LINEARLIGHT

LLD.123

LLD.63

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1. INTRODUCTION

When receipt, put out the product delicately from its package. Check there is dammage and every items are present. In case of problem, contact LINEAR TECHNOLOGIE. Return product in its original package, with operation manual.

- Keep this manual for future reference.
- Before to start, check power voltage is right (you can see it on the product rear panel)
- This product is designed for input use.
- Do not expose to product to rain or humidity to avoid a short circuit or electric chock.
- Keep away from flammable products.
- Install the product in a ventilated place (do not obstruct the ventilation holes) and keep away of 50 cm from any other device.
- To avoid electric chock, the installation must be operate by authorized and qualified technician.
- Do not do contact between Ground and Neutral. Do not forget to connect Ground to avoid electric chock.

2. FEATURES

- Blue backlight LCD display
- DMX-512 input signal
- Precision on 16 bit for a dimmer smooth variation
- Dimmer response time : Low, normal and fast
- 20 memories control manually or automatically
- Rack reaction in case of no DMX signal
- Individual curves by dimmer : Linear, curves (TV), On / off, square (theatre) or custom.
- Elegant design in light aluminium box
- Detection system to limit up-debit or down-debit
- Any dimmer output can be limited between alternative 110V and 250V
- National technological advance certificate

3. SPECIFICATIONS

- Rack power : 170V – 240V by phase (single-phase or three-phase 3P+N+T)
- Operation frequency : 45 Hz – 65 Hz
- Voltage auto compensation when power exceed 10% of variation
- Power consumption : 60W
- Max. power by output : 3 KW by circuit for racks 6 x 16A and 12 x 16A
- Max. power by output : 6 KW by circuit for racks 6 x 32A

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- Control signal : DMX512 (USITT 1990)
- Dimming range : 0 – 100%
- Response time by fault : 20 ms
- Preheating : Between 0 and 10%
- Operating time : 24 h
- Protection : IP33

4. INSTALLATION

- This product was not designed for family use.
- Power off power before to connect cables.
- Operating temperature between 2°C and 45°C.
- Relative humidity ratio between 35% and 85% max.

5. CONTROL KEYBOARD

MENU Display main menu or last selection	ENTER Enter in a menu or confirm selection
↑ Precedent	↓ Next
← Decrease	↑ Increase

6. PROGRAMMING ACCESS

Keyboard lock / unlock
- Press Enter during 2 seconds to lock system.
- It auto lock after 5 minutes of inactivity.

Dimmer rack has 10 submenus
- Dimmer manual control
- Patch
- Dimmer mode choice
- Curves
- Response delay
- Output voltage limit
- Preheating
- Loop test
- Memories control
- Configuration menu and rack information

7. INFORMATION DISPLAY

When power on, DMX signal, dimmer rack address and circuit number are displayed.

```
LLD63         6 Circ
NO: 001       DMX  OK
```

8. DIMMER MANUAL CONTROL

This function permits to change one or more dimmer intensity manually from 0 to 100% (255)

Example : To change from 1 to 12 circuits

1. Press Menu, «1.CONTROL» is displayed, press Enter.
2. Press down button, then right button to «CIRCUIT : 01 - 12».
3. Press down button to place cursor on intensity. Add intensity with right button (between 0 and PF 255)

9. PROGRAMMING

Dimmers can be programmed following automatically with start DMX address or individually with wanted DMX address.

Note : Dimmers can be programmed on any DMX circuit. DMX address (circuit) can control one or more dimmer (on left DMX N° and on right dimmer N°)

1 for 1   Individually   Wrong

Example : Assigning a DMX address automatically which start from 6
1. Press Menu.
2. Press down button to «2. Patch».
3. Press Enter, press again Enter.
4. Press wright button pour increase DMX N° or left button to decrease.
5. When modifying is finished, press Enter to save and exit.

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Example : Assigning DMX address individually (dimmer 1 control by circuit 3)
1. In PATCH menu, press right button to «USER».
2. Select circuit number with selection button and press Enter.
3. In «ADRESSE DEPART» menu, press down button, then right button to 003.
4. Press Enter to save and exit.

10. DIMMER CONTROL MODE

Dimmers can be programmed in normal, switch or fix mode :
- **Normal :** DMX signal control, dimmer is in variation mode.
- **Switch :** DMX signal control, dimmer is not graduate mode (on / off) with a setting of the trigger threshold.
- **Fix :** Not control by DMX signal, dimmer output is always send to selected intensity.

Example : To valid dimmer 2 in switch mode with 51% threshold
1. Select menu «3. FONCTION».
2. Press right button to change from 01 to 02.
3. Press down button and select Mode.
4. Press right button to change from normal to on / off.
5. Press down button to set trigger threshold to 51%.
6. Press right button to change from 50% to 51%.
7. Press Enter to save and exit.

11. CURVES SELECTION

There are 5 curves : linear, S curve (TV), on / off, square (theatre) or custom.
3 installations are possible :
- Affect a curve to a dimmer
- Program a custom curve
- Remove a curve (reset)

Example : To affect a theatre curve to circuit 1
1. Press down button to «4. COURBE» and press Enter.
2. Press Enter to valid circuit 1 in «COURBE CIRCUIT».
3. Press down button then right button to change on theatre circuit.
4. Press Enter to save and exit.

Example : To affect a custom curve to circuit 1 between 1% and 15%
1. Enter in curves mode.
2. Press right button to change input intensity to 001. Output intensity change automatically to 0016.
3. Press down button then left button to change output to 0015.
4. Save and exit.

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Example : To reset curve by default
1. Enter in «Initialiser mode courbes» menu.
2. Press left button.
3. Save and exit.

12. RESPONSE DELAY (SPEED)

3 response speed for any dimmer are possible :
- Fast (20 ms) : To create flashes with PAR or 1 KW PC.
- Normal (80 ms) : For high power projectors.
- Low (160 ms) : For 5 KW

Example : To set dimmer N° 2 in low mode
1. Enter in «5. TEMPS REPOS».
2. Press right button to change circuit to 02.
3. Press down button then left button to choose low.
4. Save and exit.

13. OUTPUT VOLTAGE LIMITATION

Any dimmer can control output voltage between 110V and 250V.

Example : To set dimmer N° 2 to 119V
1. Enter in «6. TENSION MAX» menu.
2. Press right button to select dimmer 02.
3. Press down button then left button to change voltage to 119V.
4. Save and exit.

14. PREHEATING

Preheating value can be modified to extend lamp lifetime or increase flashes speed.

Example : To set intensity to 2% on every dimmer
1. Enter in «7. PRECHAUFFAGE» menu.
2. Press left button to show «ALL».
3. Press down button then right button to 002 = 2%.
4. Save and exit.

15. LOOP TEST

This mode permits to find connected projectors faster.

1. Select menu «8. TEST EN BOUCLE».
2. Press right button to pass to 51%.
3. Press Enter then right button to select circuit 02.
4. Save and exit.

16. MEMORIES

There is 20 memories is dimmer rack and 3 choices are possibles :
- Program or modify memories
- Return memories
- Remove all memories

Transfer delay between memories can be set between 0,001 and 999,9 seconds. The last letter (E) means set mode and (V) means visualisation mode.

Example : To set or modify memory 1
1. Select menu «9. MEMOIRES».
2. Enter «1. EDITER MEMOIRE».
3. Select memory number.
4. Press Entrer to set delay.
5. Press down button to Lien to indicate next memory.
6. Press twice Entrer to save and exit.

Example : To execute a memory
1. Select «2. EXEC MEM».

Example : To remove all memories
1. Select «3. EFFACE MEM».

17. RACK CONFIGURATION MENU

In this program, there are 7 functions :
1. Rack number between 001 and 999
2. Voltage system : Show 3 phases voltage
3. Show used frequency
4. Single serial number identifying product
5. Rack behaviour in case of no DMX signal. It is possible to choose :
- Keep last light status on scene
- Execute a memory
6. Over voltage setting :
- Equipments protection thresholds choice to 300V max.
- Disable protection result in putting threshold on Off
7. Reset rack by default (factory settings)

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