and the 3 shafts for the focusing lens holder be lubricated periodically, preferably every two months. Use only high quality, high-temperature resistant grease instead of any type of oil. When lubricating the bearings, a syringe with a fine needle is the easiest way to introduce the grease to the bearings around each gobo.

## KEEPING THE PROJECTOR CLEAN

To ensure the reliability of the projector it should be kept clean. It is recommended that the fans should be cleaned every 15 days. The lens and dichroic colour filters should also be regularly cleaned to maintain an optimum light output. **Do NOT use any type of solvent on dichroic colour filters.**

Cleaning frequency depends on the environment in which the fixture operates: damp, smoke or particularly dirty surroundings can cause greater accumulation of dirt on the unit's optics. A soft cloth and typical glass cleaning products should be used in cleaning. It is recommended to clean the external optics at least once every 20 days and clean the internal optics at least once every 30 / 60 days.

**Do not use any organic solvent, e.g. alcohol, to clean the reflector mirror, dichroic colour filters or housing of the apparatus.**

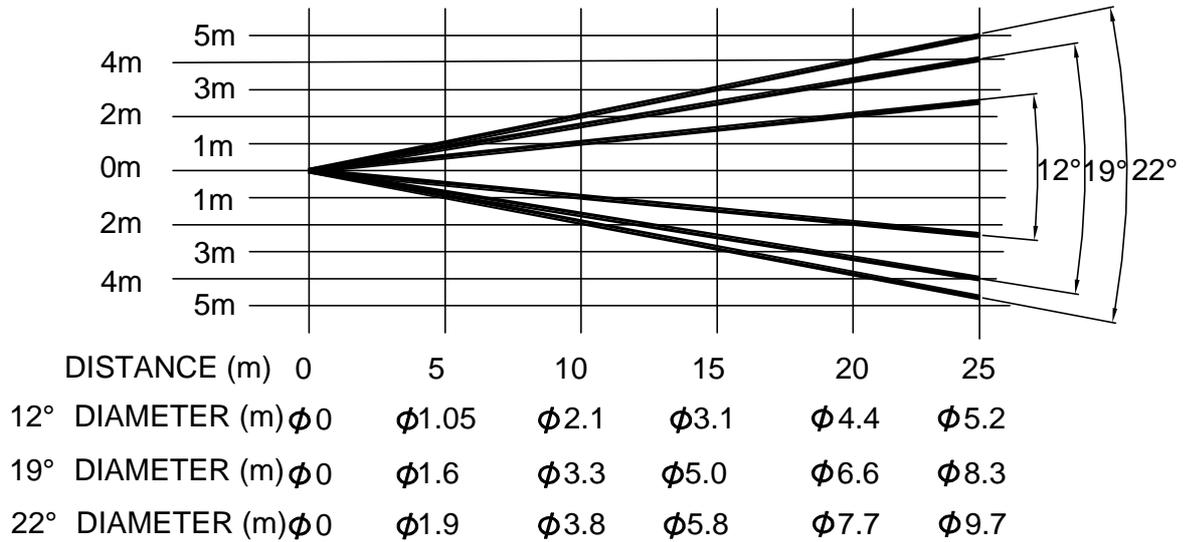
## TROUBLESHOOTING

| PROBLEM   | POSSIBLE CAUSE   | ACTION   |
|---|--|--|
| The projector doesn't switch on                                       | -The power supply is not present<br>-The lamp doesn't work                               | Check the fuse on the power socket.<br>Replace the lamp.   |
| The lamp comes on but the projector doesn't respond to the controller | -Wrong DMX configuration and/or start address<br>- Defective DMX cable                   | Make sure that the projector is correctly configured.<br>Replace or repair the DMX cable.                |
| The projector only functions intermittently                           | -The fan has failed  | Make sure the fan is working and not dirty.  |
| Defective projection  | -The lens is broken<br>-Dust or grease on lenses   | Check the lenses are not broken.<br>Remove dust or grease from the lenses.                               |
| The projected image appears to have a halo                            | -Installation of the lamp is not correct<br>-Dust or grease contamination on the optics. | Make sure the lamp is installed correctly.<br>Carefully clean the optical group lenses and the projector |

|                      |   |   |
|----------------------|---|---|
|                      |   | components.   |
| The beam appears dim | -Dust or grease contamination on the optics.<br>-The lamp is at the end of its life | Check the optics is clean.<br><br>Replace with a new lamp of the specified type and rating. |

## LIGHT OUTPUT

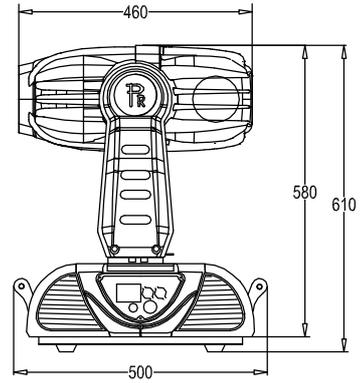
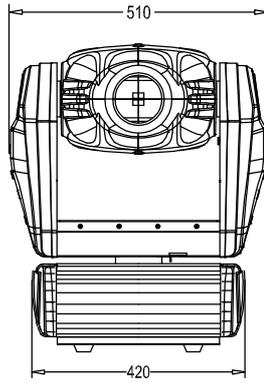
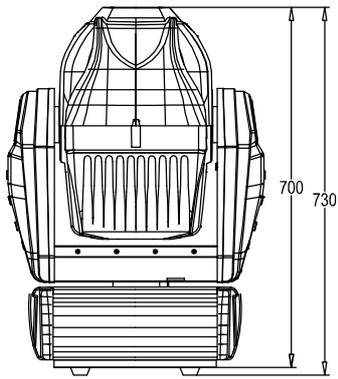
|             |       |      |      |     |     |
|-------------|-------|------|------|-----|-----|
| 22° ( lux ) | 8600  | 2150 | 950  | 530 | 340 |
| 19° ( lux ) | 11270 | 2817 | 1250 | 700 | 450 |
| 12° ( lux ) | 7500  | 1875 | 830  | 460 | 300 |



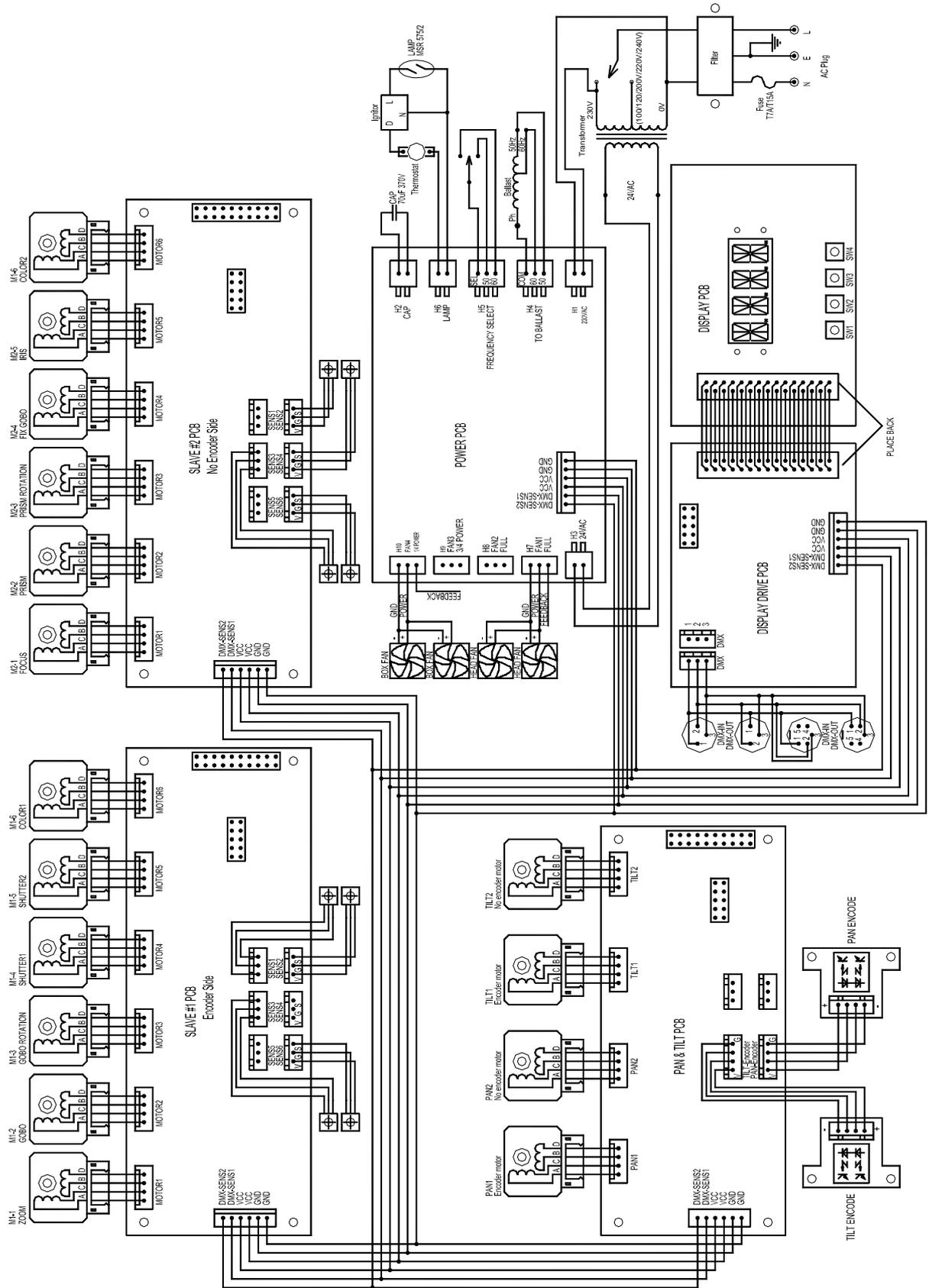
## TECHNICAL DATA

|                                       |   |
|---------------------------------------|---|
| <b>VOLTAGES:</b>                      | 100/120/200/220/230/245V AC, 50Hz or 60Hz to order  |
| <b>POWER CONSUMPTION:</b>             | 780W  |
| <b>LAMP:</b>                          | Type: Philips MSR 575/2 discharge lamp<br>Colour Temperature: 7200°K<br>Socket: GX9.5, single end<br>Manufacturers Rated Lamp Life: 1000 Hours  |
| <b>COLOURS:</b>                       | 2 colour wheels<br>6 dichroic colours plus white each wheel<br>Adjustable speed with rainbow effect   |
| <b>COLOUR TEMPERATURE CORRECTION:</b> | 2 colour temperature corrective filters   |
| <b>GOBOS:</b>                         | <b>Rotated gobo wheel</b><br>5 interchangeable gobos+white, indexical, bidirectionally rotatable in adjustable speed respectively<br><b>Fixed gobo wheel</b><br>7 interchangeable gobos+white, bidirectionally rotatable in adjustable speed wholly<br>Gobo diameter: 36.3mm<br>Gobo image diameter: 31.5mm |
| <b>PRISM WHEEL:</b>                   | 1x white, 1x 5 facet prism, 1x 3 Facet prism, 1x CTO, 1x frost  |
| <b>FOCUS:</b>                         | DMX controlled focus  |
| <b>EFFECT WHEEL:</b>                  | 1x white, 1x big angle filter, 1x small angle filter, 1x ultraviolet filter<br>1x double-colour filter  |
| <b>SHUTTER:</b>                       | Double shutter blades, 0-100% linearly adjustable   |
| <b>STROBE:</b>                        | 0.3-6 F.P.S.  |
| <b>HEAD MOVEMENT:</b>                 | Pan 540°, Tilt 270°   |
| <b>BEAM ANGLE:</b>                    | 12°, 19°, 22°   |
| <b>CONTROL:</b>                       | DMX512, 19 Channels   |
| <b>HOUSING:</b>                       | Composite plastic (IP20)  |
| <b>NET WEIGHT:</b>                    | 200/220/230/240V : 39Kg<br>100/120V : 42Kg  |

**SIZES:**



# ELECTRICAL DIAGRAM



## COMPONENT ORDER CODES

| NAME                                 | PART NO.  | REMARK                        |
|--------------------------------------|-----------|-------------------------------|
| TRANSFORMER                          | 040030053 | 220/230V                      |
|                                      | 040030052 | 100/120V                      |
|                                      | 040030051 | 200/240V                      |
| THERMOSTAT                           | 190010054 | KSD020 95 /10A/250V           |
| CAPACITOR                            | 140010043 | 70 $\mu$ F/370V               |
| BALLAST                              | 040070059 | 230V/50-60Hz, 575W            |
| IGNITOR                              | 040090035 | 575~1200W 3~5KV               |
| LAMP                                 | 100050017 | MSR 575W/2                    |
| PAN&TILT DRIVE BELT1, 2, 3, 4        | 290151221 | HTD459-3M-6                   |
| FANS 1 , 2 , 3 , 4                   | 030060035 | KDE2409PTB-6 24VDC            |
| MOTORS (Total 16PCS)                 | 030040089 | 23HS2039L 6.35x25 (4PCS)      |
|                                      | 030040090 | 16HY7001-16L Tr6.5 L77 (1PCS) |
|                                      | 030040092 | 17HD0013-32L 5x7 (1PCS)       |
|                                      | 030040093 | 17HD0013-33L 5x35 (1PCS)      |
|                                      | 030040094 | 17HD0013-35L 5x20 (5PCS)      |
|                                      | 030040095 | 17HD0013-36L 5x12 (3PCS)      |
|                                      | 030040096 | 17HD0013-31L 5x23 (1PCS)      |
| IC                                   |           |                               |
| Pan & Tilt driver PCB                | 170040017 | 74HCT573                      |
|                                      | 170110004 | NJM3771D2 or PBL3771          |
|                                      | 170170012 | DS75176BN or SN75176BP        |
|                                      | 170170053 | TCL7528CDW                    |
|                                      | 170170064 | LM2575S-5.0                   |
|                                      | 170170066 | 74HCT138                      |
|                                      | 170170067 | LM358A                        |
| Motor driver PCB<br>Motor driver PCB | 170040017 | 74HCT573                      |
|                                      | 170040040 | 74HCT245                      |
|                                      | 170110018 | NJM3773D2                     |
|                                      | 170170012 | DS75176BN or SN75176BP        |
|                                      | 170170053 | TCL7528CDW                    |
|                                      | 170170064 | LM2575S-5.0                   |
|                                      | 170170065 | CPU                           |
|                                      | 170170066 | 74FCT138                      |
| Digital driver PCB                   | 170040039 | AT24C16N                      |
|                                      | 170170012 | DS75176BN or SN75176BP        |
|                                      | 170170062 | CPU                           |
|                                      | 170170064 | LM2575S-5.0                   |

**NOTE:** You may order all parts of the PILOT 575 besides the table listed above. When ordering please state the exact name and part no. Repairs must be carried out by a qualified technician.

## CHANGING THE OPERATION FREQUENCY

### **To be carried out by qualified engineers only**

The power input settings of the PILOT 575 may be changed to suit the supply in your area that the unit is to be operated. The voltage and frequency are pre-set at the factory and marked on the exterior of the unit.

Any error or mistake in setting the voltage or frequency of the projector may seriously damage the unit.

Make sure the specifications of the transformer match the power supply and if not, the suitable transformer must be ordered (see the data).

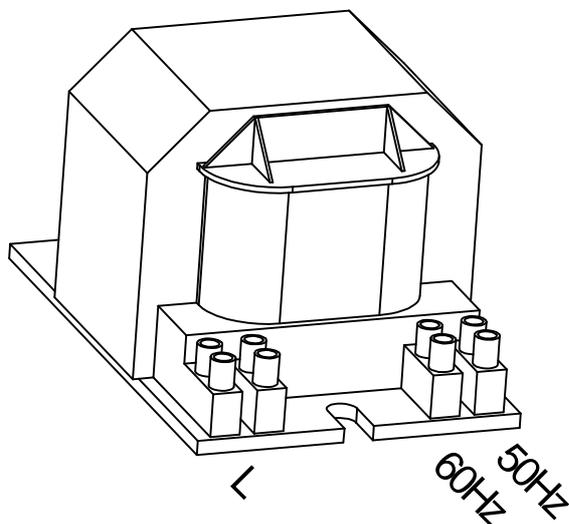
It is strongly recommended that you immediately mark the new frequency on the projector so that it may not be mistaken for the factory set frequency.

### **To change the frequency**

Open the base of the projector by unscrewing the eight screws on the top of the base and do the following operation.

Locate the ballast in the base of the projector, and select the required frequency from 50Hz or 60Hz by moving the cable to the appropriate position. The ballast will be labeled to show the connections.

**Never move or disconnect the cable attached to the connector marked "L".**



Once finished with the settings, re-assemble covers.

## PR LIGHTING LTD.

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