

# Lighting Control Engine 3+ (fx)

## Information for Use



Read the Information for Use and the Safety Instructions carefully. Subject to modification without prior notice.

Typographical and other errors do not justify any claim for damages. Modification of the product is prohibited.

This manual is designed for electricians, system administrators, and product users.

All product names and trademarks mentioned in this manual are trademarks of their respective owners.

Except for internal use, relinquishment of the instructions to a third party, duplication in any type or form - also extracts - as well as exploitation and / or communication of the contents is not permitted.

Downloads and more information at:  
[www.ecue.com](http://www.ecue.com)

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# 1 Safety instructions

Please read the safety instructions, provided in a separate manual, carefully. Make sure that the environmental, mounting, and installation prerequisites are met. This manual should be kept at a safe place and in reach of the device.

## 1.1 Symbols



The exclamation mark warns about possible damage of the device itself, to connected devices, and to the user.



The information symbol gives general hints and informs about handling and procedures for use of the device.

## 1.2 General safety instructions



- To prevent electric shock hazard or damage to the equipment, disconnect the power cord to remove power from the server. Portions of the power supply and some internal circuit remain active until power is removed.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets, and circuitry.
- Device components inside the system can reach high temperatures. Do not open the system while in operation. Repairs may only be carried out by authorized, specially trained personnel. When in doubt, contact Traxon e:cue service.
- To prevent the device from overheating, only operate it in well-ventilated environment. Do not install next to heat emitting sources or in a place subject to direct sunlight. Let the device cool down after operation before mounting or removing the device to avoid burnings.
- Avoid dust and humidity. Do not place the device in any area where it may become wet.
- Do not route network, DMX or any other communication line together with power lines. Data traffic or functions can be disturbed.
- This is a ITE device of class A. If used in domestic environments, this device may cause radio interferences. In this case the operator can be asked to undertake corrective measures.
- Do not step on the device.





- Always carry the device by using both handles. Do not carry when the red front panel is unhitched.
- The red front panel of the device must be mounted in operation (fire enclosure). Remove the red front panel only when device is disconnected from mains.
- Accessibility for children is prohibited while the red front panel is removed. Place no foreign objects inside the device when the red front panel is removed.
- Repairs may only be carried out by authorized, specially trained personnel. When in doubt, contact Traxon e:cue service.



- Installation and maintenance of this product must be performed by qualified individuals who are knowledgeable about the procedures, precautions, and hazards associated with the product.
- Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit.
- If safety instructions are missing, please contact the Traxon e:cue support service to receive a new copy.
- Information for Use for the software applications SYMPHOLIGHT and Lighting Application Suite are available in electronic form here: inside the applications, via Desktop shortcut, and over [www.ecue.com](http://www.ecue.com).

## 2 General device description

e:cue engines are a perfect platform for building dynamic, effective, and reliable lighting applications. These engines are the functional backbone of lighting installations controlling fixtures, interacting with user terminals, and executing shows. e:cue engines are built for steadiness, long-term use, and flexibility. They are feature-rich and benefit from many years pioneering work in the field of lighting control.

### 2.1 Lighting Control Engine 3+ (fx)

Designed to control large and complex projects, e:cue's Lighting Control Engine 3+ and Lighting Control Engine 3+ fx, in the following combined as LCE3+ (fx) is a high-performance server with pre-installed SYMPHOLIGHT and Lighting Application Suite (LAS) software. Functioning as a central control unit, this versatile and reliable server coordinates all devices and luminaires within one project. It features integrated digital switching inputs, two single-pole relay outputs and support for the most varied Ethernet-based protocols. The LCE3+ (fx) also offers the capability to integrate various audio/video as well as external systems, for example via the RS-232 or the SMPTE timecode. The LCE3+ (fx) is the ideal solution for the most ambitious projects. Shows and lighting scenes can be controlled via the internal web server with either a mobile



device or a web browser. A built-in status display on the front panel communicates system notifications and software messages, while built-in cursor keys enable system control directly at the unit. The LCE3+ (fx) can be mounted into a 19" rack.

## 2.2 Delivery content

Delivery content of the e:cue Lighting Control Engine 3+ (fx) -  
Product number CL23100146835 / CL23100146935:

- Lighting Control Engine 3+ (fx), including Microsoft® Windows 10™ IoT Enterprise and software licenses for e:cue's SYMPHOLIGHT and Lighting Application Suite
- Printed LCE3+ (fx) Information for Use / Bedienungsanleitung, safety instructions
- Rack mounting rails, including screws
- 1 x mini DisplayPort to DVI, HDMI, VGA adapter
- 2 x IEC-C13 power cord (EU and UK plug)
- Dry contact plug
- 2 x relay interface plug GFKC2,5/3-ST-7,62 (Phoenix Contact 1939646)

## 2.3 Optional accessories

- Plug when using mains voltage: GMSTB 2,5/3-ST-7,62 (Phoenix-Contact 1767012)
- Cable housing when using mains voltage: KGG-MSTB 2,5/4 (Phoenix-Contact 1715343)

Recommended MIDI adapters (LAS support only):

- ESI Midimate eX
- M-Audio MIDISport 2X2 AE USB
- M-Audio USB Uno



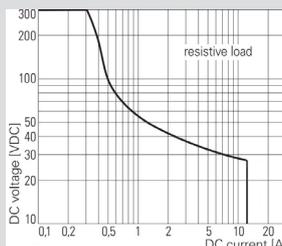
# 3 Product specifications

## 3.1 Technical Data

Product	Product number
Lighting Control Engine 3+	CL23100146835
Lighting Control Engine 3 fx+	CL23100146935
Dimensions (W x H x D)	483 x 133 x 405 mm/ 19.02 x 5.24 x 15.04 in (incl. mounting brackets)
Weight	12.3 kg / 27.12 lb (incl. mounting brackets)
Power supply input	100 ... 240 V AC, 50/60 Hz
Power consumption	110 W typically (incl. optional video capture card), efficiency up to 92.5%
Operating temperature	0 ... 40 °C / 32 ... 104 °F
Storage temperature	-10 ... 70 °C / 14 ... 158 °F
Operating / storage humidity	0 ... 80% RH, non-condensing
Protection class	IP20
Housing	Steel, front panel powder coated
Mounting	in 19-inch rack with rails

## Interface specifications

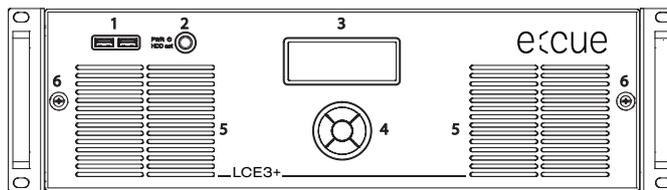
USB	2 x USB 3.0 (front) 4 x USB 3.2 Gen 1 (rear) 2 x USB 2.0 (rear)
Digital dry contacts	6 x inputs, $V_{in} = 5 \dots 24$ V DC 1 kV galvanically isolated Indicate off: $V_{in} < 1$ V DC, on: $V_{in} > 4$ V DC Input current $I_{in}$ (typical): $V_{in} = 5$ V / $I_{in} = 0.8$ mA $V_{in} = 12$ V / $I_{in} = 2.3$ mA $V_{in} = 24$ V / $I_{in} = 4.8$ mA 12 V DC output, max. 70 mA, overload protected
Relay outputs	2 x SPDT Nominal voltage: 250 V AC Continuous current: 12 A (CE, CSA), 10 A (UL, provided plug's limitation) Inrush current: 50 A (max. 20 ms) Isolation between open contacts (1 kV) DC load breaking capability:



User interfaces	LC Display, Keypad
Ethernet-Port	1 x e:net 10/100/1000 Mbps, RJ45 1 x e:net 10/100/1000/2500 Mbps, RJ45
Serial interfaces	2 x RS-232
Keyboard/ mouse	2 x PS/2
Graphics	1 x HDMI 2 x DisplayPort 3 x mini DisplayPort
Video input (LCE3FX+ version only)	DVI Input Capture, 1920 x 1080 @~80 fps, max. 2048 x 2160 pxl or max.144 fps
Audio	1 x microphone 1 x audio/line output 1 x audio/line input
Data storage	2 x M.2 SSD HDD (RAID 1 configuration)
Media drives	CD/DVD via USB port (not included)

### 3.2 Connectors and Interfaces

#### Front panel

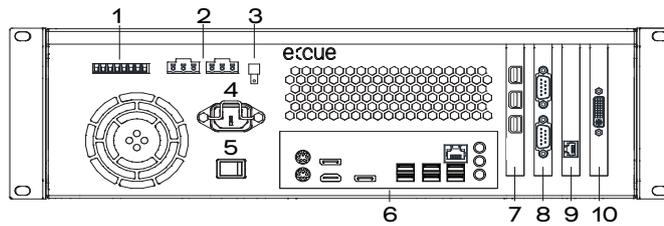


- 1 2 x USB 3.0 interfaces for USB memory or media drives
- 2 Power switch and HDD activity indicator
- 3 Display panel for system and application messages
- 4 Cursor control keys
- 5 Fan inlets
- 6 Knurled nuts for front panel mounting

The USB interfaces can be used to connect media drives like CD/DVD drivers or USB flash drives for updates or data exchange. The power switch powers the system up or forces a shutdown upon a long press. A power down can be enforced by pressing and holding the power switch for at least 5 seconds. It also serves as activity indicator for the hard disk drives inside the LCE3+ (fx).

On the display panel, application messages are displayed.

## Back panel

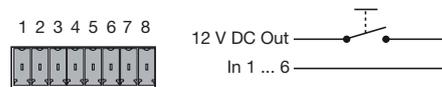


- 1 6 x Dry contact inputs and 12 V DC contact supply
- 2 2 x Relay control outputs; relay 1 left, relay 2 right
- 3 Earth connection
- 4 Main AC supply socket, IEC
- 5 Main AC switch
- 6 ["Mainboard interfaces"](#) (page 11)
- 7 3 x mini DisplayPort outputs
- 8 2 x Serial interface, RS-232
- 9 1 x Ethernet interface 10/100/1000/2500 Mbits/s, RJ45
- 10 LCE3+ fx version only: Video Capture Card, DVI-I



The BIOS and the boot screen are only accessible over the mainboard interfaces.

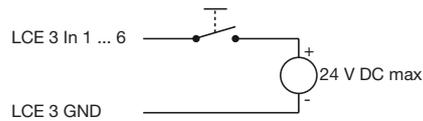
### Dry contacts



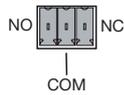
- 1  $V_{OUT} = 12 \text{ V DC}$ , max. 70 mA
- 2 ... 7 6 digital inputs (In 1 ... In 6)
- 8 Ground

Use cables with ferrule and plastic sleeve with a conductor cross section of 0.25 mm<sup>2</sup> ... 0.5 mm<sup>2</sup>. The 12 V DC supply of the LCE3+ (fx) is capable to provide up to 70 mA. The maximum input for the digital inputs is 24 V DC, the minimum voltage is 5 V DC. When voltage input is used, use Ground:



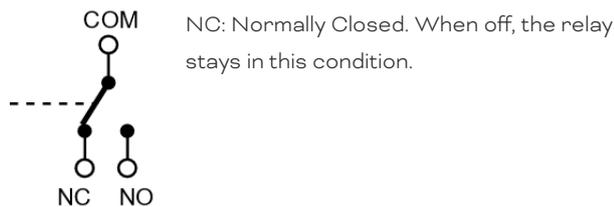


### Relay interfaces

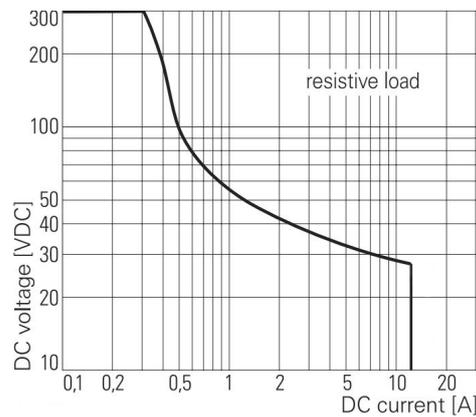


COM	Middle contact
NC	Outer contact, closed in off-state (Normally Closed)
NO	Outer contact, closed in on-state (Normally Open)

The LCE3+ (fx) has two relay contacts of Form C.



Each relay interface has a maximum DC load breaking capability of 12 A at 26 V DC or of 12 A at 250 V AC:



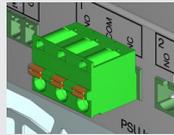
Special instructions when using mains voltage or other dangerous voltages:

- All work may only be carried out by a qualified person.
- The LCE3+ (fx) must be switched off for all cabling work.
- The field-side cables for connection to the relays must be de-energized (switched off) during all work on the LCE3+ (fx). The absence of voltage must be checked with a suitable measuring instrument before starting work!



Special instructions when using mains voltage or other dangerous voltages:

- To protect the relays against overload, a back-up fuse of 12 A or a circuit breaker of 12 A (characteristic B) must be provided.
- The provided plug of type GFKC2.5/3-ST-7.62 (Phoenix Contact 1939646) is designed for use with mains voltage, but may not provide sufficient protection against accidental contact depending on the wiring used. In this case, the person carrying out the work must ensure that adequate protection against accidental contact is provided (e.g. by installing the system in a lockable cabinet).

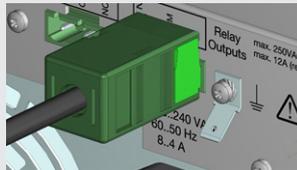
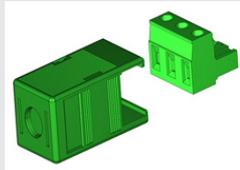


- In general, when using mains voltage, it is recommended to use a plug with protective cover including strain relief. This also allows the use of double insulated cable.

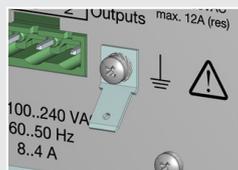
Plug: GMSTB 2,5/3-ST-7,62 (Phoenix-Contact 1767012)

Cable housing: KGG-MSTB 2,5/4 (Phoenix-Contact 1715343)

Note: Plug and cable housing are not included in delivery content.



- The housing is earthed via the power connector as standard. When using mains voltage at the relay interface, it is recommended to use an additional ground wire and connect it to the earth connection (6.3 mm blade terminal).



- Make sure that no pieces of wire get into the housing of the LCE3+ (fx), such as when stripping wires.



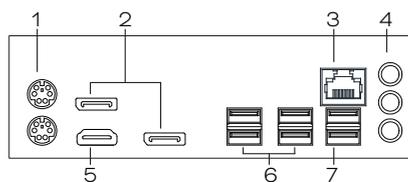
Relay plug	Max. voltage	Max. current for UL	Condition
Provided plug GFKC 2,5/3-ST-7,62	250 V AC	10 A	Comply with safety instructions for usage of AC mains.
GMSTB 2,5/3-ST-7,62 only to use in combination with cable housing KGG-MSTB 2,5/4	250 V AC	10 A	No additional safety requirements needed.



For the relay interfaces, only use terminals of the type GFKC2,5/3-ST-7,62 (Phoenix Contact 1939646) or GMSTB 2,5/3-ST-7,62 (Phoenix-Contact 1767012).

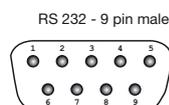
Use cables with ferrule and plastic sleeve with a conductor cross section of 0,25 mm<sup>2</sup> ... 2,5 mm<sup>2</sup>.

#### Mainboard interfaces



- 1 2 x PS/2
- 2 2 x DisplayPort
- 3 1 x Ethernet 10/100/1000 MBits/s, RJ45
- 4 3 x Audio (Microphone In, Line In, Line Out)
- 5 1 x HDMI
- 6 4 x USB 3.2
- 7 2 x USB 2.0

#### Serial interface, RS-232



1	DCD
2	RxD (Receive data)
3	TxD (Transmit data)
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI

## 4 General remarks

### 4.1 Transport

Only transport the device in its original packaging. This protects the device from damage.

### 4.2 Unpacking

Only unpack the e:cue LCE3+ (fx) at its installation location. To protect the device against condensation water, unpack it and wait until all moisture remaining in the device has evaporated. Condensation can occur when the device is moved from a cold to a warm location. Keep the packaging for use in case of further transport. Inspect all parts for completeness regarding chapter „2.2 Delivery content“ on page 05. If there is apparent damage to the device or parts are missing from the delivery scope, please contact the Traxon e:cue Support service.

### 4.3 Warranty regulations

Depending on the product, warranty regulations are of different duration. The warranty time is usually noted in the quote and in the order confirmation. See [www.traxon-ecue.com/terms-and-conditions](http://www.traxon-ecue.com/terms-and-conditions) for details. Legal warranty regulations apply in any case.

### 4.4 Disposal



Batteries and technical appliances must not be disposed of with domestic waste, but should be handed in at the appropriate collection and disposal points.

The proper disposal of packing materials and of the device is the responsibility of the



respective user and for his account; in all other matters, the retrieval obligation for packing materials and the device is subject to the statutory regulations.

#### 4.5 Support

In case of technical problems or questions regarding installation and repair please contact:

Traxon Technologies Europe GmbH  
Customer Service  
Karl-Schurz-Str. 38  
33100 Paderborn, Germany  
+49 (5251) 54648-0  
support@ecue.com

## 5 Installation

The installation of the LCE3+ (fx) consists of mounting the device, connections to the peripheral devices and to power supply.

Supply the device with power after all cabling is completed.



Connect cables and data only when the device is powered down.

#### 5.1 Mounting

You can mount the Lighting Control Engine 3+ (fx) in all standard 19-inch rack systems. Use the provided rack mounting rails and screws to fasten the device in the rack:



Make sure that the server rack is sufficiently ventilated and proper cage nuts and rack screws are used.

Connect the peripheral devices first. Ensure proper strain relief for the connected cables. All cables, except Ethernet and relay output, should not exceed a length of 3 meters. For the dry contacts see [page 08](#) and for the relay interfaces see [page 09](#).



Use shielded network cables with shielding connected to system ground.

#### 5.2 Power supply

Use the provided power cord to connect the supply voltage. Make sure that the power cord is fastened to the LCE3+ (fx) by the clamp.

To turn on the device, switch the AC mains switch on.





When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected.

## 6 Configuration

The LCE3+ (fx) runs on Microsoft® Windows 10™ as operating system. It enables you to run lighting control applications as e:cue's SYMPHOLIGHT and e:cue's Lighting Application Suite (LAS) on the LCE3+ (fx). When first powering the LCE3+ (fx), a setup of the server is required. Set the network properties for the LCE3+ (fx) and the lighting control applications afterwards.

### 6.1 LCE3+ (fx) Operation

Connect a display and input devices (keyboard, mouse) to the Lighting Control Engine 3+ (fx). Display and input devices are always necessary when accessing any application or settings on the LCE3+ (fx). Connect the power supply and switch on the LCE3+ (fx) with the power button. The LED power indicator lights up in white while the LCE3+ (fx) accesses the hard drive.

You can hot swap devices to the USB interfaces, the Mini DisplayPort outputs, to the mainboard interfaces, and the Video Capture Card of the LCE3+ (fx).



Do not switch off the server with the power button or by removing the power supply, but use the Windows shutdown function to prevent loss of data.

### 6.2 Setup

Boot the LCE3+ (fx) by pressing the power button. Windows starts its usual setup. Follow the instructions. You can change the keyboard layout to your needs and also set your time zone which matters for the lighting show execution.

Windows is set to automatic login. For other cases, these are the login credentials:

The default user name is: **ecue**

The default password is: **ecue!**

The LCE3+ (fx) has a second, backup user account prepared for safety or support reasons. Keep the account and do not change its settings: **ecueBackup** (user name), **ecueBackup!** (password). Especially in case of a forgotten password for the first account, accessing the user configurations through the backup account resolves the issue.

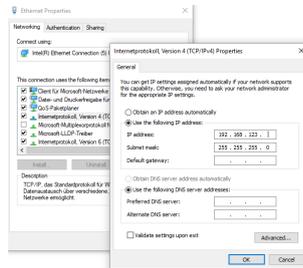


- Provide an Internet connection for the LCE3+ (fx) on setup. If necessary, with a running DHCP server to have an IP address assigned. Update Windows, SYMPHOLIGHT and the LAS. Enable and execute updates whenever available.
- Recommendation: Use the default power plan "ecue". Do not use a power manager modus which includes "sleep" since the LAS does not prevent a system shutdown. As per default, the high performance power management plan does not allow sleep modus.



### 6.3 Network Settings LCE3+ (fx)

Additionally to the network connection to the Internet, the LCE3+ (fx) is equipped with a second network adapter. This enables the integration of the LCE3+ (fx) into the network of the lighting installation. Configure the network properties for the LCE3+ (fx) as in every Windows OS, according to your network requirements:

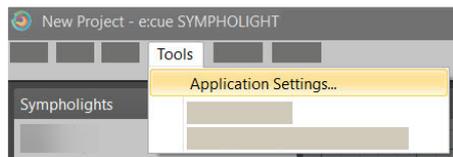


Use the preferred dedicated local network range 192.168.123.xxx with one system-internal network adapter.

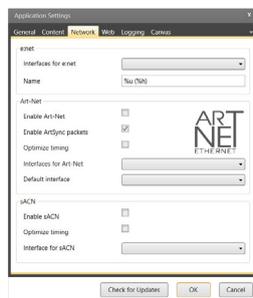
### 6.4 Network Settings SYMPHOLIGHT

The e:cue SYMPHOLIGHT application is pre-installed on the LCE3+ (fx). SYMPHOLIGHT is a software application to design, test, and program medium to very complex lighting designs. Developed with superior usability in mind, e:cue SYMPHOLIGHT is a simple yet powerful lighting control software with an intuitive graphic user interface, based on advanced timeline programming. For SYMPHOLIGHT to communicate with the network devices in the installation, SYMPHOLIGHT has to be adjusted to the same network as all the other network components. The next steps describe how to set the network address in SYMPHOLIGHT. For further information about SYMPHOLIGHT, please refer to the SYMPHOLIGHT User Manual.

1. Start the SYMPHOLIGHT application.
2. Click on **Tools** in the top left menu and select **Application Settings**:



3. In the pop up window **Application Settings** click on **Network**:



4. Enter or select the IP address(es) of your network at **Interfaces for e:net**.
5. Click **OK** to apply the changes. The pop up window closes and the network settings for SYMPHOLIGHT are now configured.

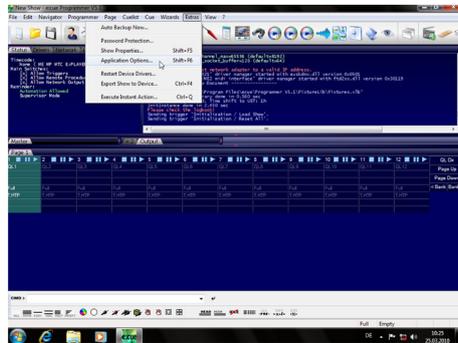


Notice that only the network settings for the SYMPHOLIGHT application have been set now. If you have further network devices installed, each of these devices have to be configured separately. See the SYMPHOLIGHT Setup Manual for details. Without a DHCP server, attach only one SYMPL node at a time; otherwise, identical IP addresses will conflict and disturb proper communication.

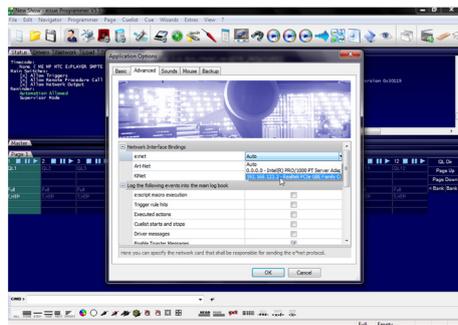
### 6.5 Network Settings LAS

The e:cue LAS is pre-installed on the LCE3+ (fx). The LAS is a software for creating light shows and controlling complex lighting projects, and to control your network and all devices in it. For the LAS to communicate with the network devices in the installation, the LAS has to be adjusted to the same network as all the other components. The next steps describe how to set the network address in the LAS. For further details on the LAS, see the System Manual e:cue LAS.

1. Start the Programmer Enterprise.
2. Click on **Extras** and select **Application Options**:



3. Under the **Advanced** tab, you can specify which network card the programmer software e:net outputs to. You can specify this setting for the Art-Net and KiNet protocols. e:cue recommends only outputting one protocol per network:



4. Click **OK** to apply the changes. The network settings for the LAS are now configured.

Notice that only the network settings for the SYMPHOLIGHT application have been set now. If you have further network devices installed, each of these devices have to be configured separately. For further details on the LAS, see the System Manual e:cue LAS.



# 7 LCE3+ (fx) system display

After powering up the system, start the lighting control application SYMPHOLIGHT or Lighting Application Suite. To start the application automatically on powering up, configure the settings of the application to start with Windows.

The system display usually cycles through various display pages. You can select these pages with the up and down cursor keys (  $\uparrow$   $\downarrow$  ). In some pages additional subpages can be selected to view more information with the right cursor key (  $\rightarrow$  ). To return to the previous page use the left cursor key (  $\leftarrow$  ).

You can send text to the system display via SYMPHOLIGHT and Lighting Application Suite. For more details, see the respective Information for Use.

* Programmer 7.0 *	
- MASTER -	The LAS Programmer version.
SystemName	Master or slave system. The system name.
* Programmer 7.0 *	The LAS Programmer version.
AppUptime: 2d19h47m	Application uptime (days, hours, minutes).
SysUptime: 2d22h49m	System uptime (days, hours, minutes).
ActHandels: 1/48	Number of running cuelists.
* 2019-05-27 11:04 *	System time.
Zone: UST +1 h (DST)	Timezone of system time.
Twilight AM: 04:33	Current astronomical twilight time for sunrise.
Twilight PM: 22:11	Current astronomical twilight time for sunset.
*2019-05-27 12:33	System time.
Sunrise: 05:17	Current astronomical sunrise time incl. DST.
Noon: 13:22	Current astronomical noon time incl. DST.
Sunset: 21:36	Current astronomical sunset time incl. DST.
* LCE3+ (fx) *	System type.
CPU: 4%	Current system CPU usage.
RAM: 13%	Current memory usage.
Fan: OK 11:04	Fan status / System time.
* LCE3+ (fx) *	System type.
2 days online	Number of days the system is online.
2 days running	Number of days the system is running.
25 days in use	Total number of days the system is in use.
* Network Adapter *	Press the $\rightarrow$ cursor key to see network info.
2 Adapter	
* Display Settings *	Press the $\rightarrow$ cursor key to set display settings.
* Visible Devices *	Press the $\rightarrow$ cursor key to see visible devices.
* Device Manager *	Device Manager overview.
51 Devices	Total number of devices in the Programmer.
28 Online	Number of devices in online state.
23 Offline	Number of devices in offline state.



\* Custom Menu \*  
 Press the > cursor key to enter. See the LAS System Manual for details how to setup user specific commands and actions. Use the ^ and v cursor keys to select, OK to execute.

\* Programmer 7.0 \*  
 The Programmer version.  
 DMX: 29fps Load:14% DMX output frame speed / System workload  
 GUI: 28fps Net: On GUI frame speed / Network enabled.  
 Supervisor Trig: On Supervisor mode enabled / Triggers enabled.

### Network adapter menu

Use the ^ and v cursor keys to switch between the network adapters. Use the < cursor key to return to the main menu.

\* Intel(R) 8257.. \*  
 The selected network interface.  
 192.168.178.25 IP address of the interface.  
 255.255.255.0 Netmask of the interface.  
 00-0B-AB-46-78-A4 Hardware address of the interface (MAC).

### Display settings

In the display settings you can change the contrast of the display. Use ^ and v keys to select contrast or backlight settings. Press the > key to enter the settings dialogue

\* Contrast \*  
 Press the > cursor key to enter the contrast settings dialogue.  
 Setup  
 Press RIGHT

\*Contrast Value \*  
 11  
 With the ^ and v keys change the contrast.  
 Set value with OK, return to the previous menu with <  
 Press UP/DOWN change .

\* Backlight \*  
 Press the > cursor key to enter the backlight settings dialogue.  
 Setup  
 Press RIGHT

\* Backlight Value \*  
 ON  
 With the ^ and v keys switch the backlight ON or OFF. Set value with OK, return to the previous menu with <.  
 Press UP/DOWN change

### Visible devices

These subpages show the devices attached to the system from the Device Manager of SYMPHOLIGHT or the LAS. Use ^ and v keys to select the device to display. Return to the previous menu with <. The following pages are examples.

\* LCE3+ (fx) I/O Inte... \*  
 The LCE3+ (fx) I/O interface (dry contacts etc.)  
 USB 33B663000000  
 The USB UID.



* Discovery Ser... *	The Discovery Service of the LAS.
IP 192.168.123.219	IP address if the service.
user1 (LCE-001)	User and system name from Windows.
* Butler PRO *	A Butler PRO.
IP 192.168.123.192	IP address of the Butler PRO.
Butler PRO 32/44	Device name.
* Term#2 *	Name of the device.
Moxa ioLogic E1214	The device is a Moxa ioLogic interface.
192.168.123.210	IP address if the device.
Online	The device is online.

## 8 LCE3+ fx video input setup

Configure the video input with the LAS.

## 9 Troubleshooting

Problem	Check	Reason	Details
System does not power up	Main switch on the back panel set to OFF?	If the main switch is set to OFF, the front button will not work.	Information for Use
Dry contact inputs do not work	Is the LCE3+ (fx) I/O system configured correctly in the Device Manager in Programmer? Is the LCE3+ (fx) added and online in the Device Manager of SYMPHOLIGHT?	The LCE3+ (fx) I/O driver must be activated in Programmer. The LCE3+ (fx) must be added in SYMPHOLIGHT. The Programmer and SYMPHOLIGHT cannot use the LCE3+ (fx) at the same time; the Programmer has priority.	LAS System Manual, SYMPHOLIGHT system manual



Relay outputs do not work	Is the LCE3+ (fx) I/O system configured correctly in the Device Manager in Programmer? Is the LCE3+ (fx) added and online in the Device Manager of SYMPHOLIGHT?	The LCE3+ (fx) I/O driver must be activated in Programmer. The LCE3+ (fx) must be added in SYMPHOLIGHT. The Programmer and SYMPHOLIGHT cannot use the LCE3+ (fx) at the same time; the Programmer has priority.	LAS System Manual, SYMPHOLIGHT system manual
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Temperature warning on display	Insufficient air flow or room temperature too high?	If the room temperature exceeds 40 °C, the system will overheat.	Information for Use
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Connected Ethernet devices are not found	Check correct e:net bindings in SYMPHOLIGHT / LAS. Check correct IP settings in Windows. Check the Ethernet cables for proper fit. Check the network switch.	There are at least two Ethernet ports in the LCE3+ (fx). Use the correct one. The IP address must also be defined in Windows. The plugs might not be connected properly. The network switch might not work as specified.	Information for Use
--	--	--	---------------------

The fan speed varies	This is correct, the fans are controlled by the system temperature.		
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# 10 Maintenance



- Do not try to repair the device. Return it to your Traxon e:cue distributor for replacement or repair.
- The red front panel of the device must be mounted in operation (fire enclosure). Remove the red front panel only when device is disconnected from mains.
- Accessibility for children is prohibited while the red front panel is removed. Place no foreign objects inside the device when the red front panel is removed.
- Before dismounting, appropriate measures must be taken to protect the respective components against damage caused by electrostatic discharge (ESD protection).

## 10.1 Cleaning

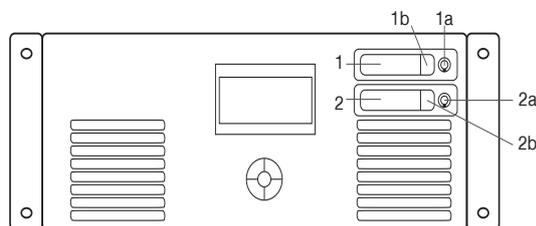
Only external cleaning might be necessary. This cleaning may only be carried out by skilled personnel. To clean the device, disconnect it from the line power supply. Disconnect all devices connected to the server. Do not use any cleaning agents containing solvents (e.g. acetone, alcohol, or thinner) or abrasives. The housing surface can be cleaned with a moist, lint-free cloth. Ensure that no water penetrates into the housing. Otherwise, this could damage the electronics.

## 10.2 Changing hard disks



The system is equipped with a RAID 1 volume to increase reliability, the SSDs in the removable frames mirror each other. Use the installed Intel Rapid Storage Technology software to manage the SSDs.

Shut down the system and disconnect from main power before accessing the internals of the LCE3+ (fx). To remove the front panel turn the two knurled nuts ant-clockwise.



- 1 Hard disk drive #1 (SSD system drive)
- 2 Hard disk drive #2 (SSD system drive)



### Hard disk replacement and upgrade

Unlock the drive. Press on the latch (1b or 2b) and the drive bay can be taken out. After changing the hard disk drive press the drive bay back into its position and lock the drive again.

## 11 Dismounting

Shut down the system and disconnect from main power. Disconnect all attached cables. Dismount the e:cue LCE3+ (fx) from the rack. The dismounting is completed.



Before dismounting, appropriate measures must be taken to protect the respective components against damage caused by electrostatic discharge (ESD protection).

### In case of returning the device

When returning the device for any reason, e.g. for exchange, be sure to watch the following note:

Always care for proper backup of all user data like shows, images and media files. Data backup is responsibility of the user, Traxon e:cue cannot guarantee that user data are kept.

## 12 Certifications

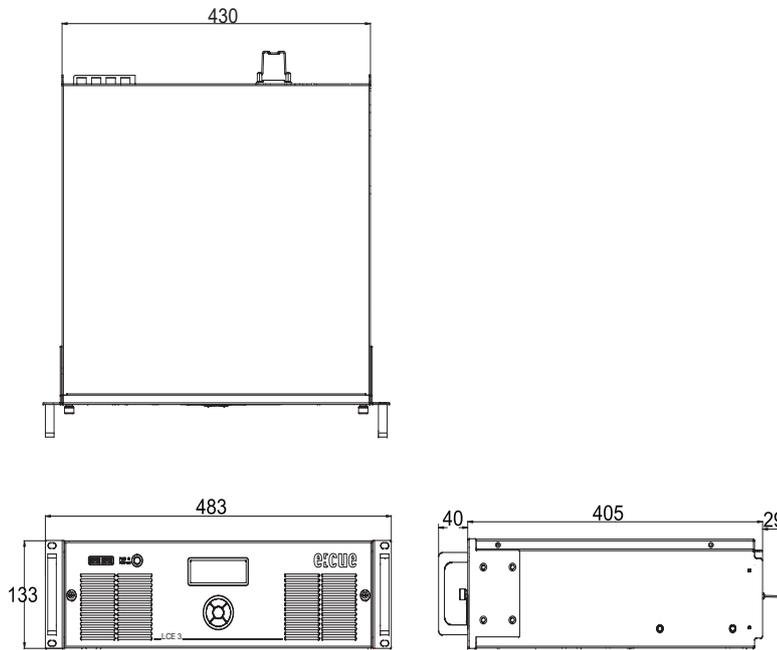


e:cue Lighting Control Engine 3+ (fx) is certified according to EN 55032:2016-02, EN 55035:2018-04, EN 62368:2017-07



# 13 Dimensions

All dimensions in mm





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Please check for the latest updates and changes on the Traxon website.

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