



CENTURY COLOUR 2500L

PR-2001

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 unit has been tested completely and packed properly by the manufacturer. Please make sure the packing and / or the unit is in good condition before installation and use. Should there be any damage caused by transportation, consult your dealer and do not use the unit. 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

- Power-cord (1 PCS)
- Barndoors (1 SET)
- XLR plug (1 PCS)
- XLR socket (1 PCS)
- This manual (1 PCS)

INTRODUCTION

Thank you for purchasing the Century Colour 2500L, PR-2001.

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.

The Century Colour is an innovative projector with an elegant housing made from high quality aluminium-alloy with an epoxy paint finish. The Century Colour complies to CE norms and standards and uses international protocol DMX 512.

The Century Colour features full CYM colour mixing with high resolution stepper motors, and an independent adjustable linear mechanical dimmer 0-100%. The protection against dust and liquid is very high, IP 44, and guarantees perfect functioning even in unfavourable weather conditions. The angle of inclination of the projector-head is adjusted easily from 0° to 90°. It is an ideal luminaire to light up buildings, exhibitions or for artistic applications.

SAFE USAGE OF THE PROJECTOR

The following points are important for safety as well as for the smooth installation and performance of the unit.

When unpacking and before disposing of the package 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 unit. Keep the package well for your possible future transportation.

The projector is intended for outdoor use and is rated at IP44. Install only in level locations. Keep this device away from dry and excessive moisture.

The projector is not designed or intended to be mounted onto 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 surfaces. Be sure that all the cooling fans run normally and no ventilation slots are blocked.

Do not project the beam onto inflammable surfaces, minimum distance is 5m. \approx 5m \approx

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. Only use the lamp with the specified type and rating.

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 dimmer pack.

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 hands.

The lamp used in this projector is a high power discharge lamp. After being switched off don't attempt to restart the projector until the 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. Occasional breaks in operation will prolong the life of both the lamp and the projector.

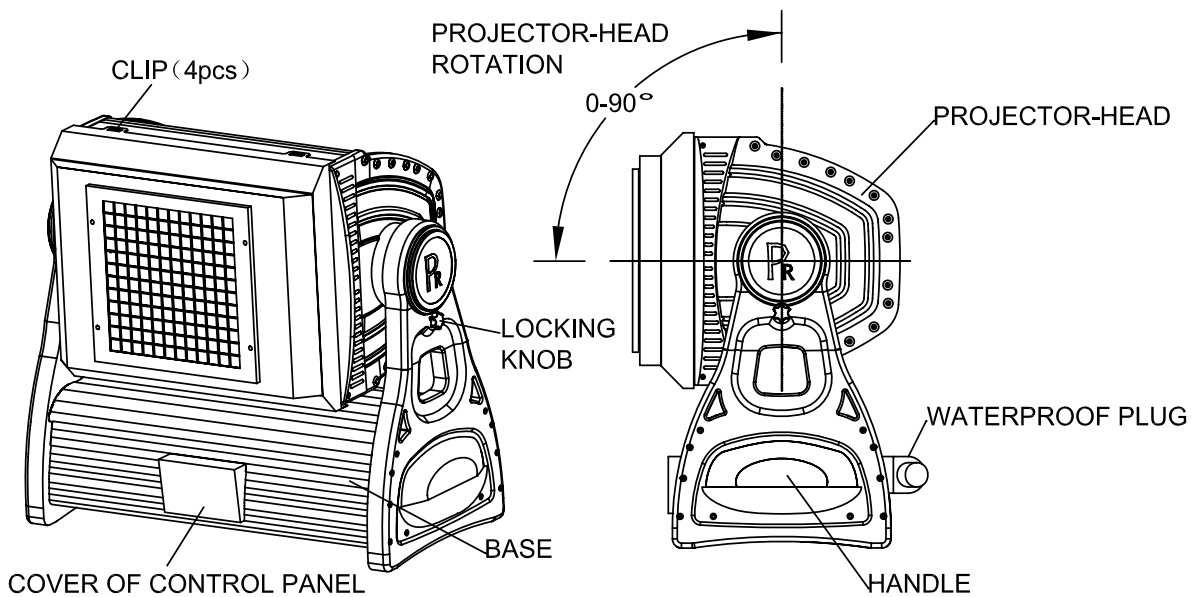
Never run the projector without a lamp.

There are 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.

CONSTRUCTION



FITTING THE LAMP

Position the projector-head in vertical position and lock it via the locking knobs.

Remove the projector-head cover by loosening the 4 retaining-clips.

Open the dichroic-colour-filter bracket by undoing the 2 M4 knurled-screws.

Insert the lamp in the lamp-holder, and ensure the little bubble on the lamp is at a right angle (90°) to the beam path. Keep the lamp clean during installation.

Tighten the 2 M3 lamp fixing screws manually. Do not overtighten.

Close the dichroic-colour-filter bracket and reinstall the projector-head cover. Make sure that all screws and retaining-clips are tightened.

Note: The MSI series are high pressure lamps with external igniters (\triangle). Care should always be taken when handling these lamps. Always read the manufacturers "Instructions for use" enclosed with the lamp.

POWER SUPPLY - MAINS

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 is supplied separately so that they may be individually switched on and off. It is recommended that the projector connect to the mains using a 3-pin 16A plug.

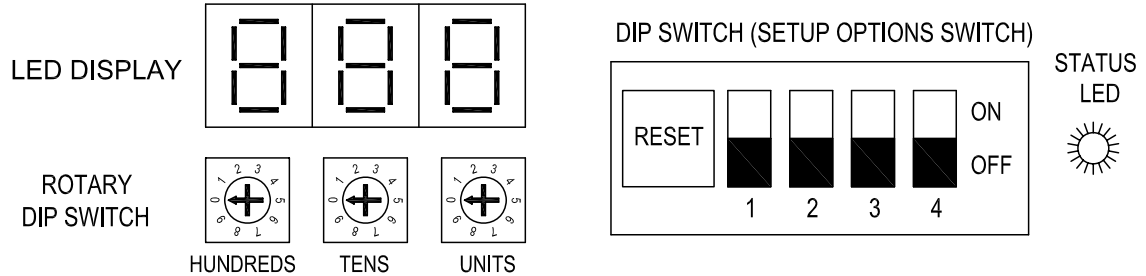
IMPORTANT

It is essential that each projector is correctly earthed and that electrical installation conforms to all relevant standards. Power consumption of the Century Colour 2500L is 2800W at 220V.

OPERATION

When the power is switched on, the projector automatically starts to run the programmes of self test. After finishing these, the projector is ready for operation.

Remove the cover of the control panel, you will see the DIP switches with numbers from 1 to 4, 3 rotary DIP switches for setting the start address and an LED display as shown in the figure below.

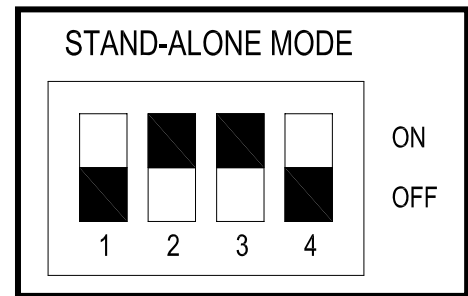


When the status LED is illuminated the projector is receiving a DMX signal. If the status LED is off which means no DMX signal is being received, check your DMX cables and connectors. Press the **RESET** button to reset the DMX start address and functions, and the status LED will flash.

STAND-ALONE MODE

Without connecting the controller, setting the DIP switch as shown right, the projector will run in stand-alone mode.

In stand-alone mode, you should only set the values of the rotary DIP switches with the tens and units, and then press the **RESET** button. After 30 seconds, the apparatus will run automatically the selected one program of the 15 built-in programmes. (How to set the rotary DIP switches, please refer to "auto programmes table" below.)



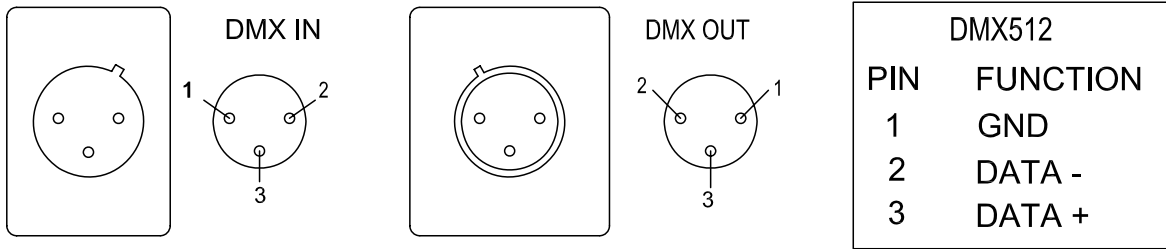
AUTO PROGRAMMES TABLE

In stand-alone and master/slave mode, by setting the 2 rotary DIP switches as shown in the following table, the unit will run whichever of the 15 programmes that have been set.

| TENS | UNITS | PROGRAMS | FUNCTIONS |
|------|-------|----------|------------------------------------------------------------|
| 0 | 1 | 1 | Slow change colours from red to magenta to yellow |
| 0 | 2 | 2 | Slow change colours from red to magenta to yellow to white |
| 0 | 3 | 3 | Slow change colours from green to cyan to yellow |
| 0 | 4 | 4 | Slow change colours from green to cyan to yellow to white |
| 0 | 5 | 5 | Slow change colours from blue to cyan to magenta |
| 0 | 6 | 6 | Slow change colours from blue to cyan to magenta white |
| 0 | 7 | 7 | Slow change all colours in sequence |
| 0 | 8 | 8 | Slow change all colours and white in sequence |
| 0 | 9 | 9 | Medium-speed change all colours |
| 1 | 0 | 10 | Medium-speed change all colours and white in sequence |
| 1 | 1 | 11 | Medium to fast change all colours and white in sequence |
| 1 | 2 | 12 | Medium to fast change all colours in sequence |
| 1 | 3 | 13 | Fast change all colours and white in sequence |
| 1 | 4 | 14 | Basic colours (in 6 seconds) |
| 1 | 5 | 15 | Basic colours and white (in 6 seconds) |

XLR CONNECTORS AND TERMINATOR

XLR CONNECTORS

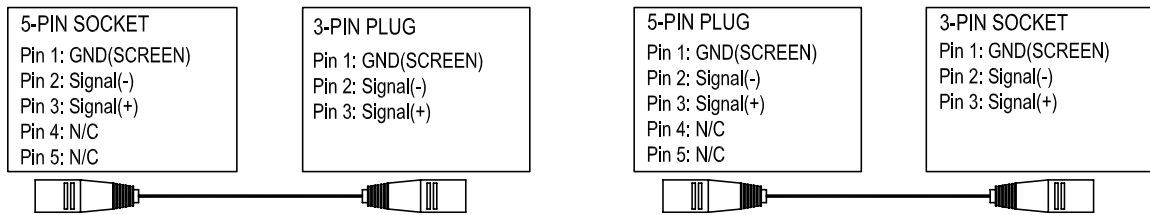


Connection between controller and projector and between one projector and another must be made with 2 core screened cable, with each core having at least a 0.5mm diameter. Connection to and from the projector is via cannon 3-pin XLR plugs and sockets which are included with the projector. The XLR's are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

Note: Care should be taken to ensure that none of the connections touch the body of the plug or each other. The body of the plug is not connected in any way. The Century Colour accepts digital control signals in standard DMX512 (1990) format.

5-PIN AND 3-PIN CONVERSION

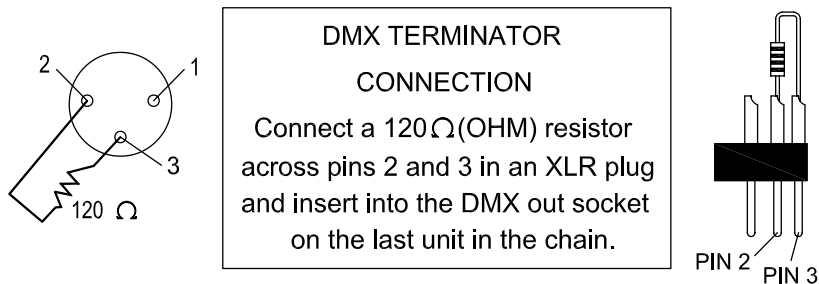
Century Colour uses 3-pin XLR plug / socket. If your controller uses 5-pin XLR plug / socket, you should convert 5-pin plug / socket into 3-pin socket / plug as shown below.



DMX TERMINATOR

In the Controller mode or Master/Slave mode, the DMX output has to be connected with a DMX terminator at the last fixture in the chain. This prevents electrical noise from disturbing and corrupting the DMX control signals.

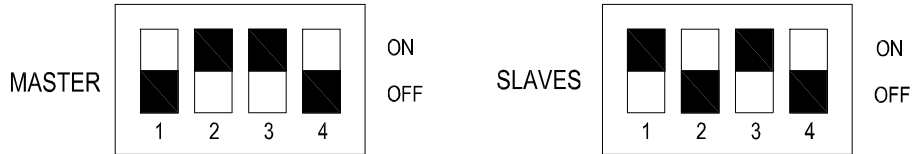
The DMX terminator is simply an XLR connector with a 120Ω (ohm) resistor connected across pins 2 and 3, which is then plugged into the output socket on the last projector in the chain. The connections are illustrated below.



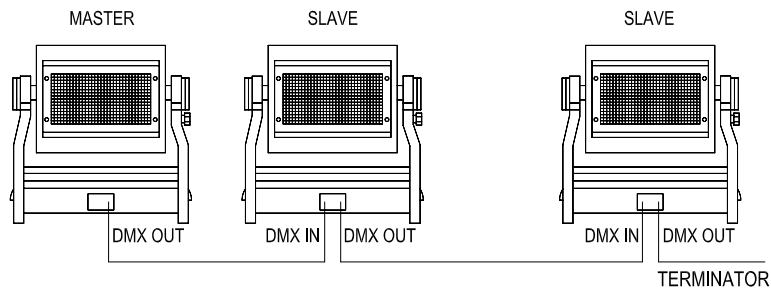
MASTER/SLAVE MODE

Many luminaires can run synchronously by linking them with each other in the master/slave mode.

Select one luminaire as the master, and set the DIP switches as shown in the figure below. Regard the other luminaires as the slaves, and set their DIP switches as shown in the figure below.



Connect the master's output to the first slave's input with an XLR-XLR control cable, and connect the first slave's output to the second slave's input with an XLR-XLR control cable. The rest may be deduced by analogy. Eventually connect the last slave's output to a DMX terminator as shown below.



In master/slave mode, you should only set the value of the tens and units of the rotary DIP switches of the master, and then press the **RESET** button. After 30 seconds, all the luminaires will run automatically and follow whichever one of the 15 automatic programs selected. (How to set the rotary DIP switches, please refer to "auto programmes table" above.)

You can easily differentiate the master from the slaves. The master's status LED is off and the slaves' status LEDs are constantly on.

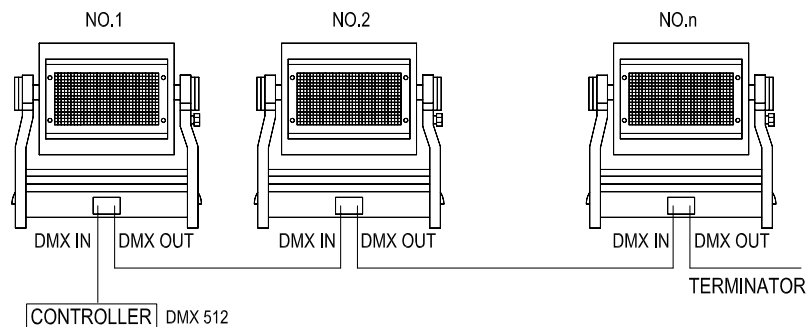
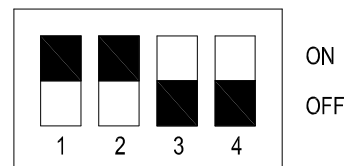
CONTROLLER MODE – DMX 512 OPERATION

Century Colour uses international standard DMX 512 protocol. You may use a controller to control many luminaires by setting the rotary DIP switches. (For details please refer to "DMX start address setting via the 3 rotary DIP switches".)

Set the DIP switches as shown in the figure on the right. Now, all the luminaires will work under the controller.

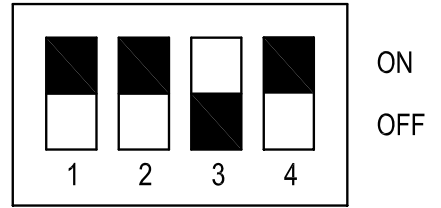
Connect the controller's output to the first luminaire's input, and connect the first luminaire's output to the second luminaire's input. The rest may be deduced by analogy. Eventually connect the last luminaire's output to a DMX terminator as shown below.

CONTROLLER MODE



REMOTE RESET CONTROL

In controller mode, set the DIP switches as shown in the figure on the right, the channel 7 will be activated. Now, all the luminaires will work under remote reset control.



DMX CONTROL CHANNEL FUNCTIONS

The Century Colour has 7 channels. They are shown in the following table.

| ITEM | CHANNELS | DMX VALUE | PERCENTAGE | DESCRIPTION |
|---------|-----------------------|---------------------------------|------------|-----------------------------------------|
| 1 | Motor speed adjust | 0-63 | 0%-25% | Slow speed |
| | | 64-127 | 25%-50% | Medium speed |
| | | 128-191 | 50%-75% | Medium to high speed |
| | | 192-255 | 75%-100% | High speed |
| 2 | Cyan | 0-255 | 0%-100% | White to cyan continuous change |
| 3 | Yellow | 0-255 | 0%-100% | White to yellow continuous change |
| 4 | Magenta | 0-255 | 0%-100% | White to magenta continuous change |
| 5 | Dimmer | 0-255 | 0%-100% | Shutter to open continuous change |
| 6 | Auto colours changing | 0-25 | 0%-10% | White |
| | | 26-51 | 10%-20% | Cyan |
| | | 52-77 | 20%-30% | Yellow |
| | | 78-103 | 30%-40% | Magenta |
| | | 104-129 | 40%-50% | Blue |
| | | 130-155 | 50%-60% | Red |
| | | 156-181 | 60%-70% | Green |
| | | 182-207 | 70%-80% | Slow change colours in sequence |
| | | 208-233 | 80%-90% | Medium-speed change colours in sequence |
| 234-255 | 90%-100% | Fast change colours in sequence | | |
| 7 | Remote reset control | 0-127 | 0%-50% | Lamp on |
| | | 128-191 | 50%-75% | Remote reset |
| | | 192-250 | 75%-98% | Lamp on |
| | | 251-255 | 98%-100% | Lamp off |

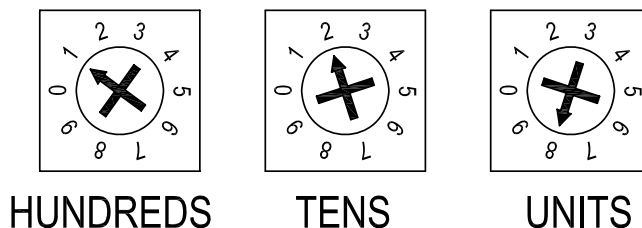
Channel 6 must be at DMX level 0 (i.e. 0%) in order to use channel 2, 3 and 4.

DMX START ADDRESS SETTING VIA THE 3 ROTARY DIP SWITCHES

Each Century Colour 2500L 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 Century Colour 2500L has 7 channels, so set the No. 1 projector’s address to 001, No. 2 projector’s address to 008, No. 3 projector’s address to 015, No. 4 projector’s address to 022, and so on.

The display shows the DMX start address after the projector is switched on. (If you have already set the DMX start address and saved it, the display will show the last setting.)

Any DMX start address may be set in this way, the start address number is comprised of 3 digits, the first is the hundreds, the second is the tens and the third is the units, so for example, a DMX start address of 19 is represented as 0 (no hundreds) 1 (one ten) 9 (nine units). In a similar way the DMX start address of 128 would be represented by 1 (one hundreds) 2 (two tens) 8 (eight units). Simply turn the rotary dip switches to represent the DMX start address in hundreds, tens and units.



The figure shows an example of a DMX start address of 128.

MAINTENANCE

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, old lamps run to the extremity of their life can explode. If the projector does not function, check the fuse in the projector base, it should only be replaced by the same specified value. 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 this operate, 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 a qualified technician.

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 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.**

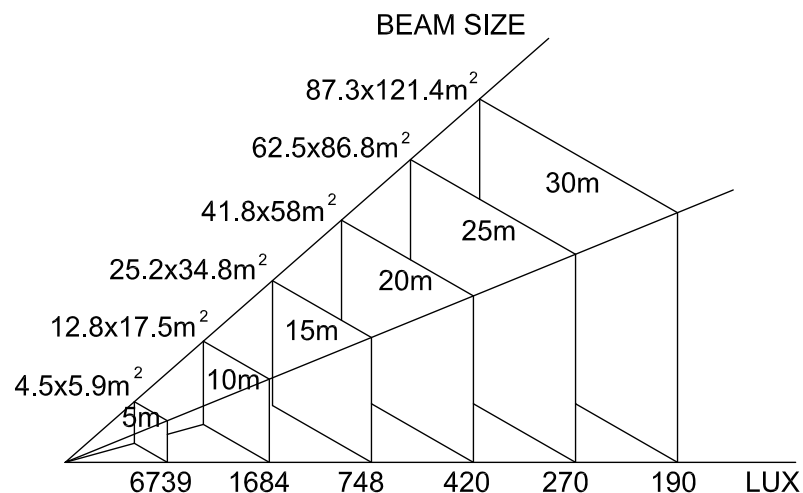
Cleaning frequency depends on the environment in which the fixture operates: damp, smoke or particularly dirty surroundings can cause greater accumulation of dirt on the unit's optics. A soft cloth and typical glass cleaning products should be used in cleaning.

Do not use any organic solvent, e.g. alcohol, to clean the housing of the projector.

TROUBLESHOOTING

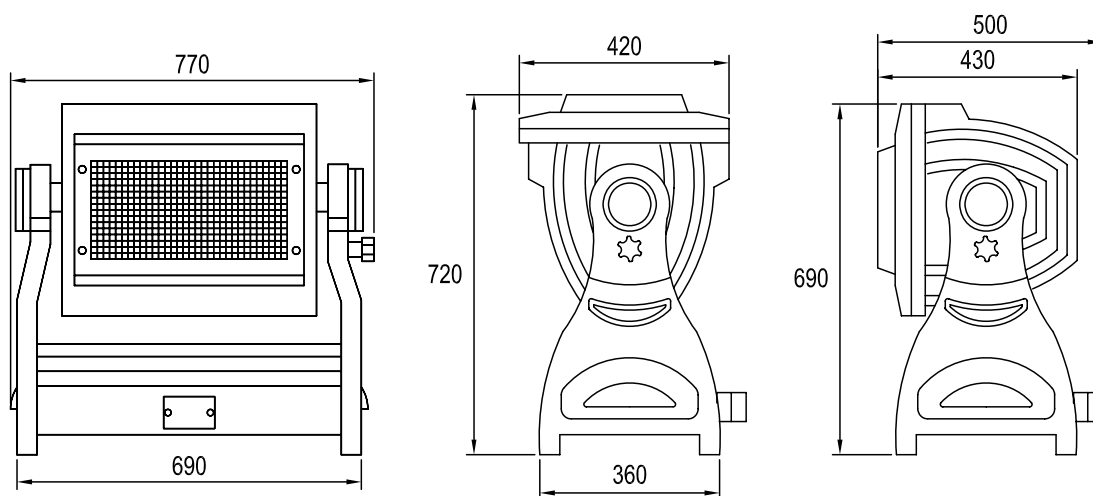
| PROBLEM | RESOURCE |
|-----------------------------------------------------------|-------------------------------------------------------------------------------|
| The projector does not start | Check that the fuse is not blown. Check that the lamp is ok. |
| The projector switches on but does not answer to commands | Check the rotary DIP switch is correctly set. Check the XLR cable is good. |
| The projector only functions intermittently | Check the fan is working and not dirty. |
| The beam appears dim | Check the lamp is not at the end of its life. |

LIGHT OUTPUT

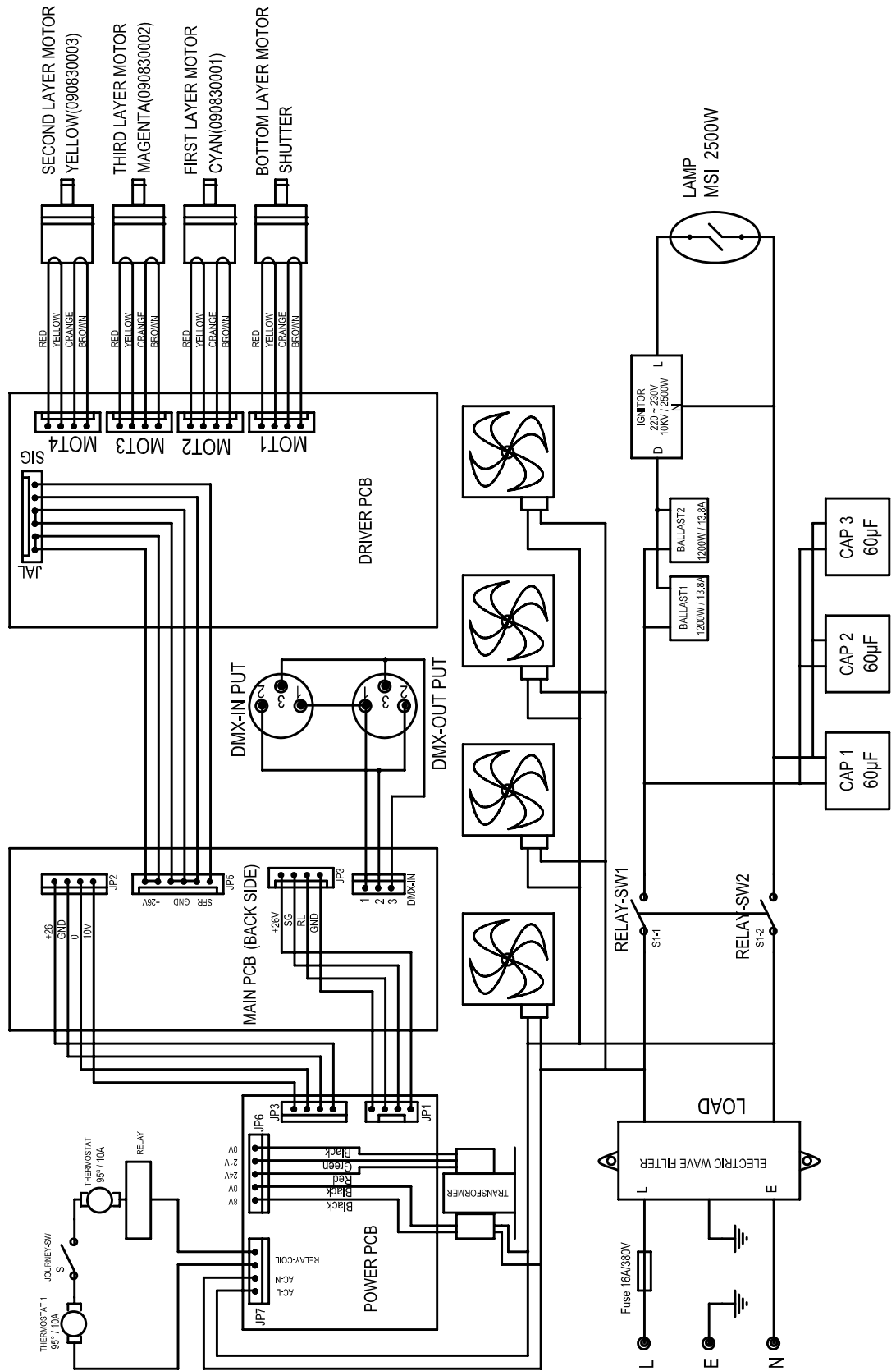


TECHNICAL DATA

| | |
|--------------------|-----------------------------------------------------------------------------------------------------|
| Power supply: | 230V AC 50Hz |
| Optional: | 240V, 220V AC 50/60Hz |
| Power consumption: | 2800W at 220V |
| Lamp: | MSA2500 DE, double ended Colour temperature: 5600°K Manufacturers Rated Lamp life: 2000 Hours |
| Protocol: | Standard DMX 512 |
| Running mode: | Stand-alone, Master/Slave, and DMX Controller |
| DMX channels: | 7 channels |
| Colours: | 3 basic colours, CYM continuous colours mixing, white, black-out |
| Beam coverage: | 60° x 45° |
| Tilt angle: | Adjustable from 0° to 90° |
| Net weight: | 70 kg |
| Others: | Linear dimming from 0-100%, thermal cut-off, digital display |



ELECTRICAL DIAGRAM



COMPONENT ORDER CODES

| NAME | PART NO. | QUANTITY | REMARK |
|-------------|-----------|----------|---------------------------|
| TRANSFORMER | 040030022 | 1 | 200V/220V/50Hz |
| IGNITOR | 040090004 | 1 | 230V/50Hz |
| BALLAST | 040070033 | 2 | 230V/50Hz |
| RELAY | 192010009 | 1 | 230V/20A |
| FILTER | 193020001 | | 10A |
| THERMOSTAT | 190010054 | 1 | 95°C/10A |
| THERMOSTAT | 190010035 | 1 | 120°C/16A |
| FUSE | 270041008 | 1 | RT14-20A |
| FAN | 030060022 | 4 | 230V/22W |
| LAMP | 100050024 | 1 | MSA 2500 DE |
| CAPACITOR | 140010018 | 3 | 60µF/AC 370V |
| MOTOR | 030040029 | 4 | 17HS1013L |
| CYAN | 090830001 | 4 | DICHROIC COLOUR FILTER |
| MAGENTA | 090830002 | 4 | DICHROIC COLOUR FILTER |
| YELLOW | 090830003 | 4 | DICHROIC COLOUR FILTER |
| MAIN PCB | 230030260 | 1 | |
| CONTROL PCB | 230030261 | 1 | |
| POWER PCB | 230030264 | 1 | |

If ordering dichroic colour filter replacements remember the part no. refers to 1 piece. The century colour 2500L uses 4 pieces of each colour.

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