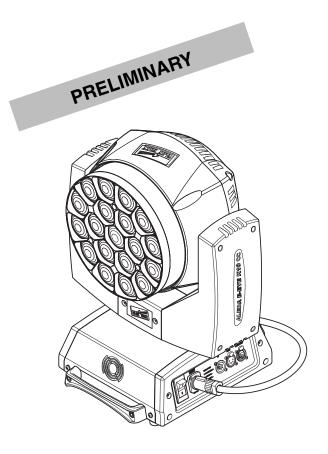
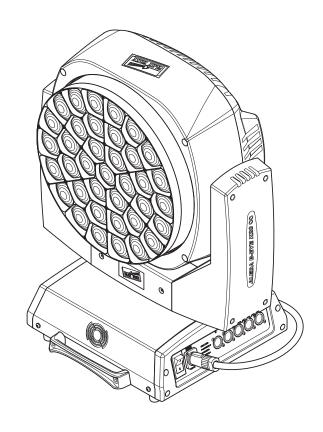
C61421

## **INSTRUCTION MANUAL**





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Congratulations on choosing a Clay Paky product! We thank you for your custom.

Please note that this product, as all the others in the rich Clay Paky range, has been designed and made with total quality to ensure excellent performance and best meet your expectations and requirements.

Carefully read this instruction manual in its entirety and keep it safe for future reference. It is essential to know the information and comply with the instructions given in this manual to ensure the fitting is installed, used and serviced correctly and safely.

CLAY PAKY S.p.A. disclaims all liability for damage to the fitting or to other property or persons deriving from installation, use and maintenance that have not been carried out in conformity with this instruction manual, which must always accompany the fitting.

CLAY PAKY S.p.A. reserves the right to modify the characteristics stated in this instruction manual at any time and without prior notice.

#### SAFETY INFORMATION

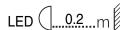
#### Installation

Make sure all parts for fixing the projector are in a good state of repair.

Make sure the point of anchorage is stable before positioning the projector.

The safety chain must be properly hooked onto the fitting and secured to the framework, so that, if the primary support system fails, the fitting falls as little as possible.

If the safety chain gets used, it needs to be replaced with a genuine spare.



#### Minimum distance of illuminated objects

The projector needs to be positioned so that the objects hit by the beam of light are at least 0.20 metres (8") from the lens of the projector.

#### • Minimum distance from flammable materials

The projector must be positioned so that any flammable materials are at least 0.20 metres (8") from every point on the surface of the fitting.



#### Mounting surfaces

It is permissible to mount the fitting on normally flammable surfaces.



ta 40°C

 Maximum ambient temperature Do not operate the fixture if the ambient temperature (Ta) exceeds 40° C (104° F).



#### IP20 protection rating

The fitting is protected against penetration by solid bodies of over 12mm (0.47") in diameter (first digit 2), but not against dripping water, rain, splashes or jets of water (second digit 0).



#### Protection against electrical shock

Connection must be made to a power supply system fitted with efficient earthing (Class I appliance according to standard EN 60598-1).

It is, moreover, recommended to protect the supply lines of the projectors from indirect contact and/or shorting to earth by using appropriately sized residual current devices.

#### Connection to mains supply

Connection to the electricity mains must be carried out by a qualified electrical installer.

Check that the mains frequency and voltage correspond to those for which the projector is designed as given on the electrical data label.

This label also gives the input power to which you need to refer to evaluate the maximum number of fittings to connect to the electricity line, in order to avoid overloading.

## t<sub>c</sub> 90°C

#### • Temperature of the external surface

The maximum temperature that can be reached on the external surface of the fitting, in a thermally steady state, is 90°C (194°F).



#### Maintenance

Before starting any maintenance work or cleaning the projector, cut off power from the mains supply.



## Light collimation system

This product contains internal light collimation system. Avoid intense light from any angle.



#### Battery

This product contains a rechargeable lithium iron tetraphosphate battery. To preserve the environment, please dispose the battery at the end of its life according to the regulation in force.



## Photobiological Safety

CAUTION. Possibly hazardous optical radiation emitted from this product. Do not stare at operating lamp. May be harmful to the eyes.



EN 62471

#### NOT FOR RESIDENTIAL USE

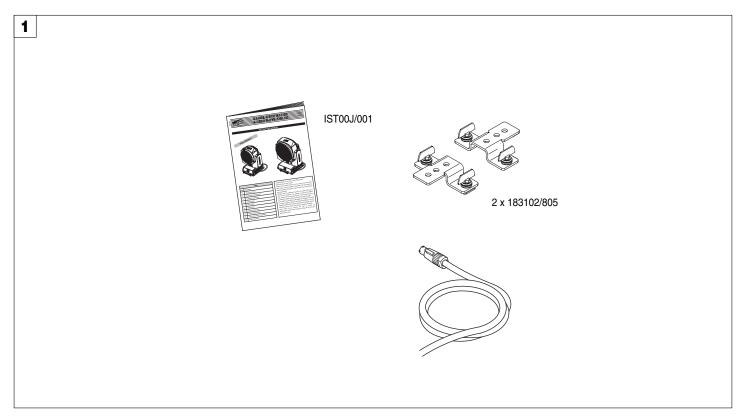
The products to which this manual refers comply with the European Directives pursuant to:

- 2006/95/EC Safety of electrical equipment supplied at low voltage (LVD)
- 2004/108/EC Electromagnetic Compatibility (EMC)

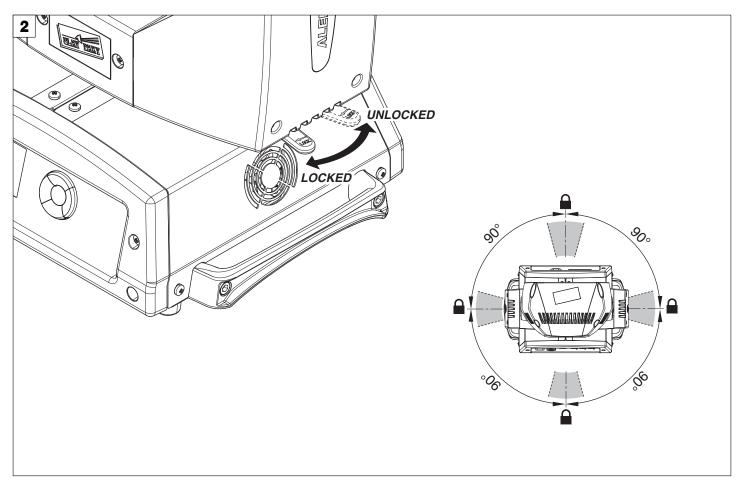
2

2011/65/EU - Restriction of the use of certain hazardous substances (RoHS)

## **UNPACKING AND PREPARATION**

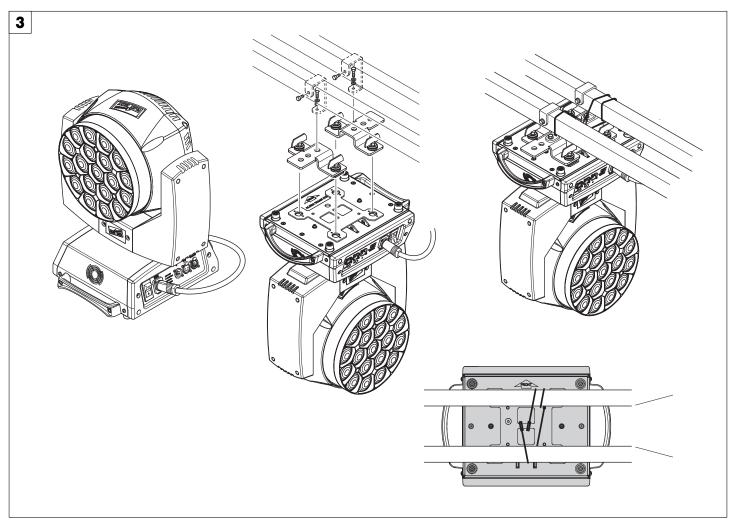


Packing contents - Fig. 1



PAN Mechanism Lock and Release (every 90°) - Fig. 2

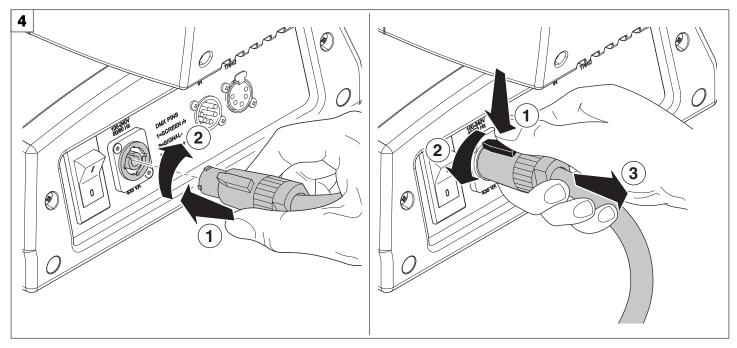
## **INSTALLATION AND START-UP**



Installing the projector - Fig. 3

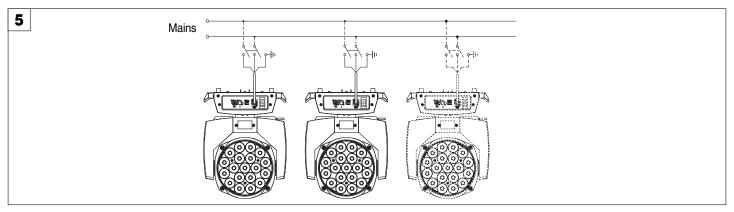
The projector can be installed on the floor resting on special rubber feet, on a truss or on the ceiling or wall.

WARNING: with the exception of when the projector is positioned on the floor, the safety cable must be fitted. (Cod. 105041/003 available on request). This must be securely fixed to the support structure of the projector and then connected to the fixing point at the centre of the base.

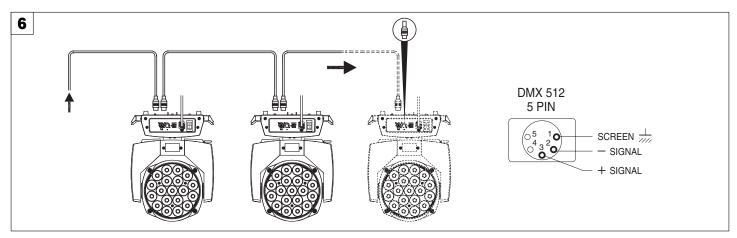


Connecting and disconnecting power cable - Fig. 4

#### **CONTROL PANEL**



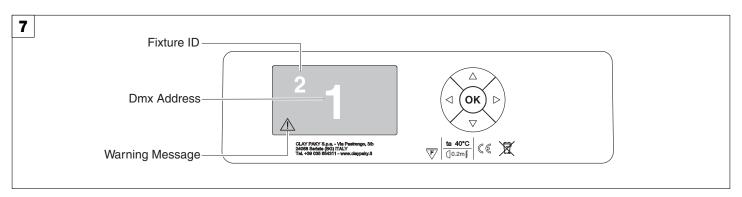
#### Connecting to the mains supply - Fig. 5



#### Connecting to the control signal line (DMX) - Fig. 6

Use a cable conforming to specifications EIA RS-485: 2-pole twisted, shielded, 1200hm characteristic impedance, 22-24 AWG, low capacity. Do not use microphone cable or other cable with characteristics differing from those specified. The end connections must be made using XLR type 5-pin male/female connectors. A terminating plug must be inserted into the last projector with a resistance of 1200hm (minimum 1/4 W) between terminals 2 and 3.

IMPORTANT: The wires must not make contact with each other or with the metal casing of the connectors. The casing itself must be connected to the shield braid and to pin 1 of the connectors.



#### Switching on the projector - Fig. 7

Press the switch. The projector starts resetting the effects. At the same time, the following information scrolls on the display:

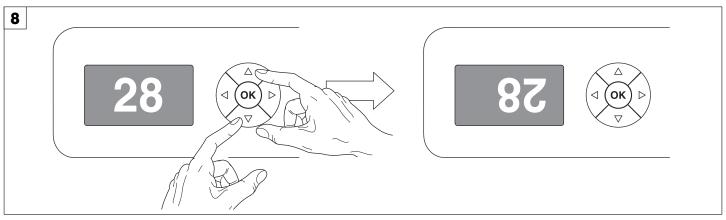


Model A.leda B-EYE CC Firmware Version X.X.X Date - Hour

xxx (Fixture ID) Dmx Address xxx

System errors
E:
W:

On conclusion of resetting in case of absence of the dmx signal, Pan and Tilt move to the "Home" position (Pan 50% - Tilt 50%). The control panel (Fig. 7) has a display and buttons for the complete programming and management of the projector menu. The display can be in one of two conditions: rest status and setting status. When it is in the rest status, the display shows the projector's DMX address and the Fixture ID address (if set). During menu setting status, after a wait time (about 30 seconds) without any key having been pressed, the display automatically returns to rest status. It should be noted than when this condition occurs, any possible value that has been modified but not yet confirmed with the (R) key will be cancelled.



#### Reversal of the display - Fig. 8

To activate this function, press UP and DOWN keys simultaneously while the display is in the rest mode. This status will be memorised and maintained even for the next time it will be switched on. To return to the initial state, repeat the operation all over again.

#### Setting the projector starting address

On each projector, the starting address must be set for the control signal (addresses from 1 to 512).

The address can also be set with the projector switched off.

Setting the address: see pag. 8.

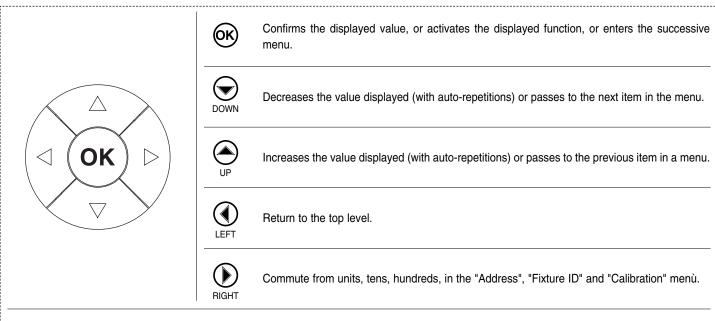
#### Setting the projector Fixture ID

On each projector, the Fixture ID address must be set for an easy identification of the fixtures in an installation (ID from 1 to 255).

The Fixture ID address can be set with the projector switched off.

Setting the Fixture ID: see pag. 8.

#### Functions of the buttons - Using the menu



#### **USING THE MENU:**

- 1) Press ( once "Main Menu" appears on the display.
- 2) Use the UP 
  and DOWN 
  keys to select the menu to be used:
  - Setup (Setup Menu): To set the setting options.
  - Option (Option Menu): To set the operating options
  - Informations (Informations Menu): To read the counters, software version and other information.
  - Manual Control (Manual control Menu): To trigger the test and manual control functions.
  - Test (Test Menu): To check the proper functionning of effects
  - Advanced (Advanced Menu): Access to the "Advanced menu" is recommended for a trained technical personnel.

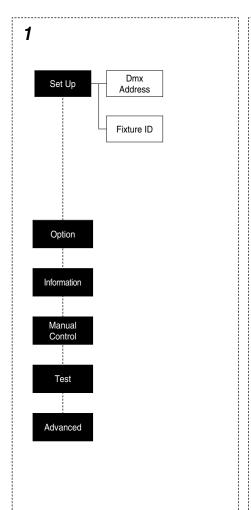
To enable the "Advanced" see pag.13

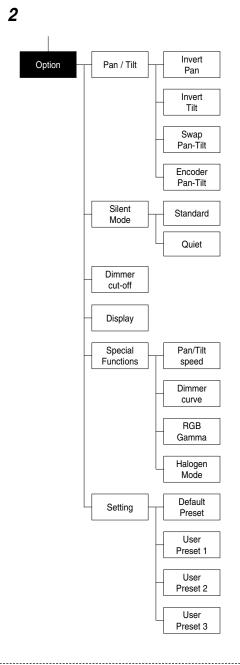
- 3) Press ( to display the first item in the selected menu.
- 4) Use the UP 
  and DOWN 
  keys to select the MENU items.

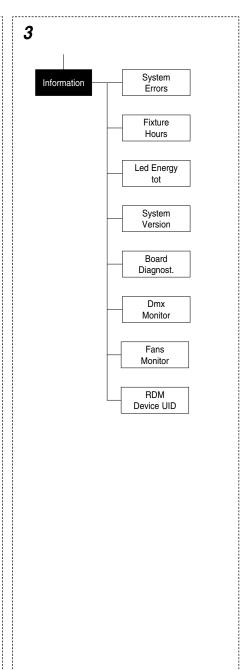
#### Setting addresses and options with the projector disconnected

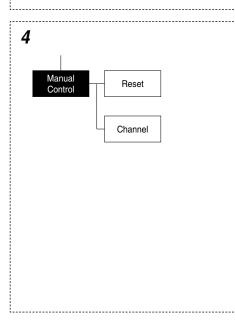
The projector's DMX address, as well as other possible operating options, can also be set when the appliance is disconnected from the electricity supply. All that is needed is to press to momentarily activate the display and thus access the settings. Once the required operations have been carried out, the display will switch off again after a wait time of 30 seconds.

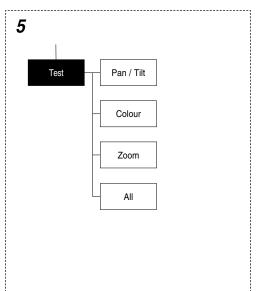
## **MENU SETTING**

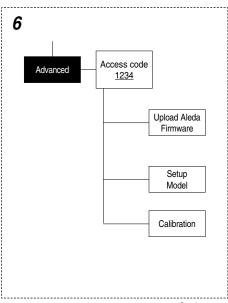




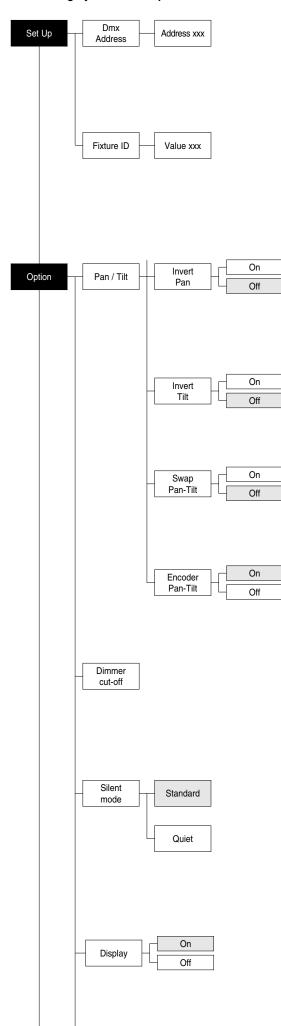








#### NOTE: On grey the default options



#### **SET UP MENU**

#### **DMX ADDRESS**

NOTE: without the DMX signal the Address (XXX) flashing

Allows you to select the DMX ADDRESS.

- 1) Press ( the current DMX Adress appear on the display.
- Use the UP 
   and DOWN 
   RIGHT 
   keys to plan the DMX Address.
- 3) Press ( to confirm the selection or LEFT ( to keep current settings.

#### **FIXTURE ID**

Allows you to select the FIXTURE ID.

- 1) Press (or) the current Fixture ID appear on the display.
- 2) Use the UP 

  , DOWN , RIGHT keys to plan the Fixture ID.
- 3) Press (x) to confirm the selection or LEFT (1) to keep current settings.

#### **OPTIONS MENU**

#### **PAN / TILT**

#### Invert pan

Used for reversing Pan movement.

- 1) Press ( the current settings appear on the display (On or Off).
- Use the UP and DOWN keys to enable (On) or disable (Off) PAN inversion.
- 3) Press ( to confirm the selection or LEFT ( to keep current settings.

#### Invert tilt

Used for reversing tilt movement.

- 1) Press 🕟 the current settings appear on the display (On or Off).
- Use the UP and DOWN keys to enable (On) or disable (Off)
   Tilt inversion.
- 3) Press (b) to confirm the selection or LEFT (1) to keep current settings.

#### **Swap Pan-Tilt**

Used for swapping Pan and Tilt channels (as well as Pan fine and Tilt fine).

- 1) Press (Ox) the current settings appear on the display (On or Off).
- 2) Use the UP and DOWN keys to enable (On) or disable (Off) Pan and Tilt channel swap.
- 3) Press (x) to confirm the selection or LEFT (1) to keep current settings.

#### **Encoder Pan-Tilt**

Used for enabling the Pan / Tilt encoders.

- 1) Press ( the current settings appear on the display (On or Off).
- Use the UP and DOWN keys to enable (On) or disable (Off) Pan / Tilt encoders.
- 3) Press 

   to confirm the selection or LEFT 

   to keep current settings. You can quickly disable the Pan and Tilt Encoder by simultaneously pressing the UP 

   and DOWN 

   keys in the "Main Menu".

#### **DIMMER CUT-OFF**

Used to set a DMX fine value under which the dimmer remains to zero level.

- 1) Press ( the current Dimmer cut-off appear on the display.
- Use the UP and DOWN , RIGHT keys to plan the Dimmer cut-off.
- 3) Press ok to confirm the selection or LEFT o to keep current settings.

### **SILENT MODE**

It lets you select the "Silent Mode" from the two available.

- 1) Press ( the current setting appears on the display.
- 2) Use the UP ♠ and DOWN ♠ keys to select one of the following settings:

**Standard:** Maximum speed and consequently maximum effects/fans noise level.

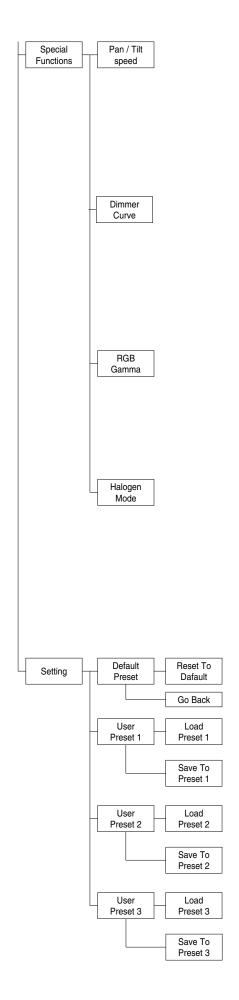
**Quiet:** Regulates the speed of the effects (Zoom, Pan , Tilt) and of the fans, thereby reducing their noise level.

3) Press (b) to confirm the selection or LEFT (1) to keep the current setting.

#### **DISPLAY**

Used for automatically reduce brightness on the display after about 30 seconds in idle.

- 1) Press 🕟 the current settings appear on the display (On or Off).
- 2) Use the UP and DOWN keys to enable (On) or disable (Off) the decreasing of display brightness.
- 3) Press ( to confirm the selection or LEFT ( to keep current settings.



#### SPECIAL FUNCTIONS

#### Pan / Tilt speed

Lets you select two different Pan and Tilt speeds.

- 1) Press ( the current setting appears on the display.
- 2) Use the UP 
  and DOWN 
  keys to select one of the following
  - Normal
  - Fast
- 3) Press ( to confirm the selection or LEFT ( to keep current settings.

#### **Dimmer Curve**

Lets you select four different Dimmer channel curves.

- Press (a) the current setting appears on the display.
- 2) Use the UP 
  and DOWN 
  keys to select one of the following settings:
  - Curve 1
  - Curve 2
  - Curve 3
  - Curve 4
- 3) Press ( to confirm the selection or LEFT ( to keep current settings.

#### **RGB Gamma**

Lets you select three different RGBW gamma curves.

- 1) Press ( the current setting appears on the display.
- 2) Use the UP 
  and DOWN 
  keys to select one of the following settings:
  - Gamma 1.0
  - Gamma 1.5
  - Gamma 2.0
- 3) Press (x) to confirm the selection or LEFT (1) to keep current settings.

#### Halogen Mode

Lets you select five different halogen lamp simulations.

- 1) Press 🕟 the current setting appears on the display.
- 2) Use the UP (a) and DOWN (b) keys to select one of the following settings:
  - Halogen OFF
  - Halogen Lamp 1
  - Halogen Lamp 2
  - Halogen Lamp 3
  - Halogen Lamp 4 - Halogen Lamp 5
- 3) Press ( to confirm the selection or LEFT ( to keep current settings.

#### **SETTING**

Used to save 3 different settings of the items in the options menu and relative submenus.

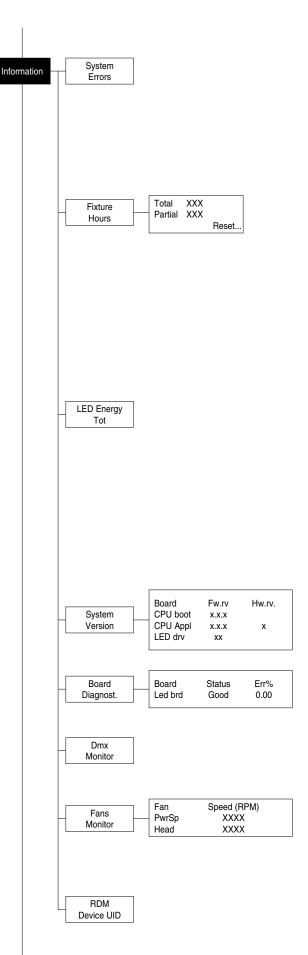
- 1) Press 🕟 "Default preset" appears on the display.
- 2) Use the UP (a) and DOWN (b) keys to select one of the following configurations:
  - Default preset (\*)
  - User preset 1
  - User preset 2
  - User Preset 3
- 3) Press ເ⊗ "Load preset X" appears on the display. 4) Use the UP ♠ and DOWN ♠ keys to select:
- - Load preset X to recall a previously stored configuration.
  - Save to preset X to store the current configuration.
  - a confirmation message (Are you sure?) appears on the display.
- 5) Select YES to confirm the selection or NO to keep the current setting and return to the next higher level.
- (\*) DEFAULT PRESET

Used for restoring default values on all options menu items and relevant submenus

1) Press (or), a confirmation message (Are you sure?) appears on the display.

2) Select YES to confirm the selction or NO to keep current setting.

**OPTION DEFAULT** Invert Pan Off Invert Tilt Off Swap Pan-Tilt Off **Encoder Pan-Tilt** On Silent Mode Standard Display Off Pan/Tilt speed Fast Dimmer Curve Curve 1 Gamma 1.5 RGB Gamma Halogen OFF Halogen Mode



#### **INFORMATION MENU**

#### **SYSTEM ERRORS**

Shows a list of warnings and messages relevant to errors occurred since the fixtures switching-on.

- Pressing you are allowed to reset the SYSTEM ERRORS list.
   A confirmation message (Are you sure you want to clear error list ?) appears on the display.
- 2) Select YES to reset the list or NO to go back.

#### **FIXTURE HOURS**

Used for displaying projector operating hours (total and partial).

1) Press (x) - Hours total and partial appears on the display.

#### **Total counter**

Counts the number of projector working life hours (from manufacture to date).

#### **Partial counter**

Counts the number of partial projector working life hours since the last reset to date.

- 2) Press (x) to reset partial projector working hours a confirmation message (Are you sure?) appears on the display.
- 3) Select YES to reset partial projectors counter or NO to keep the current setting and return to the top menu level.

#### **LED ENERGY TOT**

Lets you view total LED working hours.

1) Press (%) - to display total and partial Watts/hour:

#### Total

Total LED working hours from construction to date.

#### Dartia

LED working hours from last reset to date.

- 2) Press ( to reset the partial counter. A confirmation appears on the screen (Are you sure?)
- 3) Select YES to reset the partial counter or NO to keep the current setting and open the next menu level.

#### **SYSTEM VERSION**

Used for displaying the software and hardware version of each board installed in the projector. (CPU and LED board).

#### **BOARD DIAGNOSTIC**

Used for displaying the status error of each board installed in the projector: Led board

### **DMX MONITOR**

Used for displaying the projector DMX channel level in bit (Val) and in percentage (Perc).

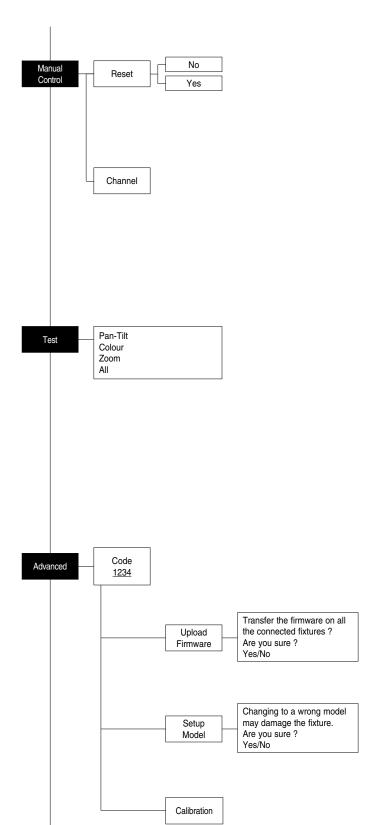
### **FANS MONITOR**

Used for displaying the speed of each fan installed in the projector: PwrSp (fan PSU)

Head (fan head)

#### **RDM DEVICE UID**

Shows the exclusive address of the fixture to use communicate via RDM.



### **MANUAL CONTROL**

#### **RESET**

Used for resetting the projector.

- Press to reset the projectors, a confirmation message (Are you sure?) appears on the display.
- Select YES to starting reset the fixture or NO to keep the current setting and return to the top menu level.

#### **CHANNEL**

Used for setting channel levels from the projector control panel.

- 1) Press (ok) the first channel appears on the display.
- 2) Use the UP 
  and DOWN 
  keys to select the required channel:
- 3) Press ( and use the UP ( and DOWN ) keys to select the required DMX level (value between 0 and 255).
- 4) Press LEFT (1) to return to the top menu level.

#### **TEST MENU**

#### **TEST**

Allows you to check the proper functioning of effects.

- 1) Press ( to return to the top menu level.
- 2) Use the UP 
  and DOWN 
  keys to select the required test.
- 3) Press ( to confirm the selection or LEFT ( to keep current settings.

Test sequence:

Pan - Tilt effects (Pan & Tilt)

Colour effects

Zoom

All effects

#### **ADVANCED MENU**

To enable the "Advanced Menu" set up the "Access code" (1234) using the UP  $\bigcirc$ , DOWN  $\bigcirc$ , RIGHT  $\bigcirc$  keys.

Press ( - "Menu advanced" appears on the display

#### **UP LOAD FIRMWARE**

Allows you to transfer the firmware from 1 fixture to all the connected fixtures.

- Press , a confirmation message appears on the display.
- 2) Select YES to start the firmware loading or NO to keep the current setting and return to the top menu level

#### **SETUP MODEL**

Allows you to change the default model of projector.

- 1) Press ( a confirmation message appears on the display.
- 2) Select YES to define the model of projector or NO to keep the current setting and return to the top menu level.

#### **CALIBRATION**

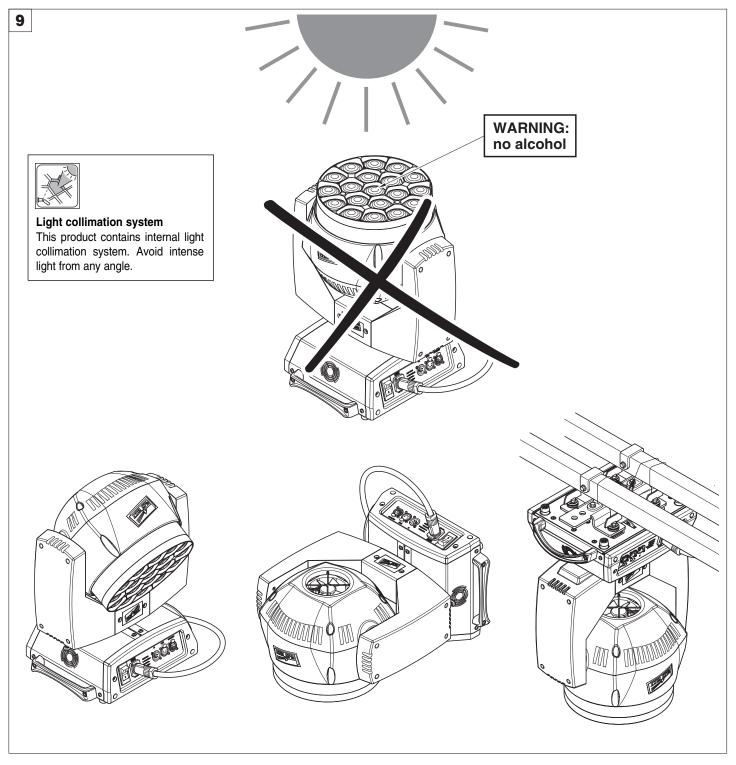
Allows you to adjust effects from the control panel to obtain perfect uniformity between the projectors.

- 1) Press 🕟 "channels" appears on the display.
- Using the UP 
   and DOWN 
   keys, select the effect you wish to regulate.
- 3) Press ♠ and use the RIGHT ♠, UP ♠ and DOWN ♠ buttons to make the adjustment by setting a value between 0 and 255.
- 4) Press (x) to confirm the selection or LEFT (1) to keep current settings and return to the top level.

#### **FACTORY DEFAULT**

Allows you to restore default values of all channels (128).

- 1) Press 🕟 a confirmation message appears on the display (Reset calibration to factory default ?).
- Select YES to reset calibration to factory default or NO to keep the current setting and return to the top menu level.



#### **CAUTION:**

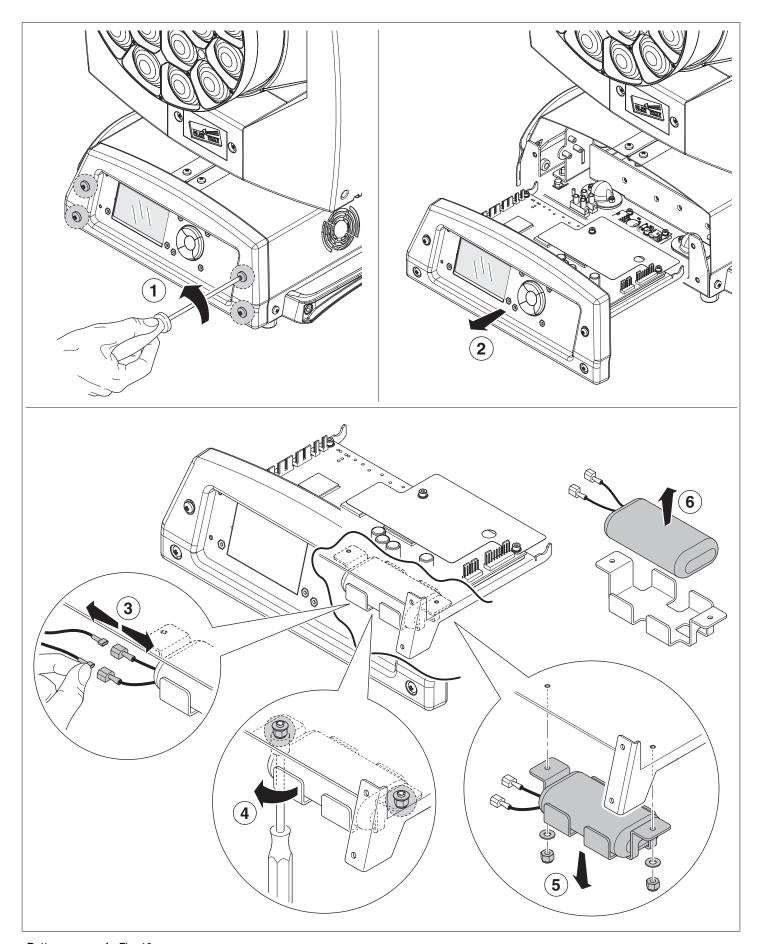
- To avoid damage to the internal parts of the fixture when the fixture is not working, is recommended to turn the head down before turning the fixture off, so that the front lenses of the fixture are invested as little as possible from the sun.
- · Set channel 20 (Zoom) to 255-bit before turning off the projector to facilitate the packaging of the projector.
- To ensure optimal operation and performance for a long time it is essential to periodically clean the parts subject to dust and grease deposits. The frequency with which the following operations are to be carried out depends on various factors, such as the amount of the effects and the quality of the working environment (air humidity, presence of dust, salinity, etc.).

It is recommended that the projector undergoes an annual service by a qualified technician for special maintenance involving at least the following operations:

- General cleaning of internal parts.
- Restoring lubrication of all parts subject to friction, using lubricants specifically supplied by Clay Paky.
- General visual check of the internal components, cabling, mechanical parts, etc.
- Electrical, photometric and functional checks; eventual repairs.

#### Cleaning the lenses

Only use neutral soap and water to clean the lenses, then dry it carefully with a soft, non-abrasive cloth. (WARNING: the use of alcohol or any other detergent could damage the lenses).



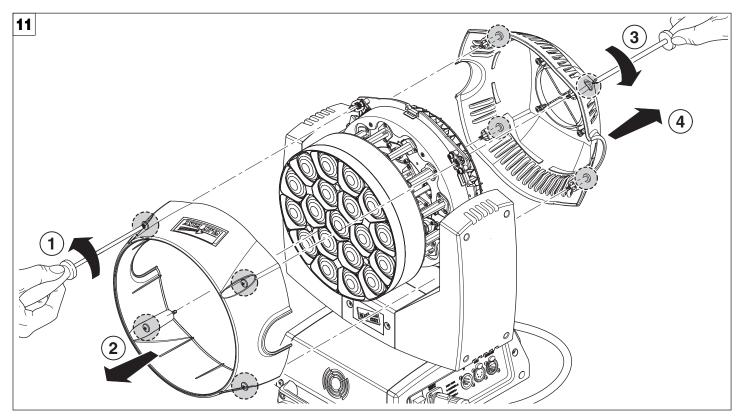
Battery removal - Fig. 10

LiFePO4

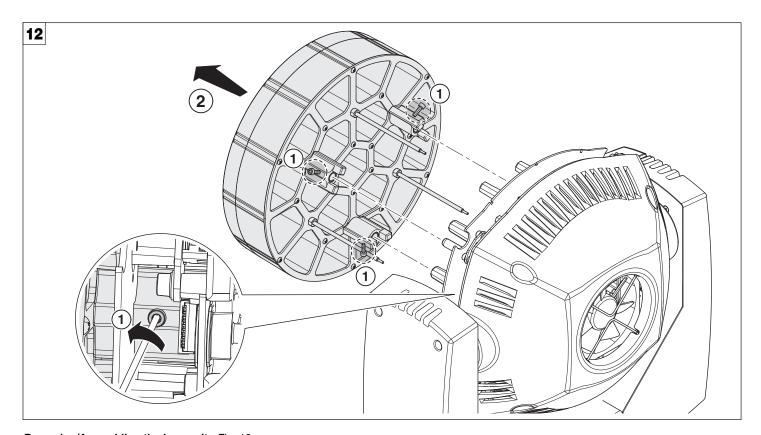
This product contains a rechargeable lithium iron tetraphosphate battery. To preserve the environment, please dispose the battery at the end of its life according to the regulation in force.

13

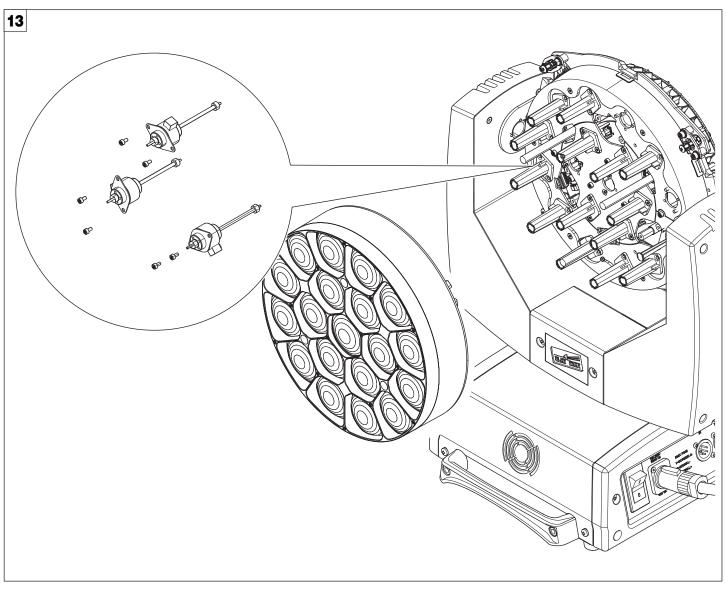
## **MAINTENANCE**



Opening the covers - Fig. 11



Removing/Assembling the lens unit - Fig. 12

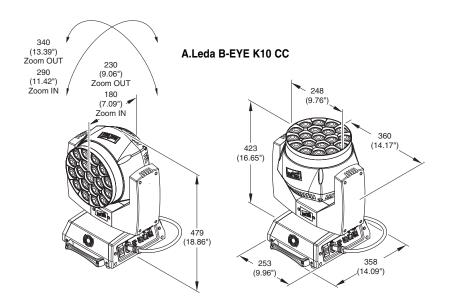


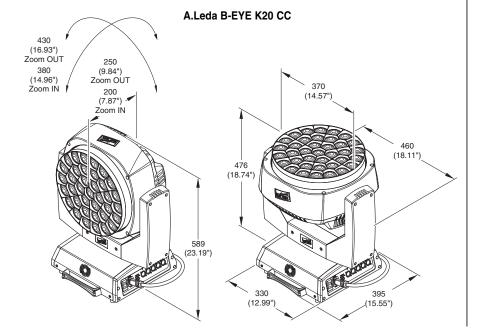
Replacing the line actuator - Fig. 13

## **CAUSE AND SOLUTION OF PROBLEMS**

	THE PROJECTOR WILL NOT SWITCH ON					
	ELECTRONICS NON-OPERATIONAL			PROBLEMS		
			DE	FECTIVE PROJECTION		PROBLEMS
				REDUCED LUMINOSITY		
				POSSIBLE CAUSES	CHECKS AND R	EMEDIES
•				No mains supply.	Check the power supply voltage.	
•			•	LED exhausted or defective.	Call an authorised technician.	
	•	Signal transmission cable faulty or disconnected. Replace the cables.				
	•	Incorrect addressing.     Check addresses (see instructions).				
	•	Fault in the electronic circuits.     Call an authorised technician.				
		Lenses or reflector broken     Call an authorised technician.				
		● Dust or grease deposited. Clean (see instructions).				

### **TECHNICAL INFORMATION**





#### Power supplies available

100-240V 50/60Hz

#### Input power

- •K10 CC 350VA
- •K20 CC 550VA

#### **LED** source

Osram Ostar RGBW - 15W LED Average LED life: 50.000 h

#### Motors

5 (k10), 6 (k20) stepper motors, operating with microsteps, totally microprocessor controlled.

#### Cooling

- High efficiency die-cast aluminium
- Forced ventilation

### Inputs

DMX 512

#### Working position

Working in any position.

#### Moving head

- Movement by means of two stepper motors, controlled by microprocessor.
- Automatic repositioning of PAN and TILT after accidental movement not controlled by control unit.
- Angle:
- PAN = 540°
- TILT = 210°

#### IP20 protection rating

- Protected against the entry of solid bodies larger than 12mm (0.47").
- No protection against the entry of liquids.

#### **CE Marking**

Complies with the following European Directives

- 2006/95/EC (LVD)
- 2004/108/EC (EMC)
- 2011/65/EU (RoHS).

#### Weights

- B-EYE K10 CC: 14.5 kg (31.14 lbs)
- B-EYE K20 CC: 21 kg (46.3 lbs)

## **CHANNEL FUNCTION**

## **A.LEDA B-EYE K10 CC**

## A.LEDA B-EYE K20 CC

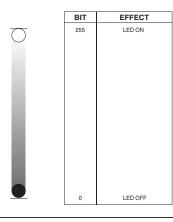
NB: To prevent accidental breakage of the effects, which could collide with each other during transport, before switching the projector OFF check that all the projector Channels have been excluded (DMX level @0 bit).

CHANNEL	CHANNEL MODE
1	Red
2	RedFine
3	Green
4	GreenFine
5	Blue
6	BlueFine
7	White
8	WhiteFine
9	сто
10	Macro Colour
11	Strobe
12	Dimmer
13	Dimmer fine
14	Pan
15	Pan fine
16	Tilt
17	Tilt fine
18	Function
19	Reset
20	Zoom

NOTE: On conclusion of resetting in case of absence of DMX signal, Pan & Tilt move to the "Home" position (Pan 128 bit - Tilt 128 bit) all the others channels stay at 0 bit.

• (1 - 3 - 5 - 7) RED - GREEN - BLUE - WHITE

K10 CC K20 CC



• (2 - 4 - 6 - 8) RED FINE – GREEN FINE – BLUE FINE – WHITE FINE

K10 CC K20 CC



BIT	EFFECT
255	UP
	10111
0	LOW

• (9) LINEAR CTO

K10 CC K20 CC

BIT	EFFECT
255	2500 K
224	3200 K
188	4000 K
144	5000 K
117	5600 K
99	6000 K
54	7000 K
10	8000 K
0-9	UNUSED RANGE

• (10) MACRO COLOUR

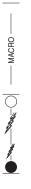
K10 CC K20 CC

Part		LEE		В	IT V	ALU	E
208         -         Dirty White         255         255         122         255           207         197         Alioe Blue         128         255         143         0           184-190         174         Dark Steel Blue         158         247         89         0           180-183         170         Deep lawender         232         165         88         0           1779         169         Lilac Tint         246         208         45         0           175-178         165         Daylight Blue         75         218         89         0           172-173         162         Bastard Amber         227         176         23         0           162-167         152         Pale Gold         255         189         24         0           162-167         152         Pale Gold         255         189         24         0           155-156         141         Bright Blue         0         231         142         1         0           151-156         141         Bright Blue         0         299         1         0           147-148         137         Special lawender         299	BIT		COLOUR				_
191-206	209-255	-	White	255	235	66	255
191-206	208	-	Dirty White	255	255	122	255
184-190	207	197	Alice Blue	128	255	143	0
180-183         170         Deep lavender         232         165         58         0           179         169         Lilac Tint         246         208         45         0           175-178         165         Daylight Blue         75         218         90         0           172-173         162         Bastard Amber         227         176         23         0           168-171         158         Deep Orange         227         86         1         0           162-167         152         Pale Gold         255         189         24         0           157-161         147         Apricot         231         142         11         0           157-165         141         Bright Blue         0         243         79         0           149-150         139         Primary Green         59         229         1         0           144-161         136         Pale Lavender         255         48         1         0           144-14         132         Medium Blue         0         23         135         0           145-155         148         136         Deep Golden Amber         255	191-206	181	· ·	76	*	255	0
179         169         Lilac Tint         246         208         45         0           175-178         165         Daylight Blue         75         218         90         0           174         164         Flame Red         211         27         2         0           172-173         162         Bastard Amber         227         166         1         0           168-171         158         Deep Orange         227         86         1         0           157-161         147         Apricot         231         142         11         0           157-161         147         Apricot         231         142         11         0           149-150         139         Primary Green         59         229         1         0           147-148         137         Special lavender         199         197         74         0           145         135         Deep Golden Amber         255         48         1         0           142-144         132         Medium Blue         0         239         135         0           142-144         132         Medium Blue         0         239							•
175-178		-		-			-
174         164         Flame Red         211         27         2         0           172-173         162         Bastard Amber         227         176         23         0           168-171         158         Deep Orange         227         176         23         0           162-167         152         Pale Gold         255         189         24         0           157-161         147         Apricot         231         142         11         0           151-156         141         Bright Blue         0         243         79         0           149-150         139         Primary Green         59         29         1         0           145-148         137         Special lavender         199         197         74         0           145         135         Deep Golden Amber         255         48         1         0           146         136         Pale Lavender         225         196         54         0           145         135         Deep Golden Amber         255         48         1         0           145         135         Medum Blue         0         231	_			-			•
172-173			, 0	-			
188-171		-				1	
162-167         152         Pale Gold         255         189         24         0           157-161         147         Apricot         231         142         11         0           157-161         147         Apricot         231         142         11         0           157-161         147         Apricot         231         142         11         0           149-150         139         Primary Green         59         229         1         0           147-148         137         Special lavender         199         197         74         0           145         135         Deep Golden Amber         255         48         1         0           142-144         132         Medium Blue         0         39         135         0           138-135         126         Mauve         213         28         50         0           136-137         126         Mauve         213         28         50         0           134-135         124         Dark Green         67         237         10         2           131-133         121         Leaf Green         171         232         1		-					-
157-161         147         Apricot         231         142         11         0           151-156         141         Bright Blue         0         243         79         0           149-150         139         Primary Green         59         229         1         0           147-148         137         Special lavender         199         197         74         0           146         136         Pale Lavender         225         196         54         0           145         135         Deep Golden Amber         255         48         1         0           142-144         132         Medium Blue         0         239         135         0           136-137         126         Mauve         213         28         50         0           134-135         124         Dark Green         67         237         10         2           131-133         121         Leaf Green         171         232         1         0           128         118         Light Blue         6         2255         76         0           127         117         Steel Blue         185         255         48			. 0				
151-156	' '	-					
149-150         139         Primary Green         59         229         1         0           147-148         137         Special lavender         199         197         74         0           146         136         Pale Lavender         225         196         54         0           145         135         Deep Golden Amber         255         48         1         0           142-144         132         Medium Blue         0         239         135         0           138-141         128         Bright Pink         239         40         31         0           134-135         124         Dark Green         67         237         10         2           131-133         121         Leaf Green         171         232         1         2           129-130         119         Dark Blue         0         194         253         0           128         118         Light Blue         62         255         76         0           127         117         Steel Blue         185         255         48         0           128         118         Magenta         158         6         8	-	* ***					•
147-148         137         Special lavender         199         197         74         0           146         136         Pale Lavender         225         196         54         0           145         135         Deep Golden Amber         255         48         1         0           142-144         132         Medium Blue         0         239         135         0           136-137         126         Mauve         213         28         50         0           134-135         124         Dark Green         67         237         10         2           131-133         121         Leaf Green         171         232         1         0           128         118         Light Blue         0         194         253         76         0           128         118         Light Blue         62         255         76         0           127         117         Steel Blue         185         255         48         0           127         117         Steel Blue         39         249         43         0           128         115         Peacock Blue         39         249         <			•	-			
146         136         Pale Lavender         225         196         54         0           145         135         Deep Golden Amber         255         48         1         0           142-144         132         Medium Blue         0         239         135         0           138-141         128         Bright Pink         239         40         31         0           136-137         126         Mauve         213         28         50         0           134-135         124         Dark Green         67         237         10         2           131-133         121         Leaf Green         171         232         1         0           128         118         Light Blue         0         194         253         0           128         118         Light Blue         62         255         76         0           127         117         Steel Blue         185         255         48         0           128         118         Light Blue         62         255         76         0           125         115         Peacock Blue         39         249         43         0 </td <td>  ' ' '</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	' ' '						
145         135         Deep Golden Amber         255         48         1         0           142-144         132         Medium Blue         0         239         135         0           138-141         128         Bright Pink         239         40         31         0           136-137         126         Mauve         213         28         50         0           134-135         124         Dark Green         67         237         10         2           129-130         119         Dark Blue         0         194         253         0           128         118         Light Blue         62         255         76         0           127         117         Steel Blue         185         255         48         0           128         118         Light Blue         62         255         76         0           127         117         Steel Blue         185         255         48         0           125         115         Peacox Blue         39         249         43         0           125         115         Peacox Blue         39         249         43         0		-				l	-
142-144         132         Medium Blue         0         239         135         0           138-141         128         Bright Pink         239         40         31         0           136-137         126         Mauve         213         28         50         0           134-135         124         Dark Green         67         237         10         2           131-133         121         Leaf Green         171         232         1         0           128         118         Light Blue         0         194         253         0           128         118         Light Blue         62         255         76         0           127         117         Steel Blue         185         255         48         0           126         116         Med Blu Green         185         255         48         0           125         115         Peacock Blue         39         249         43         0           123-122         113         Magenta         158         6         8         0           123-132         11         13         13         0         14         12         <				_			•
138-141         128         Bright Pink         239         40         31         0           136-137         126         Mauve         213         28         50         0           134-135         124         Dark Green         67         237         10         2           131-133         121         Leaf Green         171         232         1         0           129-130         119         Dark Blue         0         194         253         0           128         118         Light Blue         0         194         255         76         0           127         117         Steel Blue         185         255         76         0           126         116         Med Blu Green         185         255         48         0           125         115         Peacock Blue         39         249         43         0           125         115         Peacock Blue         39         249         43         0           125         115         Magenta         186         8         0           121-122         110         Middle Rose         209         132         24         0							•
136-137         126         Mauve         213         28         50         0           134-135         124         Dark Green         67         237         10         2           131-133         121         Leaf Green         171         232         1         0           129-130         119         Dark Blue         0         194         253         0           128         118         Light Blue         62         255         76         0           127         117         Steel Blue         185         255         48         0           126         116         Med Blu Green         185         255         48         0           125         115         Peacock Blue         39         249         43         0           123-124         113         Magenta         158         6         8         0           120         110         Middle Rose         209         132         24         0           119         109         Light Salmon         240         141         27         0           118         108         English Rose         220         140         18         0		-		-			•
131-133         121         Leaf Green         171         232         1         0           129-130         119         Dark Blue         0         194         253         0           128         118         Light Blue         62         255         76         0           127         117         Steel Blue         185         255         48         0           126         116         Med Blu Green         185         255         48         0           125         115         Peacock Blue         39         249         43         0           123-124         113         Magenta         158         6         8         0           121-122         111         Dark Pink         225         107         27         0           120         110         Middle Rose         209         132         24         0           119         109         Light Salmon         240         141         27         0           119         109         Light Salmon         240         141         27         0           118         108         English Rose         220         140         18         0 <td></td> <td>-</td> <td>o .</td> <td></td> <td></td> <td>1</td> <td></td>		-	o .			1	
131-133         121         Leaf Green         171         232         1         0           129-130         119         Dark Blue         0         194         253         0           128         118         Light Blue         62         255         76         0           127         117         Steel Blue         185         255         48         0           126         116         Med Blu Green         185         255         48         0           125         115         Peacock Blue         39         249         43         0           123-124         113         Magenta         158         6         8         0           121-122         111         Dark Pink         225         107         27         0           120         110         Middle Rose         209         132         24         0           119         109         Light Salmon         240         141         27         0           119         109         Light Salmon         240         141         27         0           118         108         English Rose         220         140         18         0 <td> </td> <td>-</td> <td></td> <td>-</td> <td>1</td> <td> </td> <td></td>		-		-	1		
128         118         Light Blue         62         255         76         0           127         117         Steel Blue         185         255         48         0           126         116         Med Blu Green         185         255         48         0           125         115         Peacock Blue         39         249         43         0           123-124         113         Magenta         158         6         8         0           121-122         111         Dark Pink         225         107         27         0           119         109         Light Salmon         240         141         27         0           118         108         English Rose         220         140         18         0           117         107         Light Rose         251         152         28         0           115-116         105         Orange         255         131         1         0           114         104         Deep Amber         243         172         1         0           115-116         105         Orange         255         131         1         0	131-133	121	Leaf Green	171	232	1	0
127         117         Steel Blue         185         255         48         0           126         116         Med Blu Green         185         255         48         0           125         115         Peacock Blue         39         249         43         0           123-124         113         Magenta         158         6         8         0           121-122         111         Dark Pink         225         107         27         0           120         110         Middle Rose         209         132         24         0           119         109         Light Salmon         240         141         27         0           118         108         English Rose         220         140         18         0           117         107         Light Rose         251         152         28         0           115-116         105         Orange         255         131         1         0           114         104         Deep Amber         243         172         1         0           113         103         Straw         216         158         0         80	129-130	119	Dark Blue	0	194	253	0
126         116         Med Blu Green         185         255         48         0           125         115         Peacock Blue         39         249         43         0           123-124         113         Magenta         158         6         8         0           121-122         111         Dark Pink         225         107         27         0           120         110         Middle Rose         209         132         24         0           119         109         Light Salmon         240         141         27         0           118         108         English Rose         220         140         18         0           117         107         Light Rose         251         152         28         0           115-116         105         Orange         255         131         1         0           114         104         Deep Amber         243         172         1         0           113         103         Straw         216         158         0         80           110-111         100         Spring Yellow         220         199         1         0     <	128	118	Light Blue	62	255	76	0
125         115         Peacock Blue         39         249         43         0           123-124         113         Magenta         158         6         8         0           121-122         111         Dark Pink         225         107         27         0           120         110         Middle Rose         209         132         24         0           119         109         Light Rose         209         132         24         0           119         109         Light Rose         220         140         18         0           117         107         Light Rose         251         152         28         0           115-116         105         Orange         255         131         1         0           114         104         Deep Amber         243         172         1         0           113         103         Straw         216         158         0         80           112         102         Light Amber         210         158         1         0           110-111         100         Spring Yellow         220         199         1         0	127	117	Steel Blue	185	255	48	0
123-124         113         Magenta         158         6         8         0           121-122         111         Dark Pink         225         107         27         0           120         110         Middle Rose         209         132         24         0           119         109         Light Salmon         240         141         27         0           118         108         English Rose         220         140         18         0           117         107         Light Rose         251         152         28         0           115-116         105         Orange         255         131         1         0           114         104         Deep Amber         243         172         1         0           113         103         Straw         216         158         0         80           112         102         Light Amber         210         158         1         0           110-111         100         Spring Yellow         220         199         1         0           100-109         90         Dark yellow green         35         225         1         0	126	116	Med Blu Green	185	255	48	0
121-122         111         Dark Pink         225         107         27         0           120         110         Middle Rose         209         132         24         0           119         109         Light Salmon         240         141         27         0           118         108         English Rose         220         140         18         0           117         107         Light Rose         251         152         28         0           115-116         105         Orange         255         131         1         0           114         104         Deep Amber         243         172         1         0           113         103         Straw         216         158         0         80           112         102         Light Amber         210         158         1         0           110-111         100         Spring Yellow         220         199         1         0           100-109         90         Dark yellow green         35         225         1         0           89-99         79         Just Blue         0         251         133         0	125	115	Peacock Blue	39	249	43	0
120         110         Middle Rose         209         132         24         0           119         109         Light Salmon         240         141         27         0           118         108         English Rose         220         140         18         0           117         107         Light Rose         251         152         28         0           115-116         105         Orange         255         131         1         0           114         104         Deep Amber         243         172         1         0           113         103         Straw         216         158         0         80           112         102         Light Amber         210         158         1         0           110-111         100         Spring Yellow         220         199         1         0           100-109         90         Dark yellow green         35         225         1         0           89-99         79         Just Blue         0         129         1         0           88-88         68         Sky Blue         0         251         133         0 <td>123-124</td> <td>113</td> <td>Magenta</td> <td>158</td> <td>6</td> <td>8</td> <td>0</td>	123-124	113	Magenta	158	6	8	0
119         109         Light Salmon         240         141         27         0           118         108         English Rose         220         140         18         0           117         107         Light Rose         251         152         28         0           115-116         105         Orange         255         131         1         0           114         104         Deep Amber         243         172         1         0           113         103         Straw         216         158         0         80           112         102         Light Amber         210         158         1         0           110-111         100         Spring Yellow         220         199         1         0           100-109         90         Dark yellow green         35         225         1         0           89-99         79         Just Blue         0         190         129         0           78-88         68         Sky Blue         0         251         133         0           62-67         52         Light Lavender         237         125         39         203	121-122	111	Dark Pink	225	107	27	0
118         108         English Rose         220         140         18         0           117         107         Light Rose         251         152         28         0           115-116         105         Orange         255         131         1         0           114         104         Deep Amber         243         172         1         0           113         103         Straw         216         158         0         80           112         102         Light Amber         210         158         1         0           110-111         100         Spring Yellow         220         199         1         0           100-109         90         Dark yellow green         35         225         1         0           89-99         79         Just Blue         0         190         129         0           78-88         68         Sky Blue         0         251         133         0           62-67         52         Light Lavender         237         125         39         203           49-61         39         Pink Carnation         232         95         0         146 </td <td>120</td> <td>110</td> <td>Middle Rose</td> <td>209</td> <td>132</td> <td>24</td> <td>0</td>	120	110	Middle Rose	209	132	24	0
117         107         Light Rose         251         152         28         0           115-116         105         Orange         255         131         1         0           114         104         Deep Amber         243         172         1         0           113         103         Straw         216         158         0         80           112         102         Light Amber         210         158         1         0           110-111         100         Spring Yellow         220         199         1         0           100-109         90         Dark yellow green         35         225         1         0           89-99         79         Just Blue         0         190         129         0           78-88         68         Sky Blue         0         251         133         0           68-77         58         Lavender         220         117         146         199           62-67         52         Light Lavender         237         125         39         203           49-61         39         Pink Carnation         232         95         0         146 </td <td>119</td> <td>109</td> <td>Light Salmon</td> <td>240</td> <td>141</td> <td>27</td> <td>0</td>	119	109	Light Salmon	240	141	27	0
115-116         105         Orange         255         131         1         0           114         104         Deep Amber         243         172         1         0           113         103         Straw         216         158         0         80           112         102         Light Amber         210         158         1         0           110-111         100         Spring Yellow         220         199         1         0           100-109         90         Dark yellow green         35         225         1         0           89-99         79         Just Blue         0         190         129         0           78-88         68         Sky Blue         0         251         133         0           68-77         58         Lavender         220         117         146         199           62-67         52         Light Lavender         237         125         39         203           49-61         39         Pink Carnation         232         95         0         146           46-48         36         Medium Pink         255         79         0         130	118	108	English Rose	220	140	18	0
114         104         Deep Amber         243         172         1         0           113         103         Straw         216         158         0         80           112         102         Light Amber         210         158         1         0           110-1111         100         Spring Yellow         220         199         1         0           100-109         90         Dark yellow green         35         225         1         0           89-99         79         Just Blue         0         190         129         0           78-88         68         Sky Blue         0         251         133         0           68-77         58         Lavender         220         117         146         199           62-67         52         Light Lavender         237         125         39         203           49-61         39         Pink Carnation         232         95         0         146           46-48         36         Medium Pink         255         79         0         130           35-34         25         Sunrise Red         249         83         2 <td< td=""><td></td><td>-</td><td>•</td><td></td><td>  -</td><td>1</td><td></td></td<>		-	•		-	1	
113         103         Straw         216         158         0         80           112         102         Light Amber         210         158         1         0           110-1111         100         Spring Yellow         220         199         1         0           100-109         90         Dark yellow green         35         225         1         0           89-99         79         Just Blue         0         190         129         0           78-88         68         Sky Blue         0         251         133         0           68-77         58         Lavender         220         117         146         199           62-67         52         Light Lavender         237         125         39         203           49-61         39         Pink Carnation         232         95         0         146           46-48         36         Medium Pink         255         79         0         130           45         35         Light Pink         228         102         0         156           35-44         25         Sunrise Red         249         83         2 <td< td=""><td></td><td></td><td>· ·</td><td></td><td></td><td></td><td>-</td></td<>			· ·				-
112         102         Light Amber         210         158         1         0           110-1111         100         Spring Yellow         220         199         1         0           100-109         90         Dark yellow green         35         225         1         0           89-99         79         Just Blue         0         190         129         0           78-88         68         Sky Blue         0         251         133         0           68-77         58         Lavender         220         117         146         199           62-67         52         Light Lavender         237         125         39         203           49-61         39         Pink Carnation         232         95         0         146           46-48         36         Medium Pink         255         79         0         130           45         35         Light Pink         228         102         0         156           35-44         25         Sunrise Red         249         83         2         0           30         20         Medium Amber         213         125         1		-			l		
110-111         100         Spring Yellow         220         199         1         0           100-109         90         Dark yellow green         35         225         1         0           89-99         79         Just Blue         0         190         129         0           78-88         68         Sky Blue         0         251         133         0           68-77         58         Lavender         220         117         146         199           62-67         52         Light Lavender         237         125         39         203           49-61         39         Pink Carnation         232         95         0         146           46-48         36         Medium Pink         255         79         0         130           45         35         Light Pink         228         102         0         156           35-44         25         Sunrise Red         249         83         2         0           30         20         Medium Amber         213         125         1         0           29         19         Fire         241         42         1         0	_			-			
100-109         90         Dark yellow green         35         225         1         0           89-99         79         Just Blue         0         190         129         0           78-88         68         Sky Blue         0         251         133         0           68-77         58         Lavender         220         117         146         199           62-67         52         Light Lavender         237         125         39         203           49-61         39         Pink Carnation         232         95         0         146           46-48         36         Medium Pink         255         79         0         130           45         35         Light Pink         228         102         0         156           35-44         25         Sunrise Red         249         83         2         0           31         21         Gold Amber         214         90         1         0           30         20         Medium Amber         213         125         1         0           29         19         Fire         241         42         1         0		-	•	-		١.	-
89-99         79         Just Blue         0         190         129         0           78-88         68         Sky Blue         0         251         133         0           68-77         58         Lavender         220         117         146         199           62-67         52         Light Lavender         237         125         39         203           49-61         39         Pink Carnation         232         95         0         146           46-48         36         Medium Pink         255         79         0         130           45         35         Light Pink         228         102         0         156           35-44         25         Sunrise Red         249         83         2         0           31         21         Gold Amber         214         90         1         0           30         20         Medium Amber         213         125         1         0           29         19         Fire         241         42         1         0           27-28         17         Surprise Peach         201         119         8         0				-			
78-88         68         Sky Blue         0         251         133         0           68-77         58         Lavender         220         117         146         199           62-67         52         Light Lavender         237         125         39         203           49-61         39         Pink Carnation         232         95         0         146           46-48         36         Medium Pink         255         79         0         130           45         35         Light Pink         228         102         0         156           35-44         25         Sunrise Red         249         83         2         0           31         21         Gold Amber         214         90         1         0           30         20         Medium Amber         213         125         1         0           29         19         Fire         241         42         1         0           27-28         17         Surprise Peach         201         119         8         0           23-26         13         Straw Tint         197         149         10         0			, ,				-
68-77         58         Lavender         220         117         146         199           62-67         52         Light Lavender         237         125         39         203           49-61         39         Pink Carnation         232         95         0         146           46-48         36         Medium Pink         255         79         0         130           45         35         Light Pink         228         102         0         156           35-44         25         Sunrise Red         249         83         2         0           31         21         Gold Amber         214         90         1         0           30         20         Medium Amber         213         125         1         0           29         19         Fire         241         42         1         0           27-28         17         Surprise Peach         201         119         8         0           20-22         10         Medium Yellow         177         148         1         0           19         -         Black         0         0         0         0         0				-			
62-67         52         Light Lavender         237         125         39         203           49-61         39         Pink Carnation         232         95         0         146           46-48         36         Medium Pink         255         79         0         130           45         35         Light Pink         228         102         0         156           35-44         25         Sunrise Red         249         83         2         0           31         21         Gold Amber         214         90         1         0           30         20         Medium Amber         213         125         1         0           29         19         Fire         241         42         1         0           29-29         19         Fire         241         42         1         0           29-19         19         Fire         241         42         1         0           29-29         19         Fire         241         42         1         0           29-29         19         Fire         241         42         1         0           20-228					l		
49-61         39         Pink Carnation         232         95         0         146           46-48         36         Medium Pink         255         79         0         130           45         35         Light Pink         228         102         0         156           35-44         25         Sunrise Red         249         83         2         0           32-34         22         Dark Amber         255         59         1         0           30         20         Medium Amber         214         90         1         0           29         19         Fire         241         42         1         0           20-2-28         17					l	l .	
46-48         36         Medium Pink         255         79         0         130           45         35         Light Pink         228         102         0         156           35-44         25         Sunrise Red         249         83         2         0           32-34         22         Dark Amber         255         59         1         0           31         21         Gold Amber         214         90         1         0           30         20         Medium Amber         213         125         1         0           29         19         Fire         241         42         1         0           29         19         Fire <td></td> <td></td> <td>•</td> <td></td> <td>l</td> <td>l .</td> <td></td>			•		l	l .	
45         35         Light Pink         228         102         0         156           35-44         25         Sunrise Red         249         83         2         0           32-34         22         Dark Amber         255         59         1         0           31         21         Gold Amber         214         90         1         0           30         20         Medium Amber         213         125         1         0           29         19         Fire         241         42         1         0           20-2-28         13         Straw Tint					l		
35-44         25         Sunrise Red         249         83         2         0           32-34         22         Dark Amber         255         59         1         0           31         21         Gold Amber         214         90         1         0           30         20         Medium Amber         213         125         1         0           29         19         Fire         241         42         1         0           29-22         17         Surprise Peach         201         119         8         0           23-26         13         Straw Tint         197         149         10         0           20-22         10         Medium Yellow         177         148         1         0           19         -         Black         0         0         0         0           18         -         White 5000 K         251         137         0         229           17         -         White 3700 K         255         201         25         255           16         -         White 7000 K         175         227         59         255           15					l		
32-34         22         Dark Amber         255         59         1         0           31         21         Gold Amber         214         90         1         0           30         20         Medium Amber         213         125         1         0           29         19         Fire         241         42         1         0           27-28         17         Surprise Peach         201         119         8         0           23-26         13         Straw Tint         197         149         10         0           20-22         10         Medium Yellow         177         148         1         0           19         -         Black         0         0         0         0           18         -         White 5000 K         251         137         0         229           17         -         White 3700 K         255         201         25         255           16         -         White 7000 K         175         227         59         255           15         -         Magenta         255         0         255         0           14			•		l	l .	
31         21         Gold Amber         214         90         1         0           30         20         Medium Amber         213         125         1         0           29         19         Fire         241         42         1         0           27-28         17         Surprise Peach         201         119         8         0           23-26         13         Straw Tint         197         149         10         0           20-22         10         Medium Yellow         177         148         1         0           19         -         Black         0         0         0         0         0           18         -         White 5000 K         251         137         0         229           17         -         White 3700 K         255         201         25         255           16         -         White 7000 K         175         227         59         255           15         -         Magenta         255         0         255         0           14         -         Yellow         226         255         1         0           <					l		
30         20         Medium Amber         213         125         1         0           29         19         Fire         241         42         1         0           27-28         17         Surprise Peach         201         119         8         0           23-26         13         Straw Tint         197         149         10         0           20-22         10         Medium Yellow         177         148         1         0           19         -         Black         0         0         0         0         0           18         -         White 5000 K         251         137         0         229           17         -         White 3700 K         255         201         25         255           16         -         White 7000 K         175         227         59         255           15         -         Magenta         255         0         255         0           14         -         Yellow         226         255         1         0           13         -         Cyan         0         255         245         0           12<					l	l .	
29         19         Fire         241         42         1         0           27-28         17         Surprise Peach         201         119         8         0           23-26         13         Straw Tint         197         149         10         0           20-22         10         Medium Yellow         177         148         1         0           19         -         Black         0         0         0         0         0           18         -         White 5000 K         251         137         0         229           17         -         White 3700 K         255         201         25         255           16         -         White 7000 K         175         227         59         255           15         -         Magenta         255         0         255         0           14         -         Yellow         226         255         1         0           13         -         Cyan         0         255         245         0           12         -         Blue         0         0         255         0         0					l		
27-28         17         Surprise Peach         201         119         8         0           23-26         13         Straw Tint         197         149         10         0           20-22         10         Medium Yellow         177         148         1         0           19         -         Black         0         0         0         0           18         -         White 5000 K         251         137         0         229           17         -         White 3700 K         255         201         25         255           16         -         White 7000 K         175         227         59         255           15         -         Magenta         255         0         255         0           14         -         Yellow         226         255         1         0           13         -         Cyan         0         255         245         0           12         -         Blue         0         0         255         0           11         -         Green         0         255         0         0           10         -					l		
23-26         13         Straw Tint         197         149         10         0           20-22         10         Medium Yellow         177         148         1         0           19         -         Black         0         0         0         0         0           18         -         White 5000 K         251         137         0         229           17         -         White 3700 K         255         201         25         255           16         -         White 7000 K         175         227         59         255           15         -         Magenta         255         0         255         0           14         -         Yellow         226         255         1         0           13         -         Cyan         0         255         245         0           12         -         Blue         0         0         255         0         0           11         -         Green         0         255         0         0         0					l		
20-22         10         Medium Yellow         177         148         1         0           19         -         Black         0         0         0         0         0           18         -         White 5000 K         251         137         0         229           17         -         White 3700 K         255         201         25         255           16         -         White 7000 K         175         227         59         255           15         -         Magenta         255         0         255         0           14         -         Yellow         226         255         1         0           13         -         Cyan         0         255         245         0           12         -         Blue         0         0         255         0           11         -         Green         0         255         0         0           10         -         Red         255         0         0         0					l	l .	
19     -     Black     0     0     0     0       18     -     White 5000 K     251     137     0     229       17     -     White 3700 K     255     201     25     255       16     -     White 7000 K     175     227     59     255       15     -     Magenta     255     0     255     0       14     -     Yellow     226     255     1     0       13     -     Cyan     0     255     245     0       12     -     Blue     0     0     255     0     0       11     -     Green     0     255     0     0     0       10     -     Red     255     0     0     0					l	l .	
18     -     White 5000 K     251     137     0     229       17     -     White 3700 K     255     201     25     255       16     -     White 7000 K     175     227     59     255       15     -     Magenta     255     0     255     0       14     -     Yellow     226     255     1     0       13     -     Cyan     0     255     245     0       12     -     Blue     0     0     255     0     0       11     -     Green     0     255     0     0     0       10     -     Red     255     0     0     0		-			l		
16     -     White 7000 K     175     227     59     255       15     -     Magenta     255     0     255     0       14     -     Yellow     226     255     1     0       13     -     Cyan     0     255     245     0       12     -     Blue     0     0     255     0       11     -     Green     0     255     0     0       10     -     Red     255     0     0     0	18	-	White 5000 K	251	137	0	229
16     -     White 7000 K     175     227     59     255       15     -     Magenta     255     0     255     0       14     -     Yellow     226     255     1     0       13     -     Cyan     0     255     245     0       12     -     Blue     0     0     255     0       11     -     Green     0     255     0     0       10     -     Red     255     0     0     0		-			l	l .	
15     -     Magenta     255     0     255     0       14     -     Yellow     226     255     1     0       13     -     Cyan     0     255     245     0       12     -     Blue     0     0     255     0       11     -     Green     0     255     0     0       10     -     Red     255     0     0     0		-			l	l .	
14     -     Yellow     226     255     1     0       13     -     Cyan     0     255     245     0       12     -     Blue     0     0     255     0       11     -     Green     0     255     0     0       10     -     Red     255     0     0     0		-	Magenta	255	0	255	
12     -     Blue     0     0     255     0       11     -     Green     0     255     0     0       10     -     Red     255     0     0     0		-	•		255	l .	0
11 - Green 0 255 0 0 1 10 - Red 255 0 0 0	13	-	Cyan	0	255	245	0
10 - Red 255 0 0 0	12	-	Blue	0	0	255	0
	11	-	Green	0	255	0	0
0-9 -   Macro color OFF   -   -   -	10	-	Red	255	0	0	0
	0-9	-	Macro color OFF	-	-	-	-

18

• (11) STROBE

# K10 CC K20 CC



BIT	EFFECT
252 - 255	LED ON
239 - 251	RANDOM FAST STROBE
226 - 238	RANDOM MEDIUM STROBE
213 - 225	RANDOM SLOW STROBE
208 - 212	LED ON
207	FAST PULSATION (25 flash/sec)
108 104 - 107	SLOW PULSATION (0,5 flash/sec) LED ON
104 - 107	FAST STROBE (25 flash/sec)
	TACTOTION (23 liabilises)
4	SLOW STROBE (1 flash/sec)
0 - 3	LED OFF

• (12) DIMMER

# K10 CC K20 CC



BIT	EFFECT
255	LED ON
0	LED OFF

• (13) DIMMER FINE

# K10 CC K20 CC

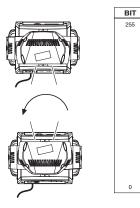


BIT	EFFECT
255	UP
0	LOW

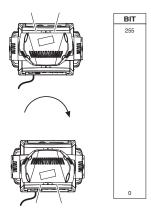
• (14) PAN

Operation with option InvertPan \$\hat{\circ}\$ Off

# K10 CC K20 CC



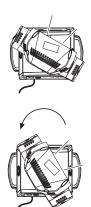
Operation with option InvertPan \hat{\circ} On



• (15) PAN FINE

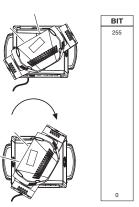
Operation with option InvertPan 🗘 Off

#### K10 CC **K20 CC**





Operation with option InvertPan 🗘 On



Operation with option InvertTilt \hat{\circ} Off

K10 CC K20 CC







0

**BIT** 255

Operation with option InvertTilt  $\,\,\hat{\circ}\,\,$  On





• (17) TILT FINE

Operation with option InvertTilt \hat{\circ} Off

K10 CC K20 CC





Operation with option InvertTilt \( \cdot \) On



**₩** 

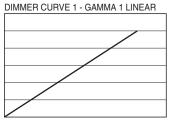


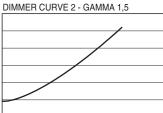
• (18) FUNCTION

K10 CC K20 CC

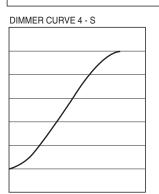
BIT	EFFECT
251 - 255	Reset to default
103 - 250	Unused Range
98 – 102	Halogen Lamp Simulation, type 5 (2500 W)
93 – 97	Halogen Lamp Simulation, type 4 (2000 W)
88 - 92	Halogen Lamp Simulation, type 3 (1200 W)
83 - 87	Halogen Lamp Simulation, type 2 (1000 W)
78 – 82	Halogen Lamp Simulation, type 1 (750W)
73 – 77	Halogen Lamp Simulation OFF (Default)
68 – 72	RGBW Gamma curve 3 – gamma = 2.0
63 - 67	RGBW Gamma curve 2 – gamma = 1.5 (Default)
58 - 62	RGBW Gamma curve 1 – gamma = 1.0
53 – 57	Dimmer Curve 4
48 - 52	Dimmer Curve 3 (Default)
43 – 47	Dimmer Curve 2
38 - 42	Dimmer Curve 1
25 - 37	Pan Tilt Normal
12 – 24	Pan Tilt Fast (Default)
0 – 11	Function off

The functions are actived passing through the "unused range" and staying 5 seconds in necessary level. Last selected function still active. Enable setting a new function.





DIMMER CURVE 3 - GAMMA 2,0



• (19) RESET

> K10 CC K20 CC

BIT	EFFECT
255	COMPLETE RESET
	Complete reset is activated passing throug the unused range and staying 5 seconds in complete reset levels
128 127	COMPLETE RESET PAN / TILT RESET
	Pan / Tilt reset is activated passing throug the unused range and staying 5 seconds in Pan / Tilt reset levels
77 76	PAN / TILT RESET ZOOM RESET
	Effects reset is activated passing throug the unused range and staying 5 seconds in Effects reset levels.
26 25	ZOOM RESET
0	UNUSED RANGE

The functions are actived passing through the "unused range" and staying 5 seconds in necessary level. Last selected function still active. Enable setting a new function.

• (20) ZOOM

> K10 CC K20 CC



BIT	EFFECT
255	WIDE BEAM
0	NARROW BEAM