Spot 575 TM3

TECLUMEN

User Manual Rel 1.0

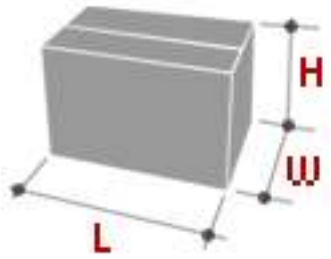
GB

INDEX:

1- TECHNICAL FEATURES

The Spot 575 TM3 is fitted with a Philips MSR 575/2 discharge lamp (GX9,5 lampholder base), with a colour temperature of 7,200 °K and a luminous flux of 49,000 Lumens.
Duration is 750 hours, with replacement recommended before 1000 hours
Other recommended lamps: Philips 575 MSD (6.000K°-49.000 Lumens-3.000 hours)
The unit incorporates:
Motorized Focus system
Zoom (3 selectable beam aperture angles 11° / 15° / 18° with auto-focus)
Dimmer (emitted light is controlled by progressive and linear dimming).
Shutter (instantaneous shutter opening/closure)
Strobe: mechanical strobe effect (frequency variable from 0.85 flashes/sec to 10 flashes/sec).
Gobo wheel (7 indexable 16 bit gobos + open)
Colour wheel (8 colours + open)
Prism (indexable 3 facet prism rotating in both directions)
Frost Filter
Electronic or magnetic ballast
Pan: 540° in 3.9 seconds (8 or 16 bit) with auto repositioning system
Tilt: 320° in 2.6 seconds (8 or 16 bit) with auto repositioning system
USITT Standard DMX 512 input
20 DMX channels
4 -eight digit- LED display with 4 buttons
2 XLR connectors (In and Out) with 3 and 5 pins selectable by user
Power supply
Electronic ballast:
Universal power supply 90 - 245 V (50/60 Hz)
Electromagnetic ballast:
230 V 50-60 Hz(Standard)
On request: 100 V 50-60 Hz /120 V 60 HZ / 208 V 60 Hz
Power consumption: 750 W.
Remote Lamp on/off via DMX
Operating ambient temperature -10° / 40°
Weight
26 Kg (Spot 575 TM3 E.B.)

Dimensions (HxDxL)
Projector (670x450x470)
Weight 26 Kg



Packing Dimensions (HxDxL)
800 x 550 x 440 mm
Weight
33.3 Kg

2- IMPORTANT SAFETY INFORMATION

2.1 Fire prevention:

Spot 575 TM uses a Philips 575 MSR/2 or MSD
The use of any other alternative lamp is not recommended and will null and void the fixture's warranty.
-Never locate the fixture on any flammable surface.
-Minimum distance from flammable materials: 1 MT.
-Minimum distance from the closest illuminable surface: 2 MT.
-Replace any blown or damaged fuses only with fuses of identical value. Refer to the wiring diagram if there is any doubt.
-Connect the projector to mains power via a thermal magnetic circuit breaker.

2.2 Prevention of electric shock:

-High voltage is present inside the unit. Unplug the unit prior to performing any function which involves touching the inside of the moving head, including lamp replacement.
-The level of technology present in the Spot 575 TMrequires the assistance of specialised personnel for all servicing. Please refer to an authorised Teclumen service centre.
-A good earth connection is essential for proper functioning of the projector.
-Never connect the unit without proper earth connection.
-The fixture should be located in places with a good air ventilation.

2.3 Protection against ultraviolet radiation:

-Never turn on the lamp if any of the lenses, filters or ABS covering is damaged. Their respective shielding functions will only operate efficiently if they are in perfect working order.
-Never look directly the lamp when it is on.

2.4 Safety:

-The projector should always be installed with bolts, clamps and other tools that are capable of supporting the weight of the unit.
-Always use a second safety cable to sustain the weight of the unit in case of the failure of the main fixing point.
-The external surface of the unit, at various points, may exceed 70°C. Never handle the unit until at least 10 minutes have elapsed since the lamp was turned off.
-Always replace the lamp if any physical damage is evident.
-Never install the fixture in an enclosed area lacking sufficient air flow. The ambient temperature should not exceed 40°C.
-A hot lamp may explode, so always wait for at least 10 minutes prior to attempting to replace the lamp.
-Always wear suitable hand protection when handling the lamp.

2.5 Level of protection against the penetration of solid and liquid matter:

-The projector is classified as an ordinary appliance and its protection level against the penetration of solid and liquid matter is IP 20.

3- MOUNTING THE LAMPS

Warning: Switch off the unit before replacing the lamp.

Philips 575 MSR/2
Power 575W
Luminous flux 49,000 lm
Colour temperature 7.200°K
Lampbase GX9,5
Rated life 1,000 hours

Philips 575 MSD
Power 575W
Luminous flux 43,000 lm
Colour temperature 6.000°K
Lampbase GX9,5
Rated life 3,000 hours

1) Using a screwdriver, remove the 3 screws A,B, C, (photo 1) which fix the lamp holder.

Photo 1

Photo 2

Photo 3

Photo 4

2) Remove the lamp holder assembly (photo2).
3)Insert the lamp (photo 3).
The lamp used on Spot 575 TM3 is made in quartz glass and should be handled with care. Always follow the instructions supplied in the lamp's packaging. Never touch the glass directly but use the tissue provided in the lamp's packaging. The GX9,5 lamp socket is symmetrical.
DO NOT USE UNDUE FORCE ON THE GLASS. In case of difficulty, read again the instructions and repeat the procedure.
4) Replace the lamp assembly and tighten the screws A,B,C, which were previously removed (photo4).

3.1 Lamp alignment

Attention: we recommend to align the lamp in the optical system to avoid overheating of the dichroic filters and other components inside the unit.

Photo 5

Alignment is carried out using the 3 adjusters X, Y and Z.
During this operation you must have a uniform luminosity all around the projected area.

4- VOLTAGE AND FREQUENCY

The Spot 575 TMwith electronic ballast can operate at 90-245 VOLT 50 or 60 Hz.
The Spot 575 TMwith electromagnetic ballast can operate at 230 V 50-60 Hz(Standard)
On request: 100 V 50-60 Hz /120 V 60 HZ / 208 V 60 Hz

5- INSTALLATION

Spot 575 TMmay be either floor or ceiling mounted.
For floor mounting installations, the Spot 575 TMis supplied with four rubber mounting feet on the base.
For ceiling mounted installations, we reccomend the use of appropriate clamps to fix the unit to the mounting surface.
The supporting structure from which the unit is hung should be capable of bearing the weight of the unit, as should any clamps used to hung it. The structure should also be sufficiently rigid so as not to move or shake whilst the Spot 575 TMis moving.
Four quarter turn fast locks placed on the base of the units,allows by using the two fast lock C clamps provided in the box, to fix the unit in any position.
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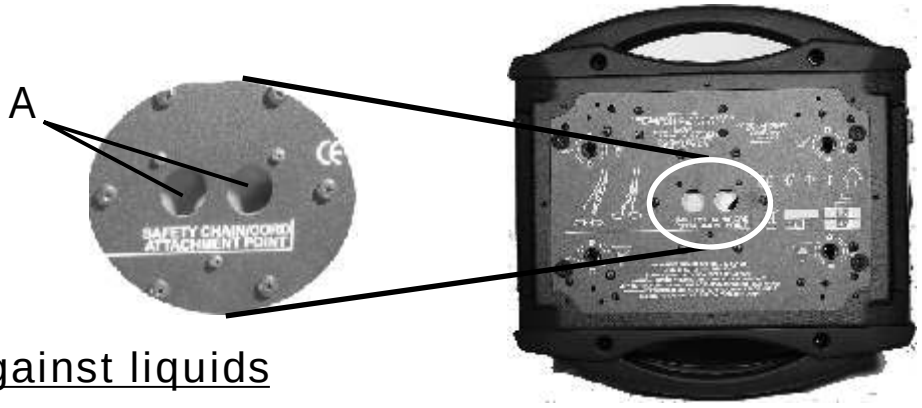
5.1- Safety cable

We recommend the use of a safety cable or chain connected to the Spot 575 TMand to the suspension truss in order to avoid the fixture accidentally falling should the main fixing point fail. Make sure that the iron cable or chain can bear the weight of the entire unit.
You may attach the safety chain to the two holes (A) located on the base of the fixture, as shown in the picture below.

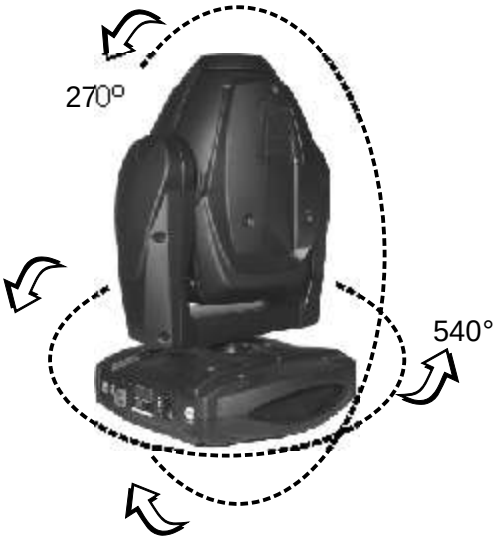


5.2- Protection against liquids

The projector contains electric and electronic components which should under no circumstances come into contact with oil, water or any other liquid. The proper unit functioning would be compromised should this occur.

5.3- Movement

The projector has a maximum movement of 540° for Pan and 270° for Tilt. DO NOT place any obstructions in the path of the projector's movement.



5.4- Risk of fire

Each fixture produces heat and must be installed in a well-ventilated place. The minimum recommended distance from flammable material is 1 MT.
Minimum distance from the object being illuminated is 2 MT.

5.5- Forced ventilation

You will note, on inspection, that the unit features various air inlets and cooling fans located on both the base and head of the fixture. These should, under no circumstances, be blocked or obstructed whilst the projector is in operation.
Doing so could cause the fixture to seriously overheat thereby compromising its proper operation.

5.6- Ambient temperature

The projector should never be installed in places that lack a constant air flow. The ambient temperature should NOT exceed 40°C.

6- MAINS CONNECTION

Spot 575 TMwith electronic ballast operate at 90-245 VOLT 50-60 Hz.
Spot 575 TMwith electromagnetic ballast operate at 230 VOLT 50-60 Hz
(On request: 100 V 50-60 Hz /120 V 60 HZ / 208 V 60 Hz)
Prior to connecting the unit to your mains supply,
ensure that the model in your possession correctly matches
the mains supply available. For connection purposes,
ensure that your plug is capable of supporting 6,3 amps at 208-230V,
Or16 amps at 100-120 V
Strict adherence to regulatory norms is strongly recommended.

Electronic ballast
90-245V 50 / 60Hz
Electromagnetic ballast
230 V 50/60 Hz (standard)
On request: 100 V 50-60 Hz
120 V 60 HZ / 208 V 60 Hz

6.1- Protection

The use of a thermal magnetic circuit breaker is recommended for each Spt 575 TM3.
A good earth connection is essential for the correct operation of the projector.

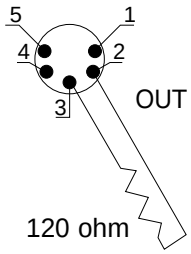
7- DMX SIGNAL CONNECTION

The unit operates using the digital DMX 512 (1990) signal. Connection between the mixer and the projector or between projectors must be carried out using a two pair screened ø 0.5 mm cable and a CANNON XLR 5 or 3 pins connector.

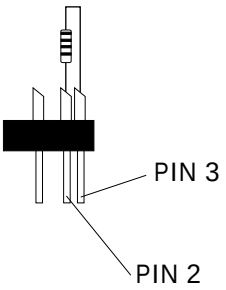
Ensure that the conductors do not touch each other.Do not connect the cable ground to the XLR chassy
The plug housing must be isolated. Connect the mixer signal to the DMX IN projector plug and connect it to the next projector by connecting the DMX OUT plug on the first projector to the DMX IN plug of the second one.
In this way, all the projectors are cascade connected.
NB. If the display showing the DMX address flashes, then one of the following errors has occurred:

- DMX signal not present
- DMX address not valid
- DMX reception problem

For Installations where long distance DMX cable connections are needed,we suggest to use a DMX terminator.
The DMX terminator is a male XLR 3-5 pins connector with a 120 ohm resistor
Between pin 2 and 3.
The DMX terminator must be plugged into the last unit (DMX out panel connector) of the DMX line.



PLACE A 120 OHM RESISTOR BETWEEN PIN 2 AND 3 OF A MALE XRL CONNECTOR AND PLUG IT INTO THE DMX OUT PANEL CONNECTOR OF THE LAST UNIT CONNECTED TO THE DMX LINE



The standard configuration of the Spot 575 TM3 is with XLR 5 pins connection.
To convert to an XLR 3 pins configuration proceed as follows:
1) Remove the 2 screws fixing the display cover panel to the unit (photo 1).
2) Remove the screws that fix the XLR connectors to the panel (photo 2).
3) Rotate the electronic card by 180° (photo 3).
4) Place the 3 pins XLR connectors in the special holes and close.

Photo 1

Photo 2

Photo 3

7.1-DMX Addresses

Spot 575 TM3 can be used in two different modes: 16 or 20 DMX (default) channels.

If you want to use the Spot 575 TM3 in 16 channels mode, select the 16 CH mode from the MODE menu and set the following addresses on the mixer:

Projector 1	A001	
Projector 2	A017	If you want to select the next projector, just add “16”
Projector 3	A033	
.....	A....	
projector 6	A081	

If you want to use the Spot 575 TM3 in 20 channels mode, select the 20 CH mode from the MODE menu and set the following addresses:

Projector 1	A001	
Projector 2	A021	If you want to select the next projector, just add “20”
Projector 3	A041	
.....	A....	
Projector 6	A101	

7.2-Selecting the DMX address

1) Press the UP-DOWN key until you reach the required DMX channel. The numbers on the display will start to flash (but the new DMX address hasn't yet been set).
2) Press ENTER to confirm your selection. The numbers on the display will stop flashing and the projector is now setted to the new DMX address.

TRICKS:
if you keep pushed the UP or DOWN keys, the channels are calculated more quickly and you get a faster selection.

8- DISPLAY FUNCTIONS

MAINS
Electronic ballast
90-245V 50 / 60Hz
Electromagnetic ballast
230 V 50/60 Hz (standard)
On request: 100 V 50-60 Hz
120 V 60 HZ / 208 V 60 Hz

DISPLAY FUNCTIONS

The Spot 575 TM3 display panel shows all the available functions . Using these functions, it is possible to change some of the parameters and add some functions. Changing the Teclumen setting can vary the functions of the unit so that it does not respond to the DMX 512 used to control it. Carefully follow the instructions below before carrying out any variations or selections.
NOTE: the symbol ☞ shows which key has to be pushed to obtain the desired function.

A001 — MENU — Up-Down — Pdir — ENTER — Up-Down — CU — Clockwise — ENTER

PAN MOVEMENT INVERSION
To reverse Pan movement from left to right and vice versa

Up-Down — CCU — Counterclockwise — ENTER

MENU — Up-Down — tdir — ENTER — Up-Down — CU — Clockwise — ENTER

TILT MOVEMENT INVERSION
To reverse Tilt movement from bottom upwards and vice versa

Up-Down — CCU — Counterclockwise — ENTER

MENU — Up-Down — dISP — ENTER — Up-Down — POS1 — ENTER — Up-Down — AA — Floor position — ENTER

REVERSE DISPLAY
Reverses display's reading depending on the mounting position
(On the ground or suspended).

bb — Suspension position — ENTER

Up-Down — StbY — ENTER — Up-Down — oFF — Display OFF — ENTER

DISPLAY STAND BY
To turn off the display (after 5 seconds)
Or leave it always on.

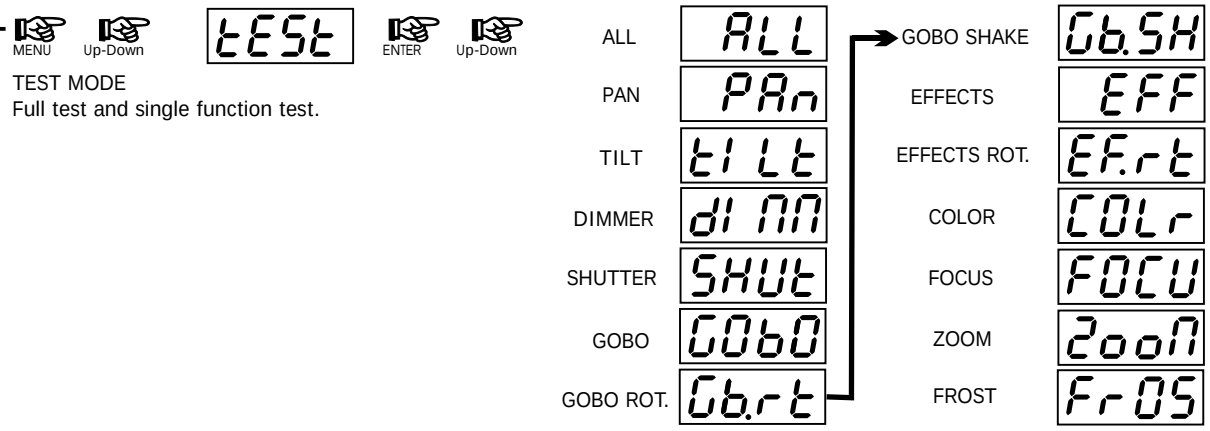
on — Display always ON — ENTER

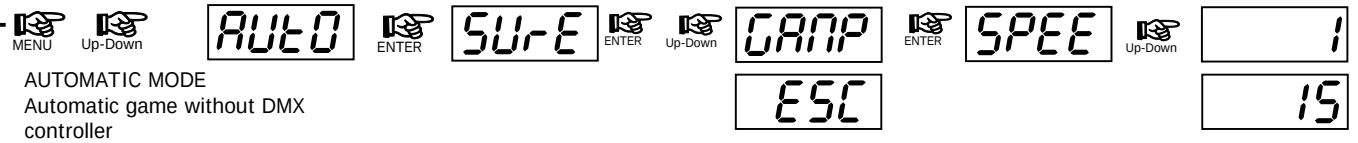
MENU — Up-Down — mOdE — ENTER — Up-Down — 20CH — 20 CHANNELS (Pan & Tilt 16 bit) — ENTER

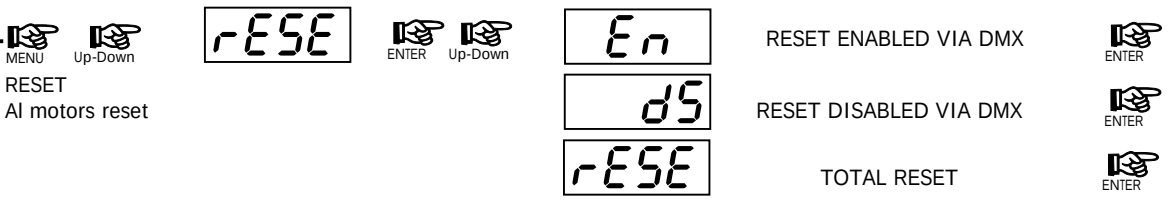
DMX MODE
To select DMX mode : 20-16 channels

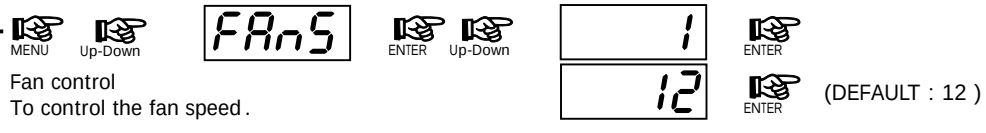
Up-Down — 16CH — 16 CHANNELS (Pan & Tilt 16 bit) — ENTER

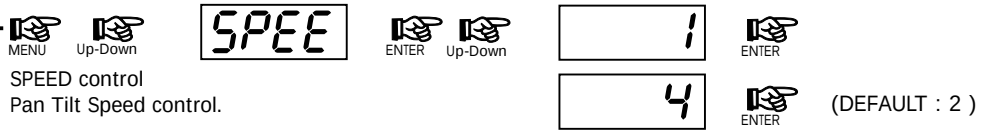
8- DISPLAY FUNCTIONS

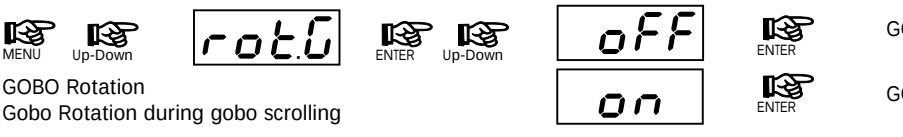




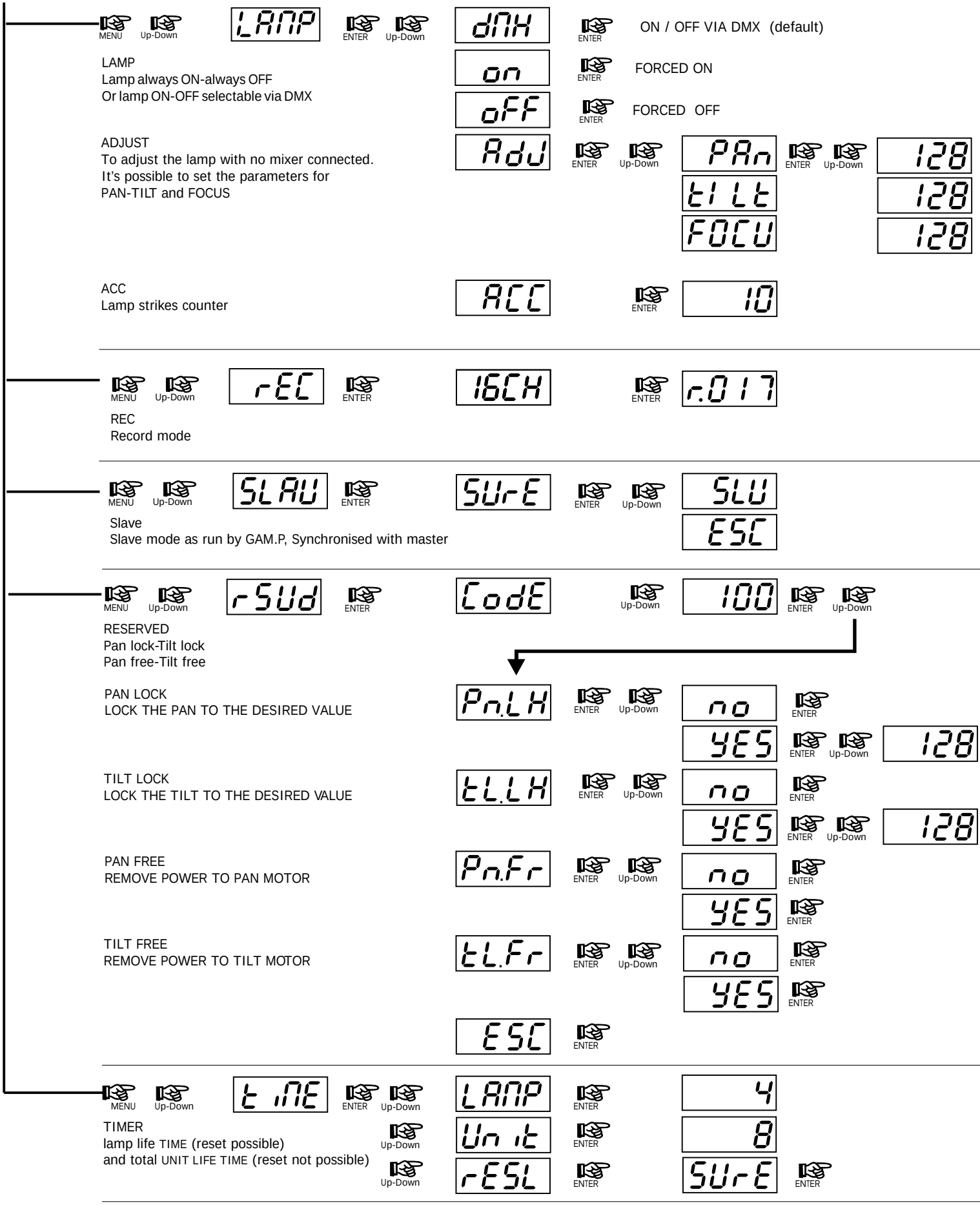








8- DISPLAY FUNCTIONS



9- AUTOMATIC MODE (auto)

Spot 575 TM3 can work in automatic mode without a DMX controller.
First of all connect the projectors with a DMX cable (picture below).

To activate Auto mode on the first unit, use the menu to run through the different modes until AUTO appears on the display, at this point press enter.
Now it is possible to select the Game P which is user programmable through REC mode.
To confirm game activation press ENTER.

9.1- Game P

The first unit that will function as a Master must be put in (AUTO) mode, the other projectors have to be put in slave mode (selectable through the menu). This way all units will be synchronised with the master. Please note that the projectors must be of the same model.
On the master unit it is possible to vary the speed of the GAME P (SPEE)
NB: It is possible to run GAME P on the other units even though these do not have GAME P programmed. You can do this by setting the units to the same mode as the master is set before programming GAME P (16CH DMX) and setting the DMX address to A001.

9.2-Rec Mode

It is possible to program your own game on the Spot 575 TM3 that will then run in AUTO mode (GAME P). Each unit can have its own programmed game.
In REC mode each projector must be set to the same mode (16CH DMX).
For the programming of GAME P besides the channels necessary to control the unit a further 3 DMX channels are needed. So that in REC mode if the 16CH mode is selected you will need 19 channels for the program to work correctly.
Connect the unit to a DMX mixer/controller, every unit should be set to its own Address (See the paragraph on DMX addresses). The projectors can also be of different models:Spot/Wash 575 TM3 , Spot/Wash 575tm and Spot/Wash 250tm. When you are in REC mode R.001 appears on the display (DMX address).

The three new DMX channels are:

-Scene channel

-From 0-255 are displayed the programmable scenes (max 16 scenes M.001 M016)

-View channel:

-From 1-19 the unit runs the scene that has been saved in the unit memory and it is possible to play through the other scenes using the scene channel.

-From 20-235 the unit runs the configuration given by the received input DMX values. With the channel scene it is possible to pass from one scene to the next,while with REC it is possible to record the selected scene.

-From 236-255 the unit runs the configuration given by the received DMX values from the projector in that moment. It is possible to select a scene and then close the GAME P with the REC channel.

-Recording channel (REC)

Records the set scene with a variation from 0 to 255 (the display flashes indicating that the scene has been recorded).

You must keep the REC channel set to 0 and to run through the 255 only once you have decided to save the scene. If GAME P is not closed, by indicating the last scene, in playback mode all 16 scenes will be played through even if not programmed.

10- PAN & TILT SPEED (SPEE) (default: 2)

You can set the PAN and TILT motors at high speed on your Spot 575 TM3.

Press menu until you see SPEE.

Press ENTER and select a speed with UP-DOWN (there are 4 speeds). Confirm by pressing ENTER.

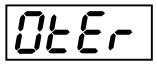
When you use speed 4 (the highest) PAN and TILT speed is very high and your projector may loose its path. In this case, the encoder corrects the position.

11- FAN SPEED (FANS)(default: 12)

Fan speed regulation makes it possible to reduce fan noise. However, the ambient temperature must be less than 35° C.

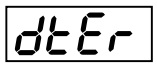
12- ERROR MESSAGES:

— ERROR: ENCODER PAN



— ERROR: ENCODER TILT

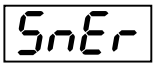
— ERROR: DMX ADDRESS



— ERROR: LOAD DATA EEPROM

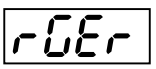
— ERROR: SENSOR CIRCUIT COLOR/ZOOM

— ERROR: SENSOR CIRCUIT GOBO/GOBO ROTATION



— ERROR: SYNCHRONIZED FREQUENCY MEASURE (SYNCHRONISM FOR LAMP ON)

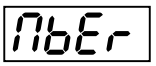
— ERROR: COLOR WHEEL POSITION



— ERROR: GOBO WHEEL POSITION

— ERROR: ZOOM POSITION

— ERROR: GOBO ROTATION POSITION



— ERROR: INTERNAL COMMUNICATION

— ERROR: AUTO MODE INPUT

13- HIDDEN MENU

For technical personnel only.

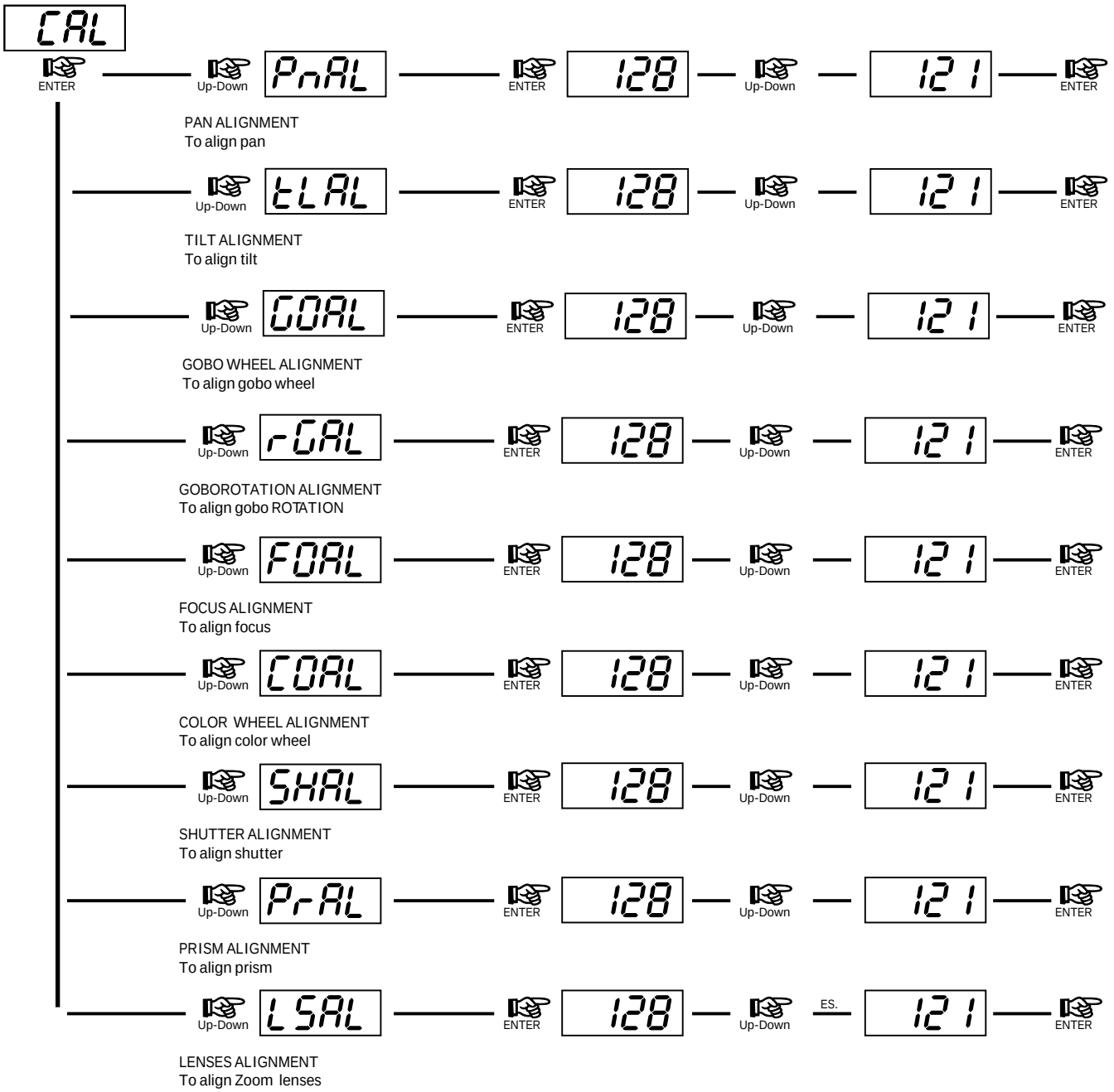
To operate this menu:

-Connect the projector to the DMX controller (DMX SIGNAL MUST BE CORRECTLY RECEIVED)

- Reset the Spot 575 TM3 (reset from the MENU, not from the DMX controller!).
- While reset is running, press the MENU and ENTER keys at the same time.

CAL	Electronic calibration of the motors.
rESN	Reset EEPROM (Reset all settings. ATTENTION: by pressing this key you must repeat all previous calibrations)
ESC	Exit from hidden menu.

16



14- OPENING THE PROJECTOR HOUSING

It is possible to inspect the inside of the projector by removing the cover as indicated below.

ATTENTION

REMOVE MAINS POWER PRIOR TO ACCESSING THE PROJECTOR'S INTERNAL COMPONENTS.

1) Loosen the 3 (1/4 turn) screws which fix the head covers (photo 1) .
2) Once unscrewed, simply lift the covers to access the internal components (photo 2).

Photo 1

Photo 2

15- REPLACING GOBOS

Spot 575 TM3 uses a mechanical system which allows the fixture's gobos to be removed without the use of special tools. Replacement gobos should be made of either heat resistant glass or metal.
An ever-increasing range of gobos is available from your Teclumen sales network.
Gobo dimensions are as follows:
ø external = 27.9 mm
ø of image with defined edge = 24 mm
thickness = from 0.2 to 4 mm (see catalogue)

Replacing gobos on the rotating gobo wheel

When replacing gobos, ensure that the projector is switched off.
1) Open the projector housing as described above.
2) Remove the gobo holder to allow easier access to the gobo(photo 1 and 2).
3) Release the gobo retaining spring and carefully remove the gobo (photo 3).
4) Reverse the procedure to install a replacement gobo.

Photo 1

Photo 2

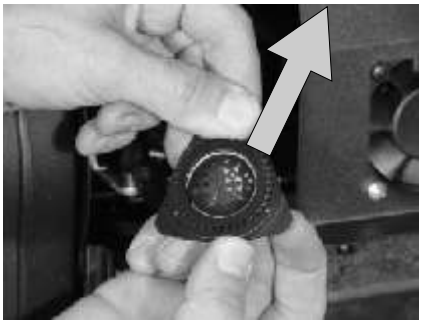


Photo 3

16- PERIODIC CLEANING

16.1- Lenses and reflectors

Even a fine layer of dust can substantially reduce the luminous output . Regularly clean all lenses and the reflector using a soft cotton cloth, dampened with a specialist lens cleaning solution.

16.2- Fans and air passages

The fans and air passages must be cleaned approximately every 6 weeks. This periodic cleaning will depend of course, on the conditions in which the projector is operating. Suitable instruments for performing this type of maintenance are a brush and a common vacuum cleaner or an air compressor. If necessary, clean the fans and air passages more frequently.

17- PERIODIC CONTROLS

Lamp

The lamp should be replaced if there is any visible damage or deformation due to heat. This will help to avoid the danger of the lamp exploding.

Mechanical parts

Periodically check all mechanical parts, gears, guides, belts, etc. for wear and tear, replacing them if necessary. Periodically check the lubrication of all components, particularly the parts subject to high temperatures. If necessary, lubricate with suitable lubricant, available from your Teclumen distributor. Check the tension of the belts and adjust it if necessary.

Electrical components

Check all electrical components for correct earthing and proper connection of all connectors; refasten them if necessary.

Fuse replacement

Locate the fuse, which protects the lamp and electronics, in the base of the Spot 575 TM3. Using a multimeter, test the condition of the fuse, replacing it with one of equivalent type if necessary.

Attention

Disconnect mains power prior to removing the projector housing.

18- DMX PROTOCOL

16 CHANNELS MODE

1 PAN msb 540°
2 PAN lsb
3 TILT msb 270°
4 TILT lsb
5 SPEED MOVEMENT
6 DIMMER
7 SHUTTER
8 COLOUR
9 COLOUR PROPORTIONAL (Priority in color channel)
10 GOBO
11 GOBO ROTATION
12 PRISM/PRISM ROTATION
13 FOCUS
14 ZOOM
15 FROST (Priority on Zoom channel)
16 LAMP ON-OFF / RESET

DMX CHANNEL	**1**	Parameter: **PAN msb**

DMX CHANNEL	**2**	Parameter: **PAN lsb**

DMX CHANNEL	**3**	Parameter: **TILT msb**

DMX CHANNEL	**4**	Parameter: **TILT lsb**

DMX CHANNEL	**5**	Parameter: **MOVEMENT SPEED**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-10	**5**				**Standard**
11-25	**18**				**Fast movement**
26-127	**76**				**Vector mode from fast to slow**
128-247	**187**				**Variable time reaction to DMX signal (fast to slow)**
248-255	**251**				**Slow reaction time to DMX signal**

DMX CHANNEL	**6**	Parameter: **DIMMER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function

0-8	**4**				**Black-out**
9-255					**Proportional dimmer**

DMX CHANNEL	**7**	Parameter: **SHUTTER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9	**5**				**Black-out**
10-23	**16**				**StrobE random speed**
24-37	**30**				**Strobe speed 1 min.**
38-51	**44**				**Strobe speed 2**
52-65	**58**				**Strobe speed 3**
66-79	**72**				**Strobe speed 4**
80-93	**86**				**Strobe speed 5**
94-107	**100**				**Strobe speed 6 max.**
108-121	**114**				**Pulse open speed 1 min.**
122-135	**128**				**Pulse open speed 2**
136-149	**142**				**Pulse open speed 3**
150-163	**156**				**Pulse open speed 4 max.**
164-177	**170**				**Pulse closed speed 1 min.**
178-191	**184**				**Pulse closed speed 2**
192-205	**198**				**Pulse closed speed 3**
206-219	**212**				**Pulse closed speed 4 max.**
220-227	**225**				**Colour and Gobo in black-out**
228-233	**230**				**Pan and Tilt in black-out**
234-255	**244**				**Open**

DMX CHANNEL	**8**	Parameter: **COLOUR**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-10	**5**				**Colour1**
11-21	**16**				**Bicolour ½**
22-32	**27**				**Colour2**
33-43	**38**				**Bicolour 2/3**
44-54	**49**				**Colour3**
55-65	**60**				**Bicolour 3/4**
66-76	**71**				**Colour4**
77-87	**82**				**Bicolour 4/5**
88-98	**93**				**Colour5**
99-109	**104**				**Bicolour 5/6**
110-120	**115**				**Colour6**
121-131	**126**				**Bicolour 6/7**
132-142	**137**				**Colour7**
143-153	**148**				**Bicolour 7/8**
154-164	**159**				**Colour8**

165-175	**170**				**Bicolour 8/9**
176-186	**181**				**Colour9**
187-197	**192**				**Bicolour 9/1**
198-200	**199**				**Right rotation speed 1 min.**
201-203	**200**				**Right rotation speed 2**
204-206	**205**				**Right rotation speed 3**
207-209	**208**				**Right rotation speed 4**
210-212	**211**				**Right rotation speed 5**
213-215	**214**				**Right rotation speed 6**
216-218	**217**				**Right rotation speed 7**
219-221	**220**				**Right rotation speed 8**
222-224	**223**				**Right rotation speed 9 max.**
225-228	**226**				**Stop**
229-231	**230**				**Left rotation speed 1 min.**
232-234	**233**				**Left rotation speed 2**
235-237	**236**				**Left rotation speed 3**
238-240	**239**				**Left rotation speed 4**
241-243	**242**				**Left rotation speed 5**
244-246	**245**				**Left rotation speed 6**
247-249	**248**				**Left rotation speed 7**
250-252	**251**				**Left rotation speed 8**
253-255	**254**				**Left rotation speed 9 max.**

DMX CHANNEL	**9**	Parameter: **PROPORTIONAL COLOUR (PRIORITY)**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-10	**5**				**No effect**
11-255					**Proportional colour**

DMX CHANNEL	**10**	Parameter: **GOBO**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-25	**12**				**Open**
26-51	**38**				**Gobo 1**
52-77	**64**				**Gobo 2**
78-103	**90**				**Gobo 3**
104-129	**116**				**Gobo 4**
130-155	**142**				**Gobo 5**
156-181	**168**				**Gobo 6**
182-207	**194**				**Gobo 7**
208-213	**210**				**Speed rotation 1 min.**
214-219	**216**				**Speed rotation 2**
220-225	**222**				**Speed rotation 3**
226-231	**228**				**Speed rotation 4**
232-237	**234**				**Speed rotation 5**
238-243	**240**				**Speed rotation 6**

244-249	**246**				**Speed rotation 7**
250-255	**252**				**Speed rotation 8 max.**

DMX CHANNEL	**11**	Parameter: **ROTO GOBO**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-127					**Proportional from 0° to 360°**
128-180					**Left rotation**
181-202	**191**				**Stop**
203-255					**Right rotation**

DMX CHANNEL	**12**	Parameter: **PRISM/ROTOPRISM**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-63	**32**				**No effect**
64-127	**95**				**Prism**
128-191					**Left rotation**
192-255					**Right rotation**

DMX CHANNEL	**13**	Parameter: **FOCUS**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**proportional**

DMX CHANNEL	**14**	Parameter: **LIGHT BEAM ANGLE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-84	**42**				**11°**
85-170	**127**				**15°**
171-255	**213**				**18°**

DMX CHANNEL	**15**	Parameter: **FROST (PRIORITY)**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-127	**63**				**No lens**
128-255	**191**				**Frost**

DMX CHANNEL	**16**	Parameter: **RESET**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-29					**No effect**
30-85					**Lamp OFF (actived after 3 seconds)**
86 - 170					**Internal motor Reset**
171-235					**Total Reset**
236-255					**Lamp ON (actived after 3 seconds)**

20 CHANNELS MODE (DEFAULT)

1 PAN msb 540°
2 PAN lsb
3 TILT msb 270°
4 TILT lsb
5 P/T SPEED MOVEMENT
6 DIMMER
7 SHUTTER
8 COLOUR
9 COLOUR MODE
10 GOBO
11 GOBO MODE
12 GOBO ROTATION-INDEX
13 GOBO ROTATION-INDEX FINE
14 GOBO SHAKE
15 PRISM
16 PRISM ROTATION
17 FOCUS
18 ZOOM
19 FROST (Priority on Zoom channel)
20 LAMP ON-OFF / RESET

DMX CHANNEL	**1**	Parameter: **PAN msb**

DMX CHANNEL	**2**	Parameter: **PAN lsb**

DMX CHANNEL	**3**	Parameter: **TILT msb**

DMX CHANNEL	**4**	Parameter: **TILT lsb**

DMX CHANNEL	**5**	Parameter: **MOVEMENT SPEED**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-10	**5**				**Standard**
11-25	**18**				**Fast movement**
26-127					**Vector mode from fast to slow**
128-247					**Variable time reaction to DMX signal (fast to slow)**
248-255					**Slow reaction time to DMX signal**

DMX CHANNEL	6	Parameter: **DIMMER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-8	**4**				**Black-out**
9-255					**Linear dimmer**

DMX CHANNEL	7	Parameter: **SHUTTER**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-19					**Black-out**
20-39					**Open**
40-59					**Black-out**
60-79					**Random Strobe**
80-89					**Strobe speed 1 min.**
90-99					**Strobe speed 2**
100-109					**Strobe speed 3**
110 -119					**Strobe speed 4**
120-129					**Strobe speed 5**
130-139					**Strobe speed 6 max.**
140-149					**Pulse open speed 1 min.**
150-159					**Pulse open speed 2**
160-169					**Pulse open speed 3**
170-179					**Pulse open speed 4 max.**
180-189					**Pulse closed speed 1 min.**
190-199					**Pulse closed speed 2**
200-209					**Pulse closed speed 3**
210-219					**Pulse closed speed 4 max.**
220-227					**Colour and Gobo in black-out**
228-233					**Pan and Tilt in black-out**
234-255					**Open**

DMX CHANNEL	8	Parameter: **COLOUR**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
IF CHANNEL 9 = FULL COLOUR (Dmx range value 0 - 63)					
0-27					**Colour1**
28-55					**Colour2**
56-83					**Colour3**
84-111					**Colour4**
112-139					**Colour5**
140-167					**Colour6**
168-195					**Colour7**
196-223					**Colour8**
224-255					**Colour9**

DMX CHANNEL	**8**	Parameter: **COLOUR**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
IF CHANNEL 9 = HALF COLOUR (Dmx range value 64 - 127)					
0-25					**No Colour**
26-51					**Bicolour ½**
52-77					**Bicolour 2/3**
78-103					**Bicolour 3/4**
104-129					**Bicolour 4/5**
130-155					**Bicolour 5/6**
156-181					**Bicolour 6/7**
182-207					**Bicolour 7/8**
208-233					**Bicolour 8/9**
234-255					**Bicolour 9/1**
IF CHANNEL 9 = PROPORTIONAL COLOUR (Dmx range value 128 - 191)					
0-10					**No Colour**
11-255					**Proportional colour**
IF CHANNEL 9 = RAINBOW (Dmx range value 192 - 255)					
0-9					**No Colour**
10-127					**Right Rot.Speed from Max to Min**
128-137					**Stop**
138-255					**Left Rot.speed from Min to Max**

DMX CHANNEL	**9**	Parameter: **COLOUR MODE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-63					**Full Colour**
64-127					**Half Colour**
128-191					**Proportional Colour**
192-255					**Rainbow**

DMX CHANNEL	**10**	Parameter: **GOBO**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-25					**Open**
26-51					**Gobo 1**
52-77					**Gobo 2**
78-103					**Gobo 3**
104-129					**Gobo 4**
130-155					**Gobo 5**
156-181					**Gobo 6**
182-207					**Gobo 7**
208-213					**Rotation speed 1 min.**

DMX CHANNEL	10	Parameter: **GOBO**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
214-219					**Rotation speed 2**
220-225					**Rotation speed 3**
226-231					**Rotation speed 4**
232-237					**Rotation speed 5**
238-243					**Rotation speed 6**
244-249					**Rotation speed 7**
250-255					**Rotation speed 8 Max**

DMX CHANNEL	11	Parameter: **GOBO MODE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-127					**Gobo Rotation Mode**
128-255					**Gobo Index Mode**

DMX CHANNEL	12	Parameter: **GOBO ROTATION/GOBO INDEX**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
IF CHANNEL 11 = Gobo Rotation Mode (Dmx range value 0 - 127)					
0-9					**Stop**
10-127					**DX Rot. Prop. Speed Max to Min**
128-137					**Stop**
138-255					**SX Rot. Prop. Speed Min to Max**
IF CHANNEL 11 = Gobo Index Mode (Dmx range value 128 - 255)					
0-255					**Gobo index Coarse**

DMX CHANNEL	13	Parameter: **GOBO INDEX FINE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Gobo Index Fine**

DMX CHANNEL	14	Parameter: **GOBO SHAKE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9					**Stop**
10-22					**Gobo Shake R-L Speed 1 Min.**
23-35					**Gobo Shake R-L Speed 2**
36-48					**Gobo Shake R-L Speed 3**

DMX CHANNEL	14	Parameter: **GOBO SHAKE**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
49-61					**Gobo Shake R-L Speed 4**
62-74					**Gobo Shake R-L Speed 5**
75-87					**Gobo Shake R-L Speed 6**
88-100					**Gobo Shake R-L Speed 7**
101-113					**Gobo Shake R-L Speed 8**
114-126					**Gobo Shake R-L Speed 9 Max**
127-138					**Stop**
139-151					**Gobo Shake L-R Speed 1 Min**
152-164					**Gobo Shake L-R Speed 2**
165-177					**Gobo Shake L-R Speed 3**
178-190					**Gobo Shake L-R Speed 4**
191-203					**Gobo Shake L-R Speed 5**
204-216					**Gobo Shake L-R Speed 6**
217-229					**Gobo Shake L-R Speed 7**
230-242					**Gobo Shake L-R Speed 8**
243-255					**Gobo Shake L-R Speed 9 Max**

DMX CHANNEL	15	Parameter: **PRISM**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-127					**No Effect**
128-255					**3 Facet Prism**

DMX CHANNEL	16	Parameter: **PRISM ROTATION**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9					**Stop**
10-121					**Left Rot. Prop. Speed from Max to Min**
122-143					**Stop**
144-255					**Right Rot. Prop. Speed from Min to Max**

DMX CHANNEL	17	Parameter: **FOCUS**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					**Linear focus**

DMX CHANNEL	**18**	Parameter: **ZOOM**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-84					**11°**
85-170					**15°**
171-255					**18°**

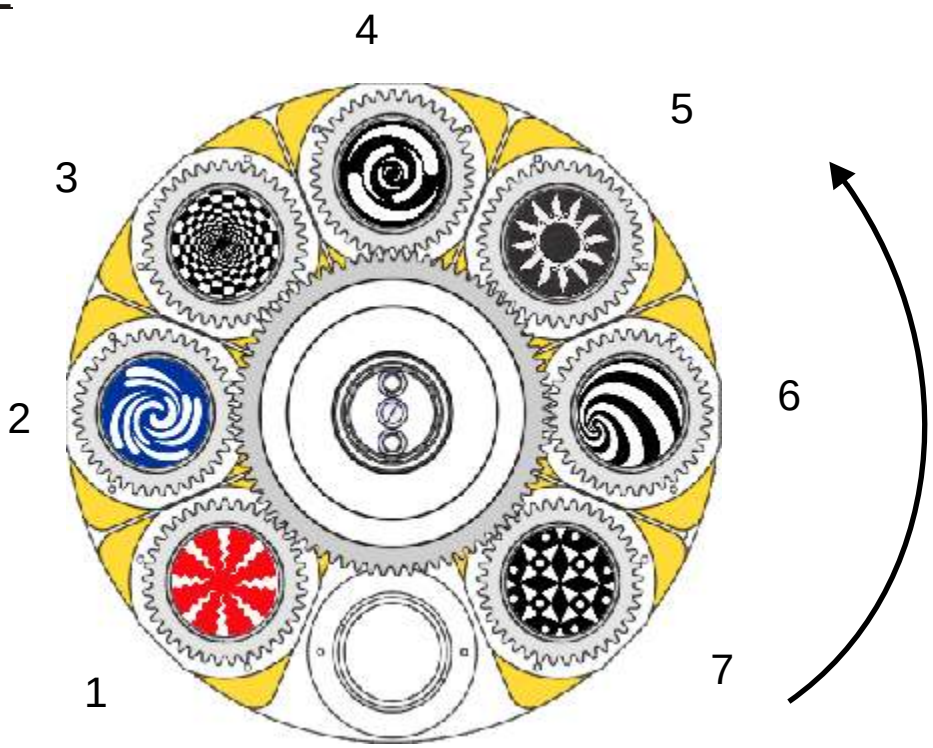
DMX CHANNEL	**19**	Parameter: **FROST**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-127					**No Effect**
128-255					**Frost**

DMX CHANNEL	**20**	Parameter: **LAMP / RESET**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9	**5**				**No Effect**
10-60	**30**				**Lamp OFF (Active after 3 seconds)**
61-129	**95**				**No Effect**
130-179	**154**				**Lamp ON (Active after 3 seconds)**
180-200	**190**				**No Effect**
201-239	**220**				**Internal Motors Reset**
240-255	**247**				**Total Reset**

19- GOBO WHEEL



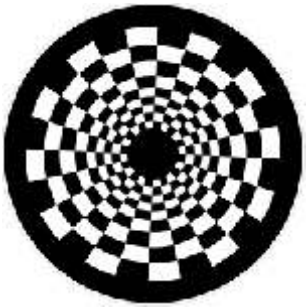
GOBO 1 DICHROIC

0516G029.02

GOBO 2 DICHROIC

0516G029

GOBO 3 DICHROIC



0516G029.01

GOBO 4 METAL

0516G030.01

GOBO 5 METAL

0516G030.02

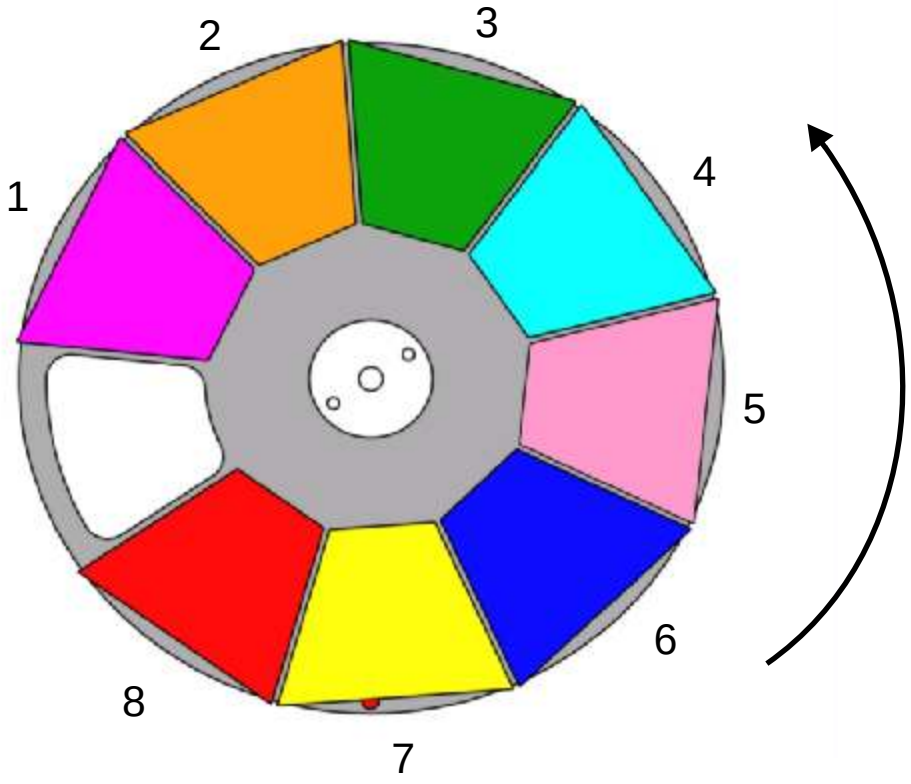
GOBO 6 METAL

0516G030.03

GOBO 7 METAL

0516G030.04

20- COLOUR WHEEL



COL1

0507C043.D01
LAVANDER SL0064

COL2

0507C051.D01
ORANGE LW590

COL3

0507C042.D01
GREEN WB5055

COL4

0507C045.D01
CYAN SW 530

COL5

0507C052.D01
PINK SL4761

COL6

0507C041.D01
DARK BLUE SW490

COL7

0507C049.D01
YELLOW LW 515

COL8

0507C047.D01
RED LW 640

21- MOTORS CONTROL CARD

8 MOTORS PCB

Display

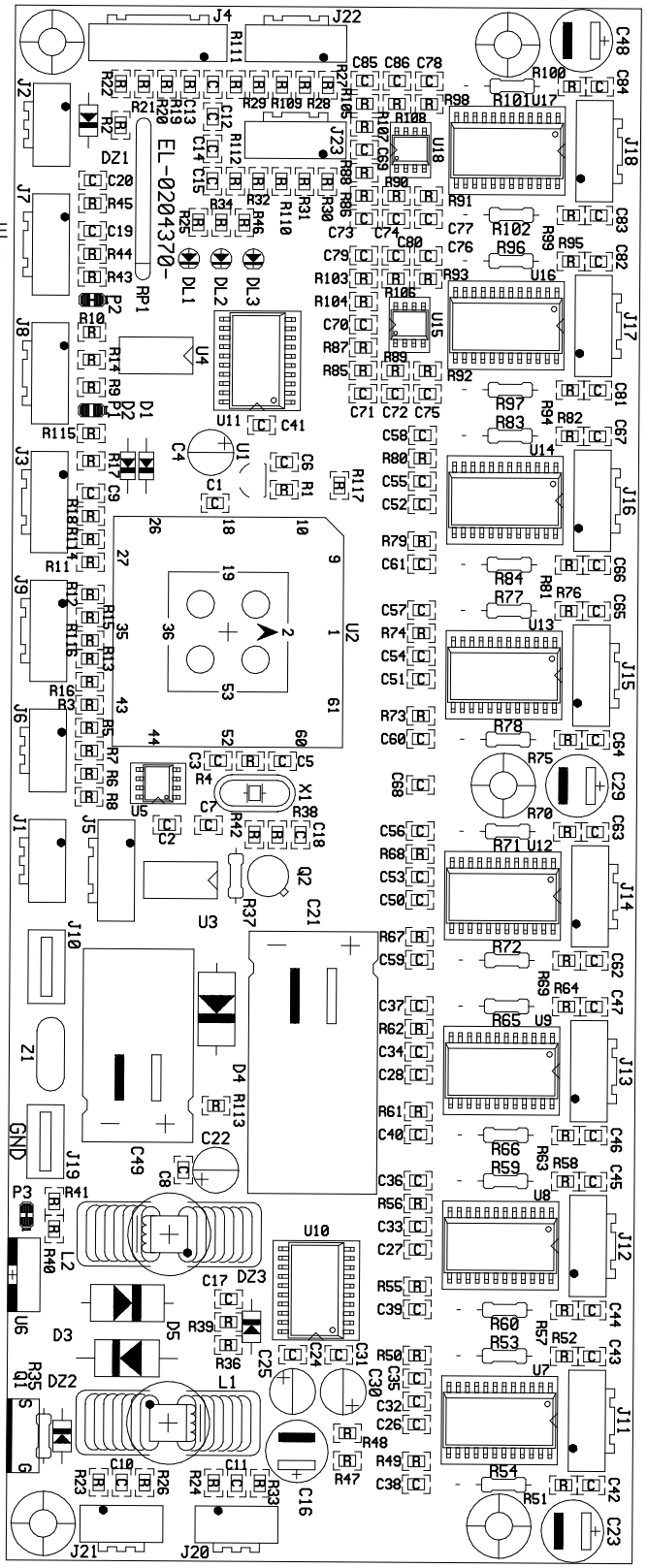
Magnetic Sensors
Line 1 Brown
Line 2 Orange

GND
ORANGE
BROWN
VCC

J3 FROM
J8 PAN & TILT

J5 FROM
J10 PAN & TILT

30 VDC
+
-



Fans

Gobo
(BLACK)

Focus
(DARK GREEN)

Strobe
(YELLOW)

Prism
(PINK)

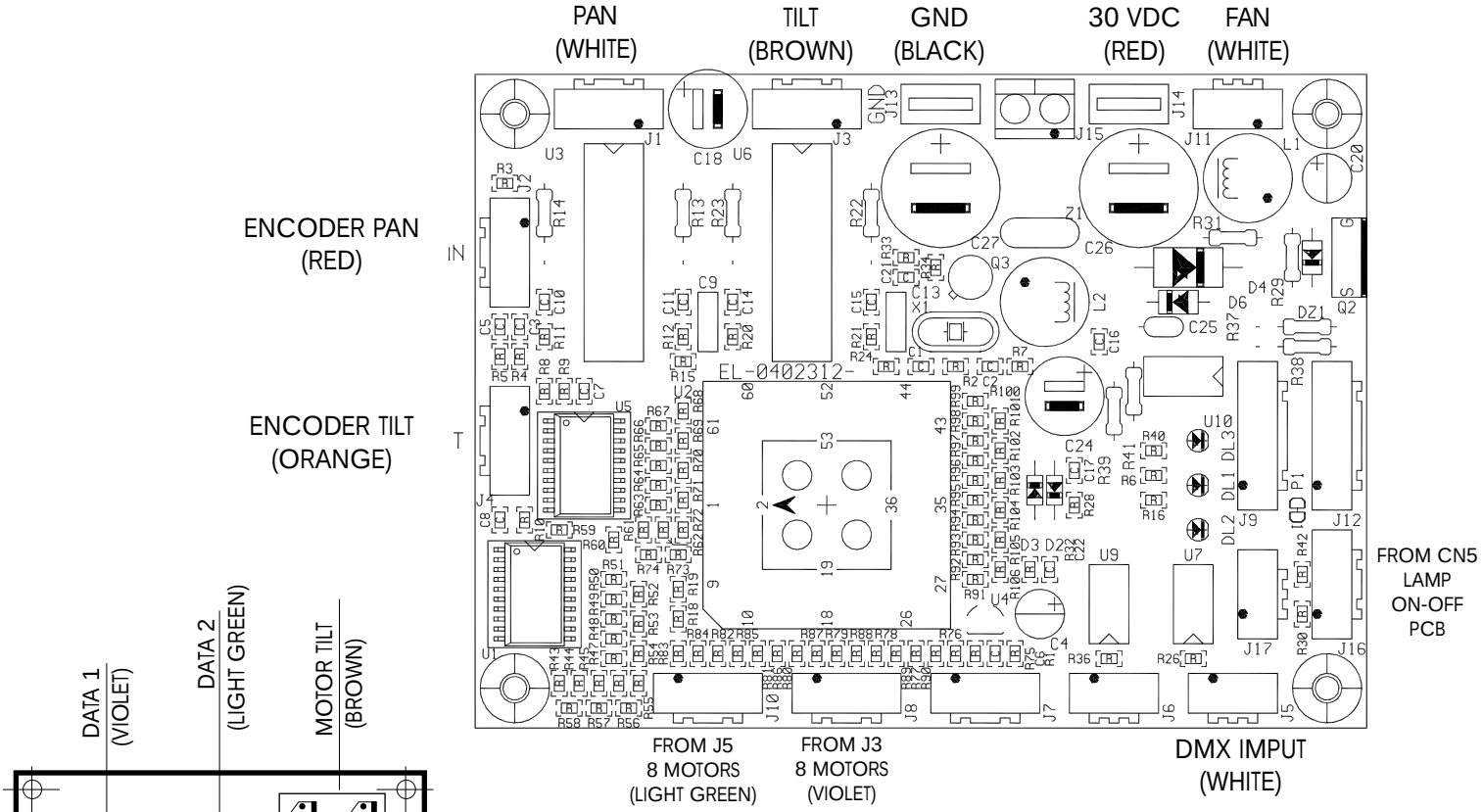
Zoom
(GREY)

Gobo rotation
(LIGHT BLUE)

Prism rotation
(GOLD)

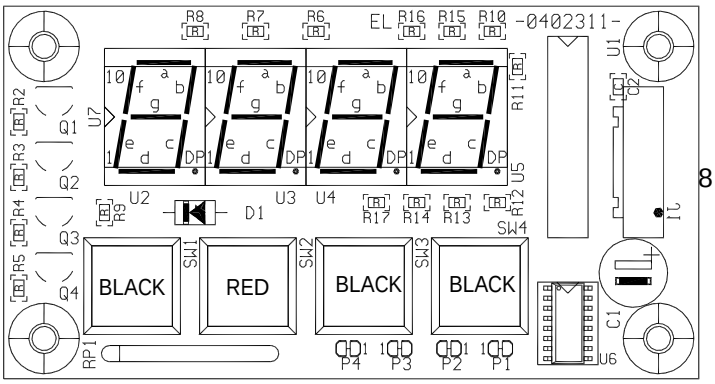
Colour
(BLUE)

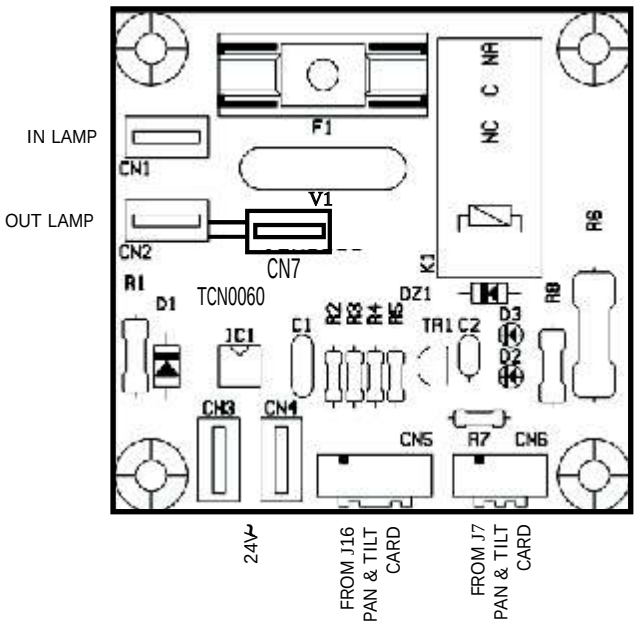
22-PAN & TILT CARD



23-CABLES RESEND CARD

24-DISPLAY CARD



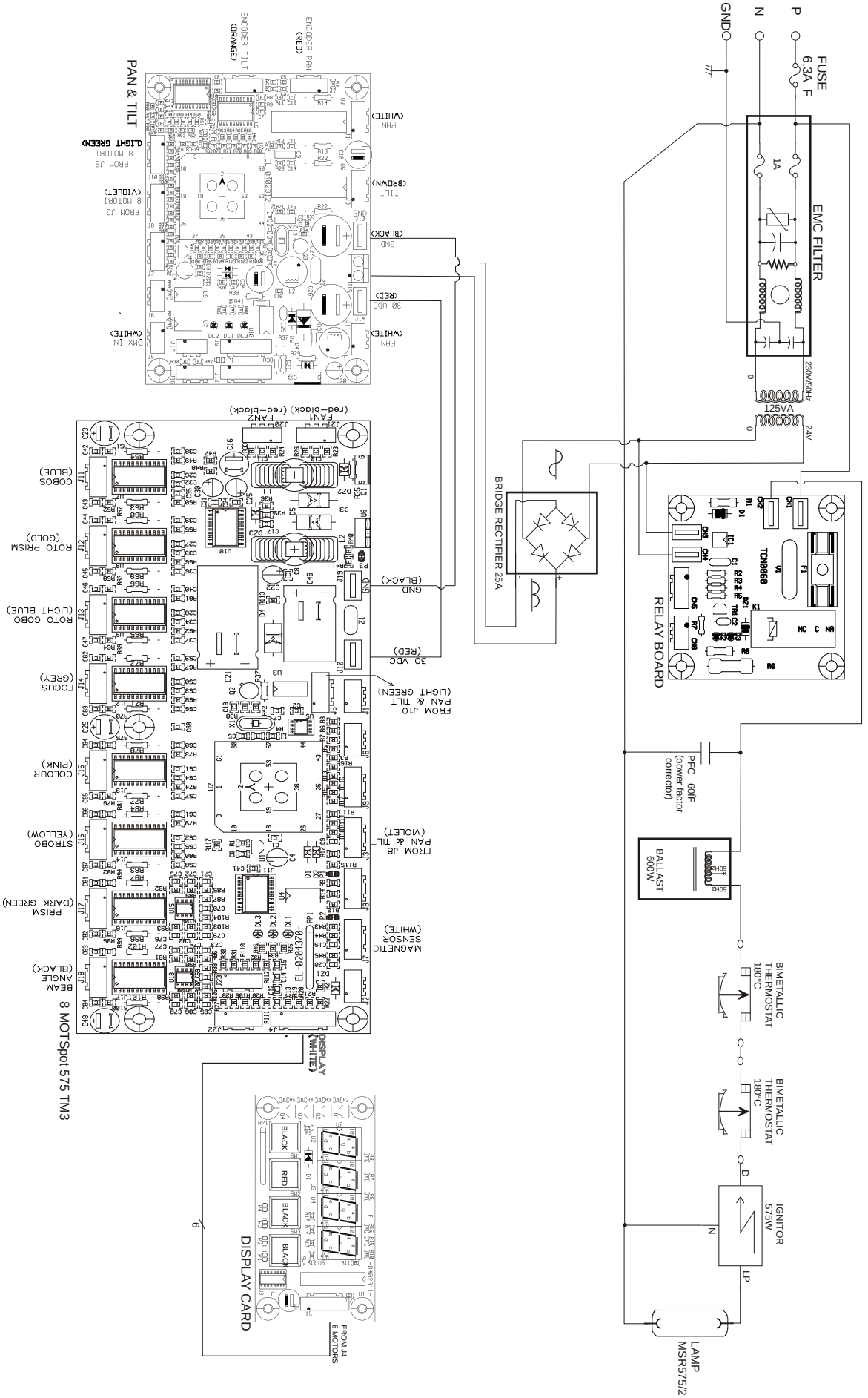


25-LAMP ON-OFF CONTROL CARD

If the PCB card doesn' t work, move the cable "IN LAMP" from CN 1 to CN 7

To remove SnEr error from display, in Menu LAMP select oFF

26- WIRING DIAGRAMS



NOTES

MADE IN ITALY CE

Teclumen s.r.l. Via Castel Goffredo 35/1 - 46040 Casaloldo (MN)
web: www.teclumen.it - e-mail: teclumen@teclumen.it
Tel. 0039 0376 778670 - Fax 0039 0376 778660