

Alpha Series A1.9i

Product code: 101812

Preface

Thank you for purchasing this DMT product.

The purpose of this user manual is to provide instructions for the correct and safe use of this product.

Keep the user manual for future reference as it is an integral part of the product. The user manual shall be stored at an easily accessible location.

This user manual contains information concerning:

- Safety instructions
- Intended and non-intended use of the device
- Installation and operation of the device
- Maintenance procedures
- Troubleshooting
- Transport, storage and disposal of the device

Non-observance of the instructions in this user manual may result in serious injuries and damage of property.

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1. Introduction

1.1. Before Using the Product



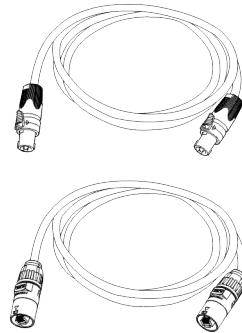
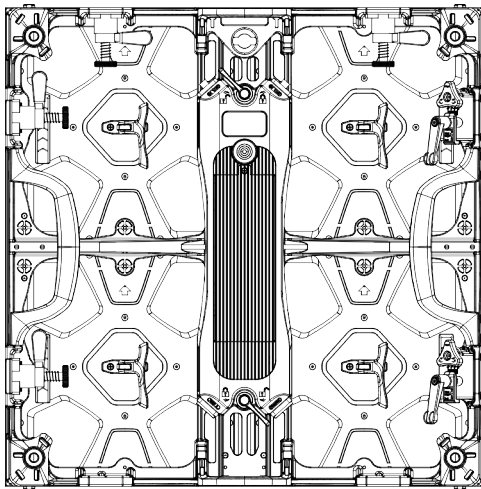
Important
Read and follow the instructions in this user manual before installing, operating or servicing this product.

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual.

After unpacking, check the contents of the box. If any parts are missing or damaged, contact your Highlite International dealer.

Your shipment includes:

Figure 1



- DMT Alpha Series A1.9i
- Power Pro cable (0,7 m) for horizontal power linking
- ProCat cable (0,7 m) for horizontal signal linking
- User manual

1.2. Intended Use

This device is intended for professional use as a LED screen for integration as a partial image area of a larger display screen area. This device is not intended for use as a standalone display. It can be installed only indoors. This device is not suitable for households.

Any other use, not mentioned under intended use, is regarded as non-intended and incorrect use.

1.3. Product Lifespan

This device is not designed for permanent operation.

Disconnect the device from the electrical power supply when the device is not in operation. This will reduce the wear and will improve the lifespan of the device.

1.4. Text Conventions

Throughout the user manual the following text conventions are used:

- Buttons: All buttons are in bold lettering, for example "Press the **UP/DOWN** buttons"
- References: References to parts of the device are in bold lettering, for example: "turn the **adjustment handle (05)**". References to chapters are hyperlinked
- 0–255: Defines a range of values
- Notes: **Note:** (in bold lettering) is followed by useful information or tips

1.5. Symbols and Signal Words

Safety notes and warnings are indicated throughout the user manual by safety signs.

Always follow the instructions provided in this user manual.



DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.



Attention

Indicates important information for the correct operation and use of the product.



Important

Read and observe the instructions in this document.



Electrical hazard



Provides important information about the disposal of this product.

1.6. Symbols on the Information Label

This product is provided with an information label. The information label is located on the bottom plate of the device.

The information label contains the following symbols:



This device shall not be treated as household waste.



Read and follow the instructions in the user manual before installing, operating or servicing the device.



This device falls under IEC protection class I.



This device is designed for indoor use.

2. Safety



Important
Read and follow the instructions in this user manual before installing, operating or servicing this product.

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual.

2.1. Warnings and Safety Instructions



DANGER
Electric shock caused by dangerous voltage inside

There are areas inside the device where dangerous touch voltage may be present.

- Do not open the device or remove any covers.
- Do not operate the device if the covers or the housing are open. Before operation, check if the housing is firmly closed and all screws are tightly fastened.
- Disconnect the device from the electrical power supply before service and maintenance, and when the device is not in use.



DANGER
Electric shock caused by short-circuit

This device falls under IEC protection Class I.

- Make sure that the device is electrically connected to ground (earth). Connect the device only to a socket-outlet with a ground (earth) connection.
- Do not cover the ground (earth) connection.
- Do not let the power cable come into contact with other cables. Handle the power cable and all connections with the mains with caution.
- Do not modify, bend, mechanically strain, put pressure on, pull or heat up the power cable.
- Make sure that the power cable is not crimped or damaged. Examine the power cable periodically for any defects.
- Do not immerse the device in water or other liquids. Do not install the device in a location where flooding may occur.
- Do not use the device during thunderstorms. Disconnect the device from the electrical power supply immediately.



Attention
Power supply

- Before connecting the device to the power supply, make sure that the current, voltage and frequency match the input voltage, current and frequency specified on the information label on the device.
- Make sure that the cross-sectional area of the extension cords and power cables is sufficient for the required power consumption of the device.



Attention
General safety

- Do not switch the device on and off in short intervals. This decreases the device's life.
- Do not shake the device. Avoid brute force when installing or operating the device.

- If the device is dropped or struck, disconnect the device from the electrical power supply immediately.
- If the device is exposed to extreme temperature variations (e.g. after transportation), do not switch it on immediately. Let the device reach room temperature before switching it on, otherwise it may be damaged by the formed condensation.
- If the device fails to work properly, discontinue use immediately.



Attention
For professional use only
This device must be used only for the purposes it is designed for.

This device is designed to be used as a LED screen. Any incorrect use may lead to hazardous situations and result in injuries and material damage.

- This device is not suitable for households.
- This device is not designed for permanent operation.
- This device does not contain user-serviceable parts. Unauthorized modifications to the device will render the warranty void. Such modifications may result in injuries and material damage.



Attention
Before each use, examine the device visually for any defects.

Make sure that:

- All screws used for installing the device or parts of the device are tightly fastened and are not corroded.
- There are no deformations on housings, fixings and installation points.
- The power cables are not damaged and do not show any material fatigue.



Attention
Do not expose the device to conditions that exceed the rated IP class conditions.

This device is IP20 rated. IP (Ingress Protection) 20 class provides protection against solid objects greater than 12 mm, such as fingers, and no protection against harmful ingress of water.

2.1.1. Requirements for the User

This product may be used by ordinary persons. Installation, service and maintenance shall be carried out only by instructed or skilled persons. Contact your Highlite International dealer for more information.

Instructed persons have been instructed and trained by a skilled person, or are supervised by a skilled person, for specific tasks and work activities associated with the installation, service and maintenance of this product, so that they can identify risks and take precautions to avoid them.

Skilled persons have training or experience, which enables them to recognize risks and avoid hazards associated with the installation, service and maintenance of this product.

Ordinary persons are all persons other than instructed persons and skilled persons. Ordinary persons include not only users of the product but also any other persons that may have access to the device or who may be in the vicinity of the device.

3. Description of the Device

The DMT Alpha Series A1.9i is an indoor HD LED screen with a pixel pitch of 1,9 mm and a built-in A8s PRO receiver card. The device allows angled connections between -5° and $+10^{\circ}$.

Two types of rigging bars (101820 + 101821) are available for standing or hanging installation. With the Stacking Bracket (101743) you can mount the device to a truss construction.

3.1. Front View

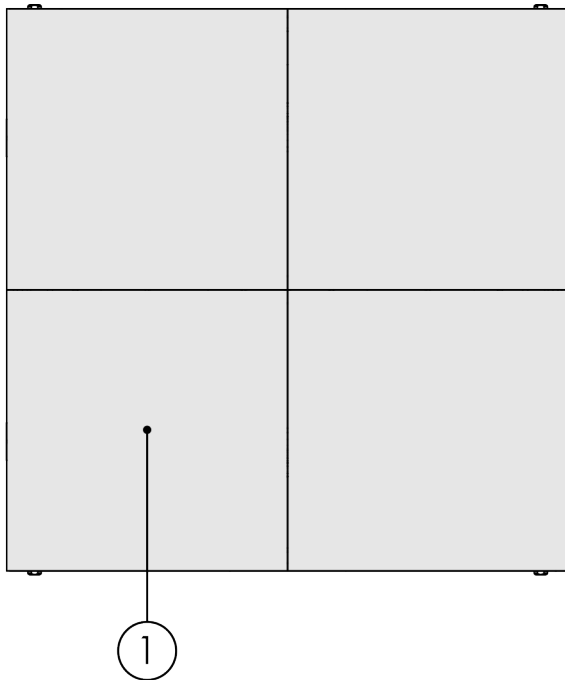


Figure 2

01) 4 x LED screen module

3.2. Back View

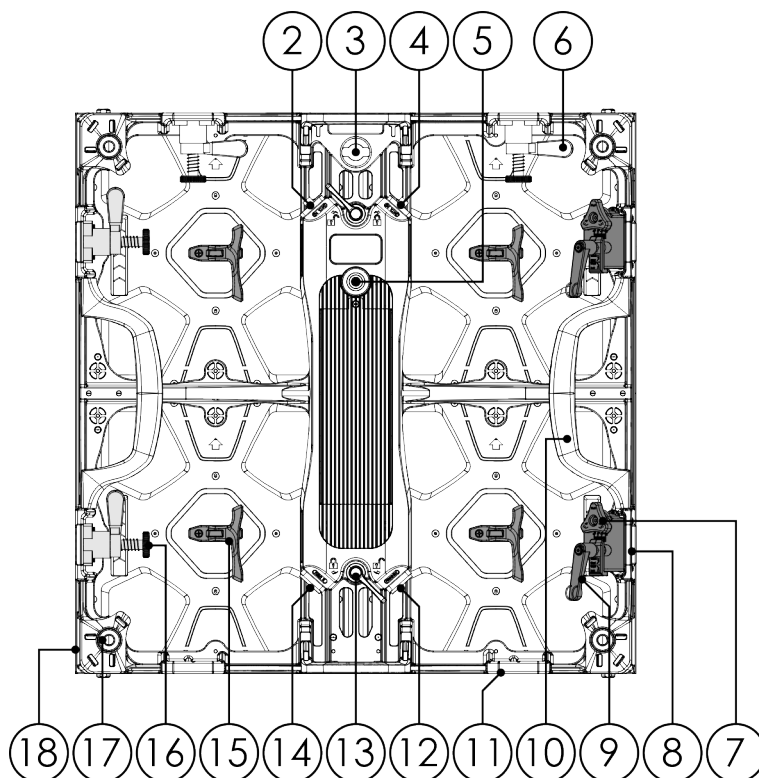


Figure 3

- 02) Data IN/OUT connector (ProCat)
- 03) Mounting opening (for stacking bracket 101743)
- 04) Data IN/OUT connector (ProCat)
- 05) Test button (with LED indicator)
- 06) 2 x Locking mechanism (for vertical connection of a rigging bar/LED screen)
- 07) 2 x Triangular screw
- 08) 2 x Inclination mechanism (with a fast-lock opening)
- 09) 2 x Locking handle
- 10) 2 x Carrying handle
- 11) 2 x Fast-lock opening (for vertical connection of 2 LED screens, or hanging/standing installation on a rigging bar)
- 12) Power OUT
- 13) 2 x Locking lever (for control box)
- 14) Power IN
- 15) 4 x Service handle (for module replacement)
- 16) 2 x Locking mechanism (for horizontal connection of a led screen)
- 17) 4 x M10 mounting opening
- 18) Cabinet frame

3.3. Product Specifications

Model:	Alpha Series A1.9i
Source:	
Light source type	LED
LED type	Black face
Brightness	800 nits
Optical:	
Pixel pitch (horizontal)	1,95 mm
Pixel pitch (vertical)	1,95 mm
Cabinet resolution (horizontal)	256 px
Cabinet resolution (vertical)	256 px
Module resolution (horizontal)	128 px
Module resolution (vertical)	128 px
Viewing angle (horizontal)	160°
Viewing angle (vertical)	160°
Minimum viewing distance	2 m
Contrast ratio	5000:1
Cabinet ratio	1:1
Transparency	0 %
Control and Programming:	
Control system	Novastar
Receiving card	A8s PRO
Screen refresh rate	3840 Hz
Electrical Specifications and Connections:	
Power supply	100–240 V AC 50/60 Hz
Power consumption	98 W
Power consumption average	50 W
Power connector In	Power Pro Blue
Power connector Out	Power Pro Grey
Data connector In	ProCat
Data connector Out	ProCat
Mechanical Specifications:	
Cabinet width	500 mm
Cabinet height	500 mm
Cabinet depth	76 mm
Module width	250 mm
Module height	250 mm
Weight	6 kg
Screen curving angles	-5° / 0° / 5° / 10°
IP rating	IP20 (indoor use only)
Housing	Magnesium die-cast
Product Properties:	
Cooling	Passive
Maintenance	Front service / Rear service
Rigging:	
Fixed mounting option	M10

Rigging vertical max.	18 pcs
Locking system	Fast lock system

Thermal Specifications:

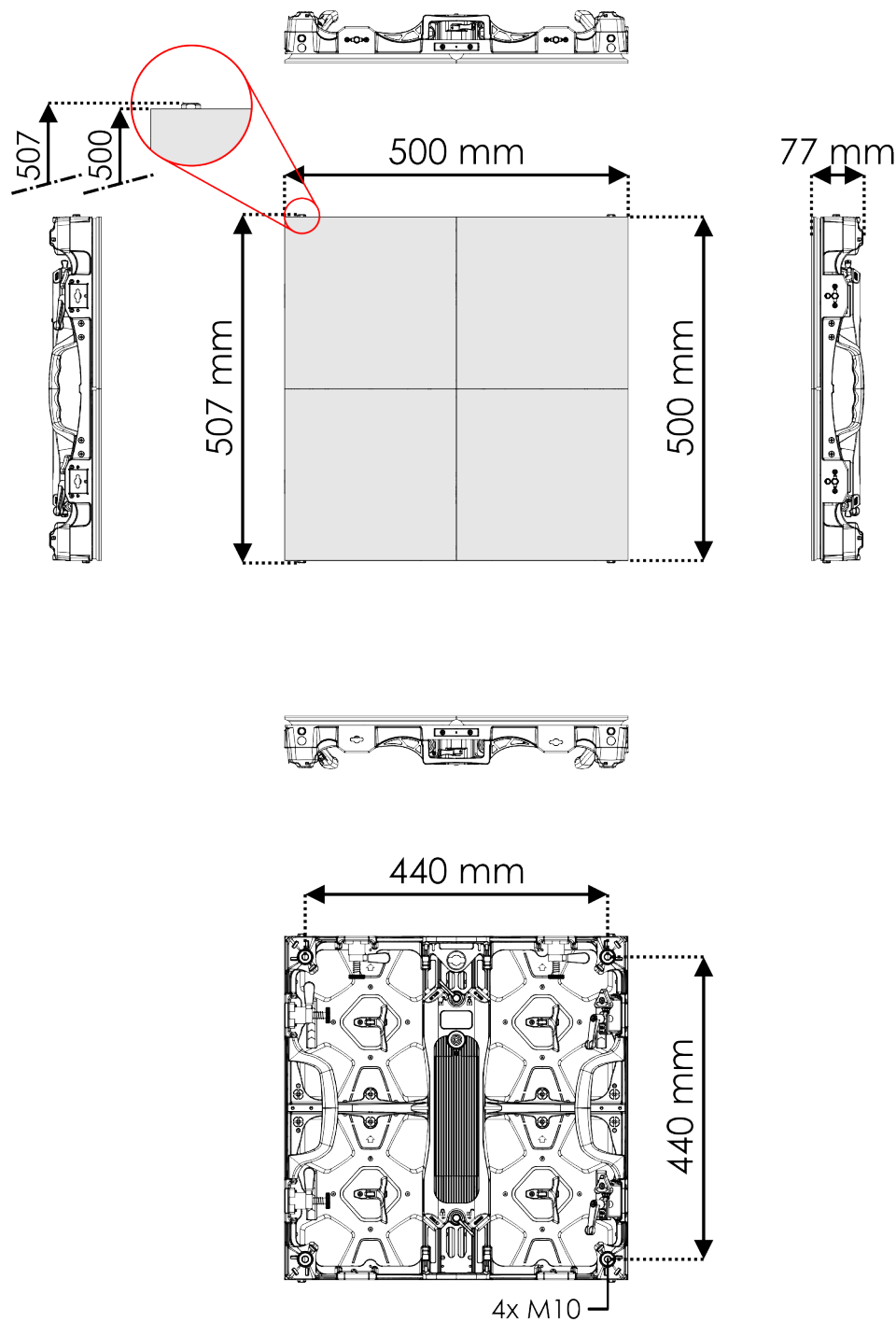
Maximum ambient temperature	45 °C
Minimum ambient temperature	-10 °C
Operating humidity	10–90 % rH

Included Items:

Included cables	Horizontal power link cable / Horizontal signal link cable
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3.4. Dimensions

Figure 4



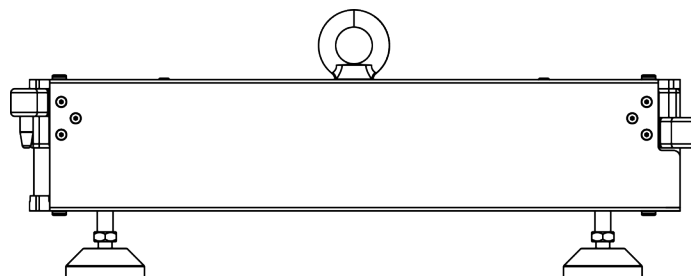
3.5. Optional Accessories

You can additionally purchase the following accessories:

- [101820](#) (Alpha Series - Single Rigging Bar incl. curving)
- [101821](#) (Alpha Series - Double Rigging Bar incl. curving)
- [101743](#) (Stacking Bracket for PS Series)

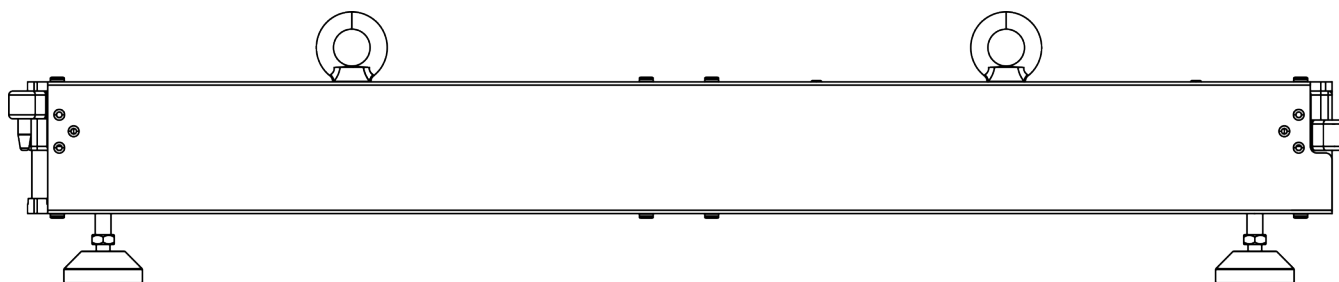
3.5.1. Alpha Series - Single Rigging Bar (incl. curving)

Figure 5



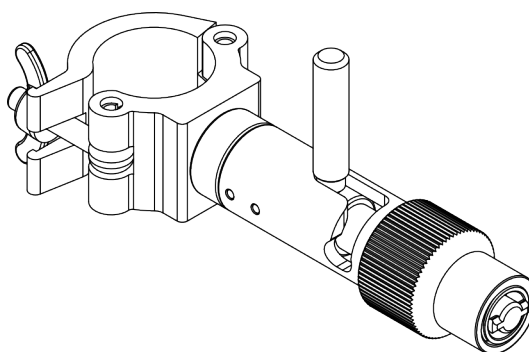
3.5.2. Alpha Series - Double Rigging Bar (incl. curving)

Figure 6



3.5.3. Stacking Bracket for PS Series

Figure 7



4. Installation

4.1. Safety Instructions for Installation



WARNING

Incorrect installation can cause serious injuries and damage of property.

If trussing systems are used, installation must be carried out only by instructed or skilled persons.

Follow all applicable European, national and local safety regulations concerning rigging and trussing.

Minimum two persons are necessary to install the device.

4.2. Personal Protective Equipment

During installation, deinstallation and rigging wear personal protective equipment in compliance with the national and site-specific regulations.

4.3. Installation Site Requirements

- The device can be used only indoors.
- The maximum ambient temperature $t_a = 45\text{ °C}$ must never be exceeded.
- The relative humidity must not exceed 50 % with an ambient temperature of 45 °C.

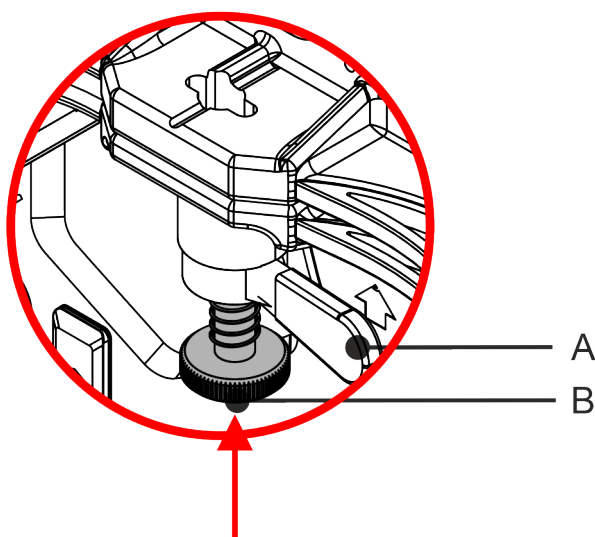
4.4. Working of the Locking Mechanism

The Alpha Series A1.9i LED screen has 4 locking mechanisms: 2 on the top section and 2 on the left side.

The Single Rigging Bar (101820) has 2 locking mechanisms and the Double Rigging Bar (101821) has 4 locking mechanisms.

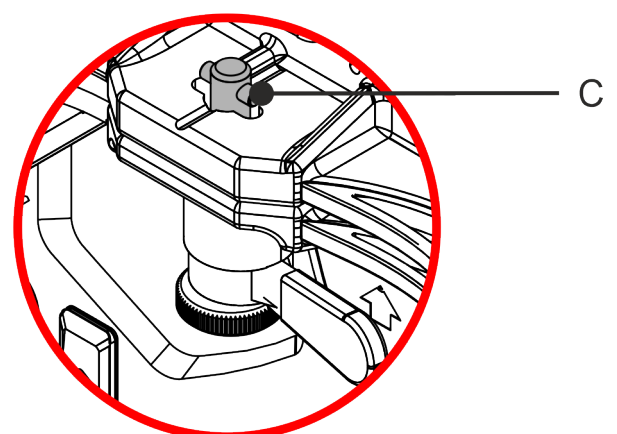
The **locking mechanisms (06/16)** allow you to easily connect a LED screen to a rigging bar, a rigging bar to a LED screen and a LED screen to another LED screen.

Figure 8



- A) Lever
- B) Spring-loaded fast-lock
- C) Pins

Figure 9



To use the locking mechanism, follow the steps below:

- 01) Turn the **lever (A)** counterclockwise.
- 02) Push the **spring-loaded fast-lock (B)** and turn it by 90° clockwise or counterclockwise, as shown in Fig. 08 and 09.
- 03) Make sure that the **pins (C)** are firmly locked in the **fast-lock opening (11)**, as shown in Fig. 10.
- 04) Turn the **lever (A)** clockwise to lock the **locking mechanism (06/16)**, as shown in Fig. 11 and 12.

Figure 10

Figure 11

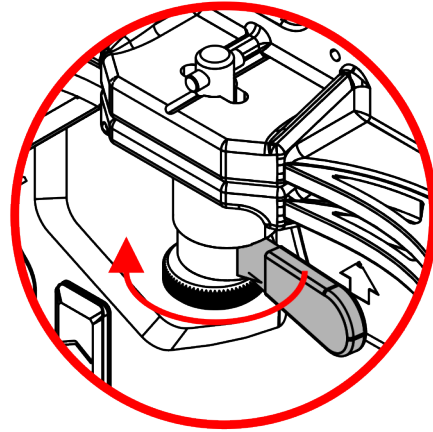
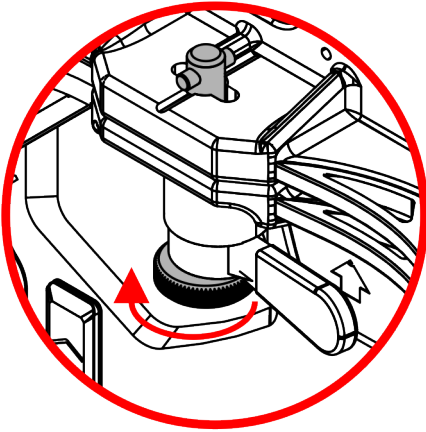
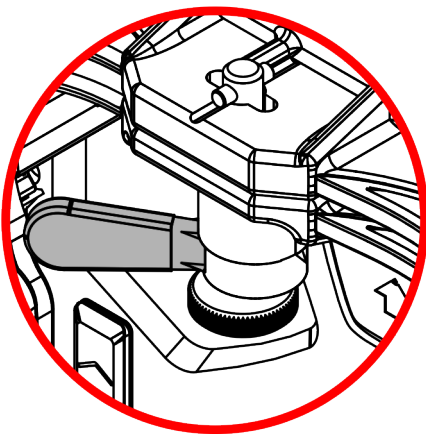


Figure 12



4.5. Maximum Number of LED Screens on a Rigging Bar



WARNING

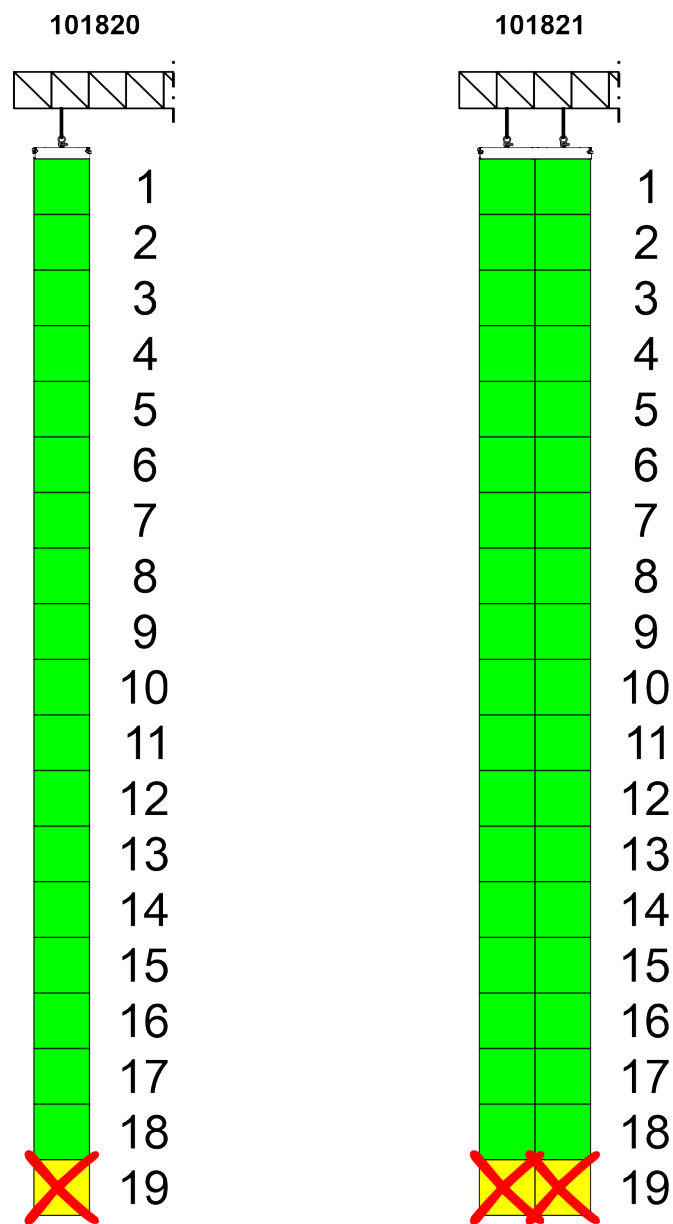
Do not hang more devices than the maximum allowed number on one rigging bar.

The Alpha Series A1.9i LED screen shall be used only with the Single Rigging Bar/ Double Rigging Bar (101820/101821).

- Do not exceed the maximum allowed Working Load Limit of the rigging bar.
- The WLL (Working Load Limit) for the Single Rigging Bar (101820) is 200 kg.
- The WLL (Working Load Limit) for the Double Rigging Bar (101821) is 400 kg.

The rigging bars are designed for hanging installation of 18 LED screens under each other. Do not hang more than 18 LED screens under each other on one rigging bar.

Figure 13



4.6. Mounting Options



CAUTION

Restrict the access under the work area during rigging/derigging.

You can mount the device in 2 different ways:

- to a rigging bar (LED screen below a rigging bar/ LED screen on top of a rigging bar)
- to a truss

4.6.1. Mounting the Device to a Rigging Bar

4.6.1.1. Hanging Installation

By the hanging installation, the device is installed below a rigging bar.



WARNING

Do not hang more devices than the maximum allowed number on one rigging bar.

The rigging bars are designed for hanging installation of 18 LED screens under each other. Do not hang more than 18 LED screens under each other on one rigging bar.



WARNING

Do not mount the device to a rigging bar only by the magnet.

The LED screen and the rigging bar have magnetic strips. The magnetic strips are designed to help you align the device to a rigging bar during installation.

- Make sure that the device is always held until installation is completed.
- Do not let the device hang on a rigging bar only by the magnet.

Before you start the installation of the LED screens, make sure that the rigging bar setup is leveled, as shown in Fig. 14 and 15. For more information about leveling, see the user manual of the Single Rigging Bar/ Double Rigging Bar (101820/101821).

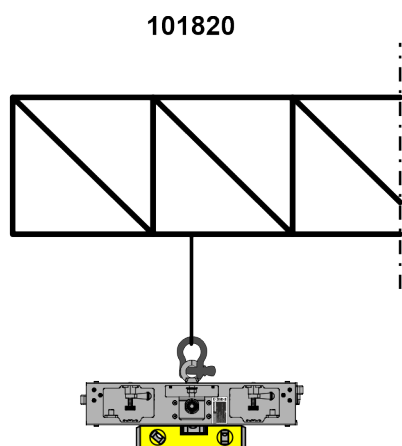


Figure 14

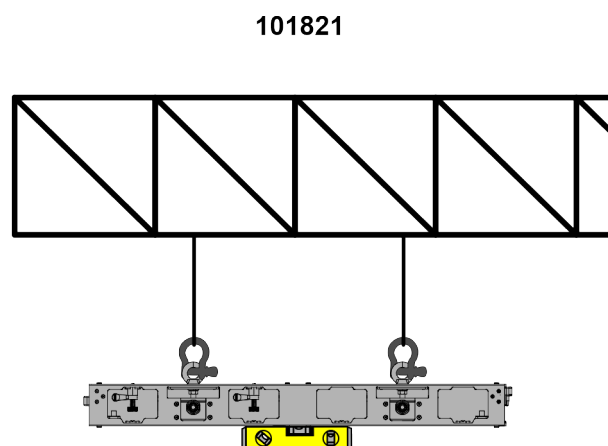


Figure 15

Figure 16

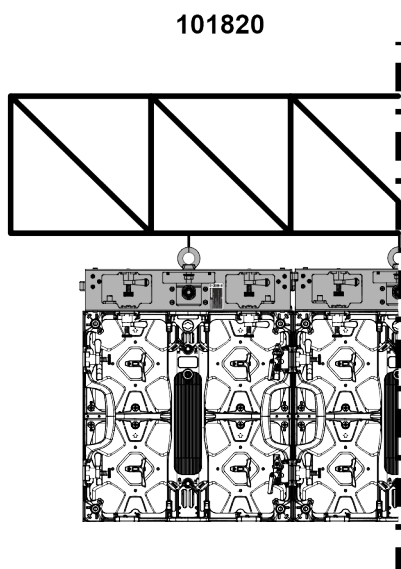
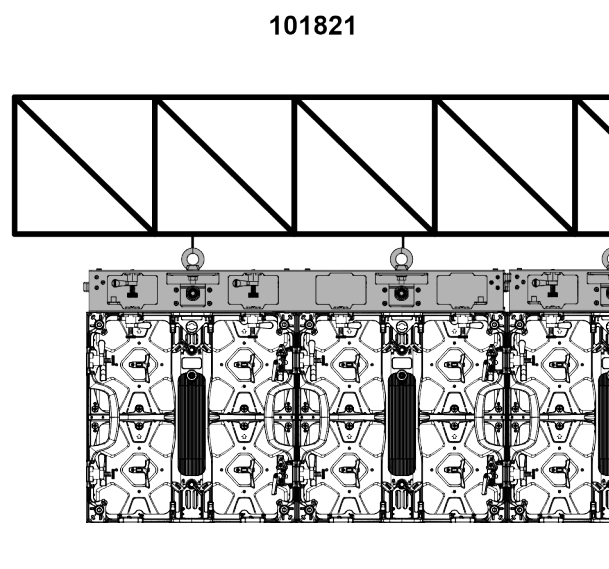


Figure 17



To connect the Alpha series 3.9i LED screen to a rigging bar, follow the steps below:

- 01) Put the LED screen below the rigging bar and let the magnetic strip on top of the LED screen snap to the bottom of the rigging bar, as shown in Fig. 18.
- 02) Turn **lever (A)** of the left **locking mechanism (06)** counterclockwise.
- 03) Push the **spring-loaded fast-lock (B)** of the left **locking mechanism (06)** upwards and turn it by 90° clockwise or counterclockwise, as shown in Fig. 19 and 20.

Figure 18

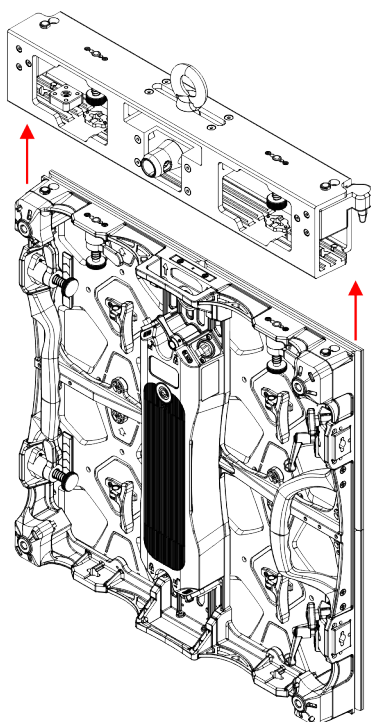


Figure 19

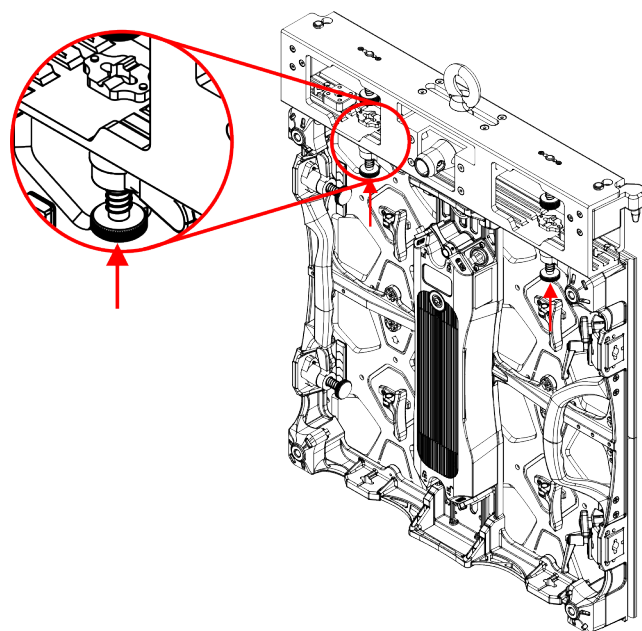
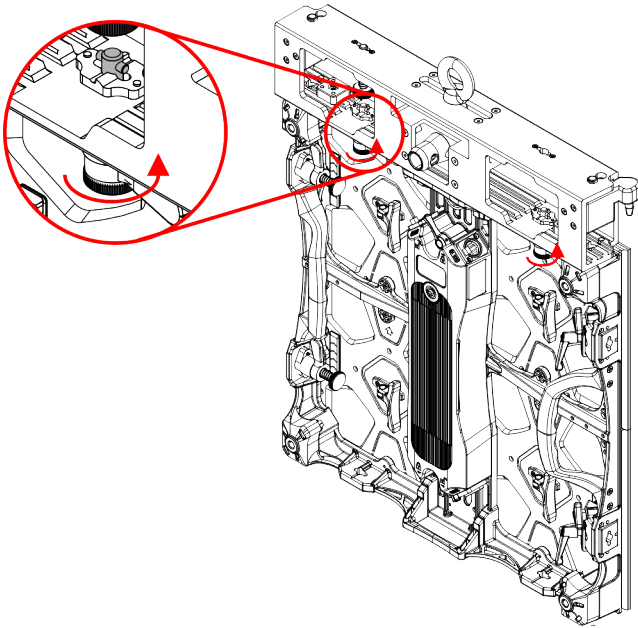


Figure 20



- 04) Make sure that the **pins (C)** of the left **locking mechanism (06)** are firmly locked in the fast-lock opening on the bottom of the rigging bar, as shown in Fig. 21.
- 05) Turn **lever (A)** of the left **locking mechanism (06)** clockwise to tighten the device to the rigging bar, as shown in Fig. 22 and 23.
- 06) Repeat steps 2–5 for the right **locking mechanism (06)**.

Figure 21

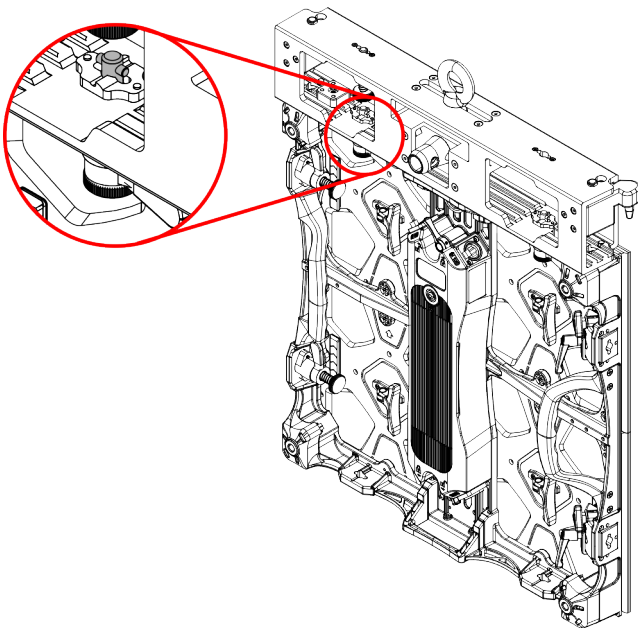
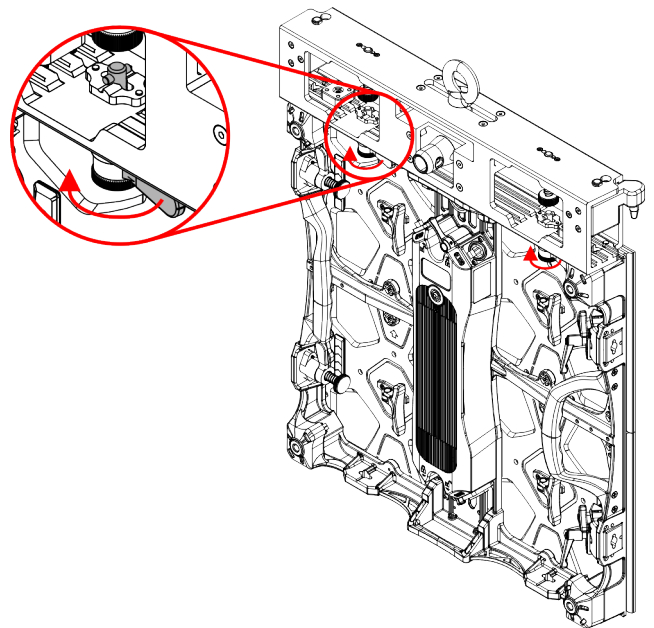


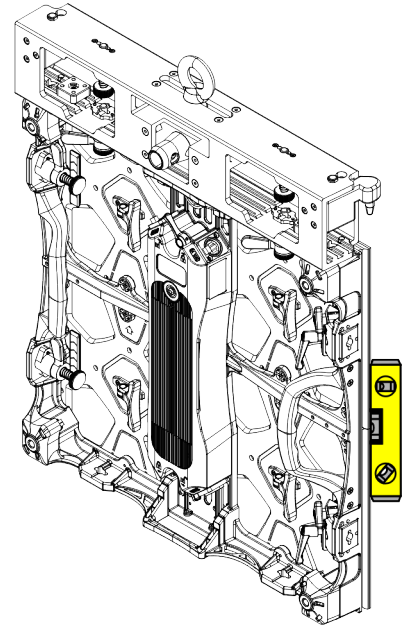
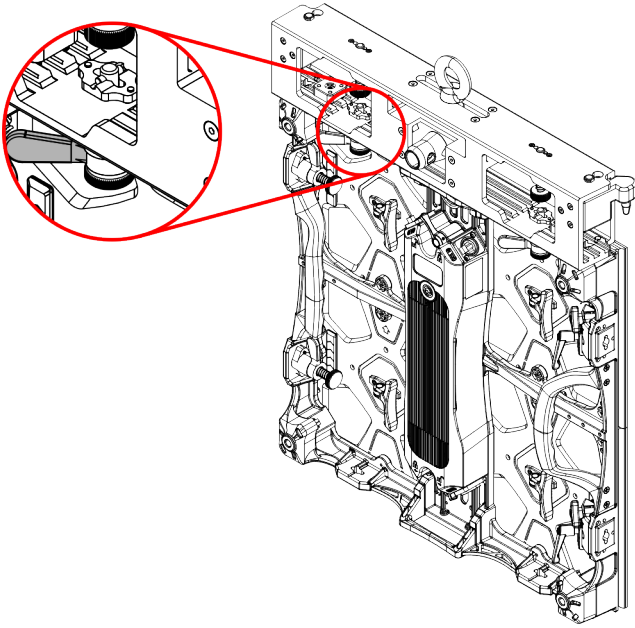
Figure 22



07) Make sure that the setup is leveled, as shown in Fig. 24. To level the setup, see Fig. 14 and 15 on page 15.

Figure 23

Figure 24



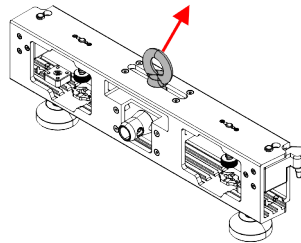
4.6.1.2. Standing Installation

By the standing installation, the device is installed on top of a rigging bar.

To install the LED screen on top of a standing rigging bar, follow the steps below:

01) Remove the rigging eye(s) from the top of the rigging bar, as shown in Fig. 25.

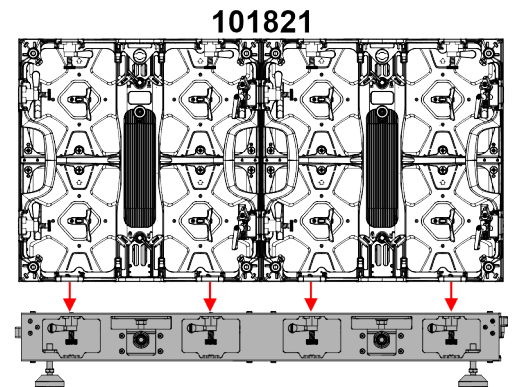
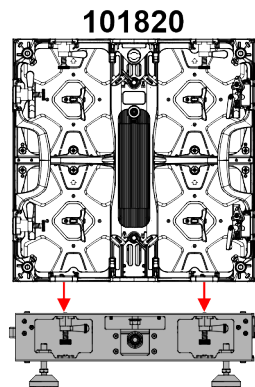
Figure 25



02) Put the LED screen on top of the rigging bar, so that the **fast-lock openings (11)** on the bottom of the LED screen fit in the fast-locks of the rigging bar, as shown in Fig. 26 and 27.

Figure 26

Figure 27

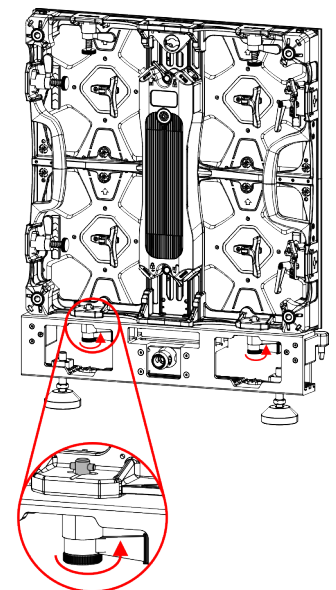
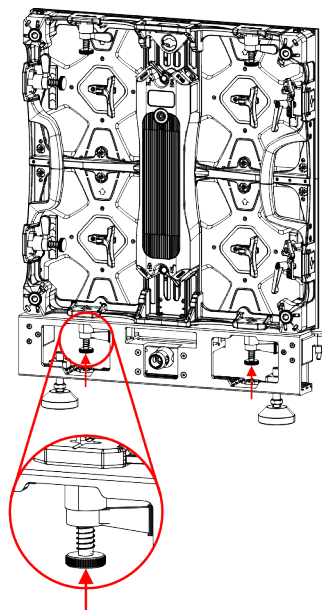


03) Turn **lever (A)** of the left **locking mechanism (06)** counterclockwise.

04) Push the **spring-loaded fast-lock (B)** of the left **locking mechanism (06)** on the rigging bar upwards and turn it by 90°, as shown in Fig. 28 and 29.

Figure 28

Figure 29



- 05) Make sure that the **pins (C)** of the left **locking mechanism (06)** on the rigging bar are firmly locked in the **fast-lock opening (11)** on the bottom of the LED screen as shown in Fig. 30.
- 06) Turn **lever (A)** of the left **locking mechanism (06)** on the rigging bar clockwise to tighten the rigging bar to the LED screen, as shown in Fig. 31 and 32.
- 07) Repeat steps 3–6 for the right **locking mechanism (06)** of the rigging bar.

Figure 30

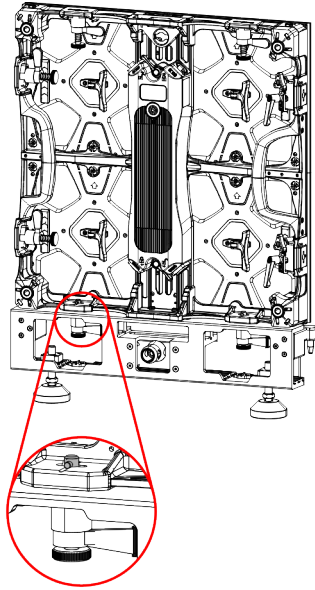
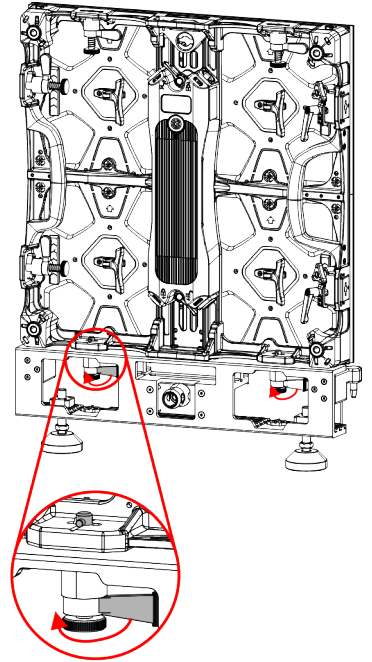


Figure 31



- 08) Make sure that the LED screen is leveled, as shown in Fig. 33. For more information about leveling the setup, see the user manual of the rigging bar (101820/101821).

Figure 32

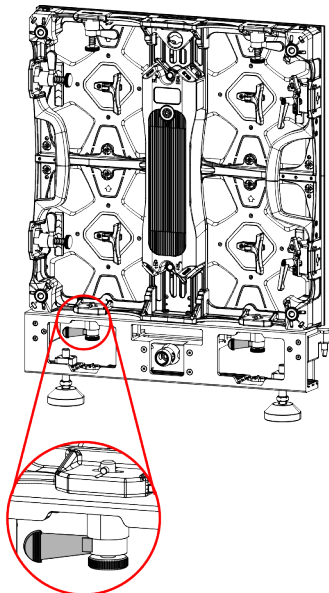
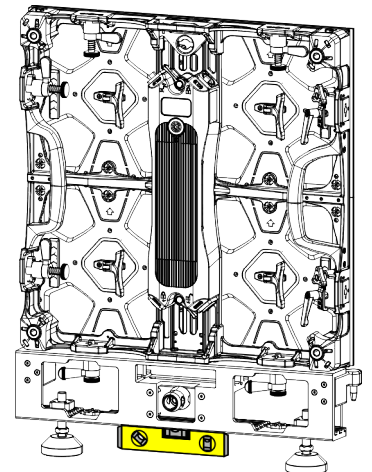


Figure 33

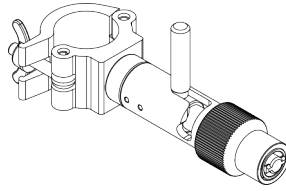


4.6.2. Mounting the Device to a Truss

You can connect the device laterally to a truss with a stacking bracket (see [3.5. Optional Accessories](#) on page 11).

To mount the device to a truss with a stacking bracket, follow the steps below:

Figure 34



- 01) Put the stacking bracket in front of the **mounting opening (03)**.
- 02) Press the lever of the stacking bracket forwards and then to the right, as shown in Fig. 35. The top of the stacking bracket locks into the **mounting opening (03)**.
- 03) To level the LED screen, turn the front of the stacking bracket clockwise, as shown in Fig. 36.

Figure 35

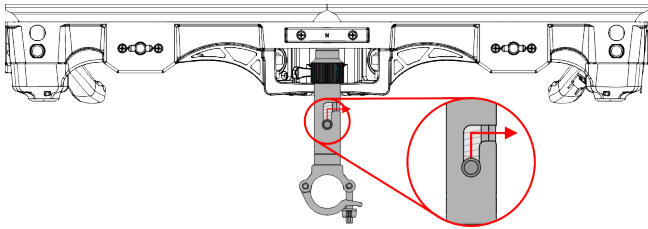


Figure 36

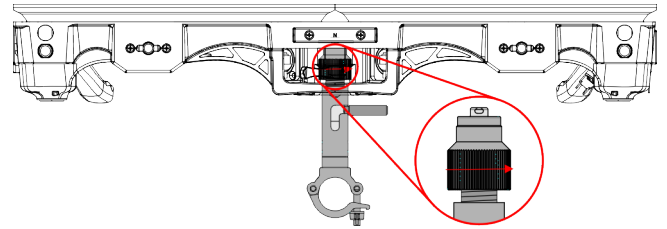
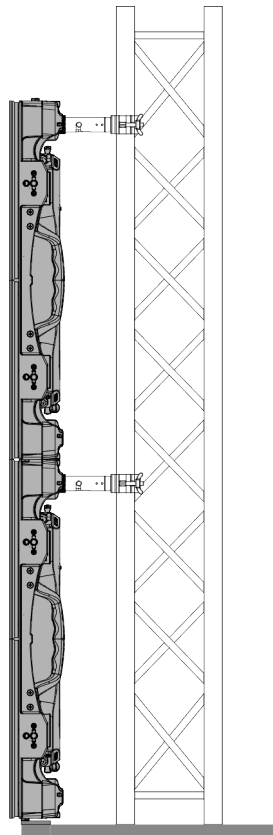


Figure 37



4.7. Connecting Multiple Devices

To create a setup with multiple devices, you need to connect the devices vertically and horizontally.

4.7.1. Vertical Installation

By the vertical installation, 2 LED screens are connected below one another.

To connect vertically 2 LED screens, follow the steps below:

- 01) Put a 2nd screen below the 1st screen and let the magnetic top of the 2nd screen snap to the bottom of the 1st screen, as shown in Fig. 38.
- 02) Turn **lever (A)** of the left **locking mechanism (06)** counterclockwise.
- 03) Push the left **spring-loaded fast-lock (B)** of the left **locking mechanism (06)** of the 2nd LED screen upwards and turn it by 90° clockwise or counterclockwise, as shown in Fig. 39 and 40.

Figure 38

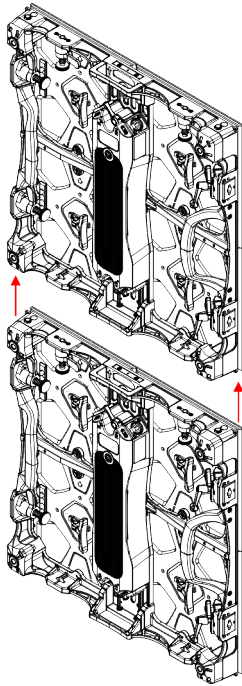


Figure 39

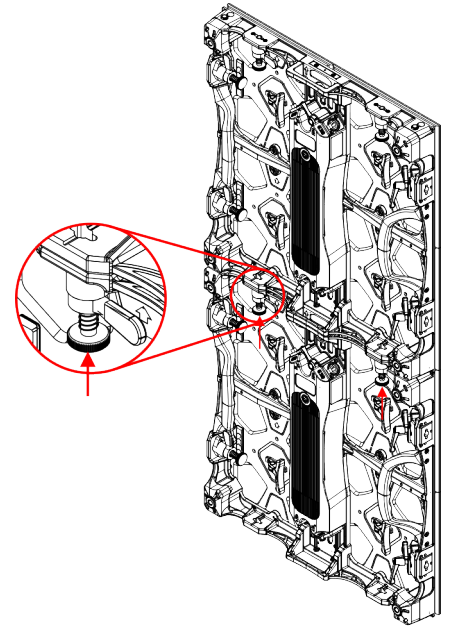
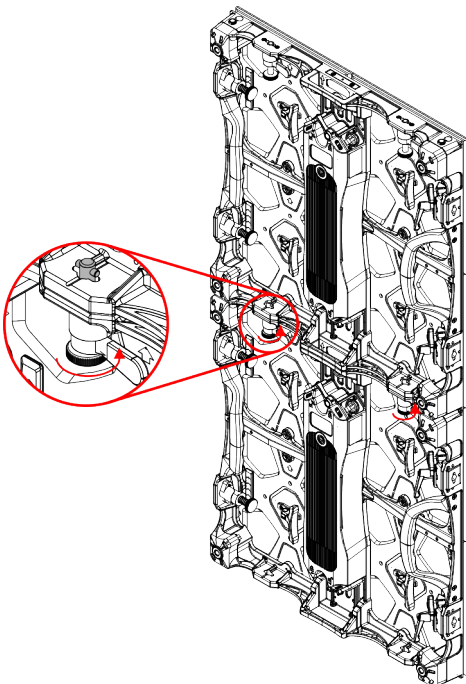


Figure 40



- 04) Make sure that the **pins (C)** of the left **locking mechanism (06)** are firmly locked in the **fast-lock opening (11)** on the bottom of the device, as shown in Fig. 41.
- 05) Turn **lever (A)** of the left **locking mechanism (06)** clockwise to tighten the 2nd LED screen to the 1st LED screen, as shown in Fig. 42 and 43.
- 06) Repeat steps 2–5 for the right **locking mechanism (06)** on the bottom LED screen.

Figure 41

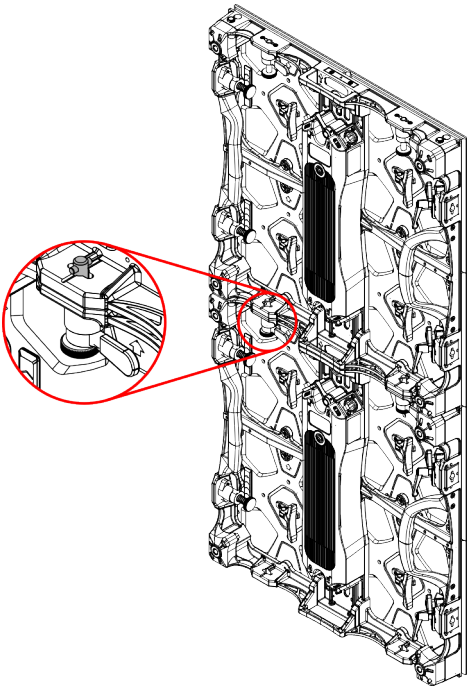
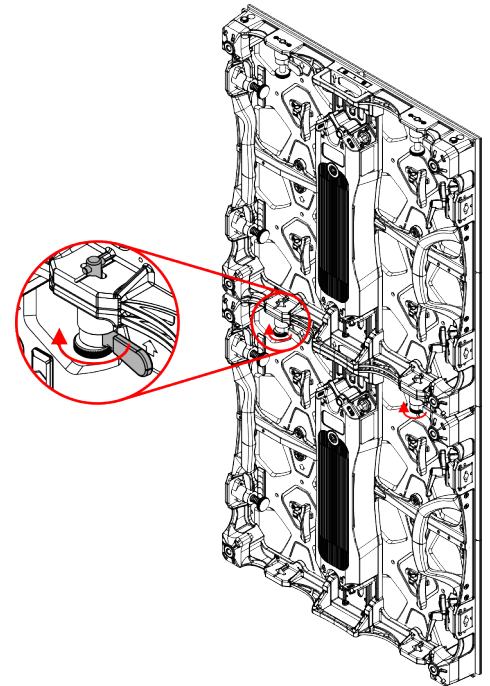


Figure 42



- 07) Make sure that the LED screen is secured and leveled before you continue with the installation, as shown in Fig. 44. To level the setup, see Fig. 14 and 15 on page 15.
- 08) If you want to add more LED screens to the setup, repeat steps 2–7.

Figure 43

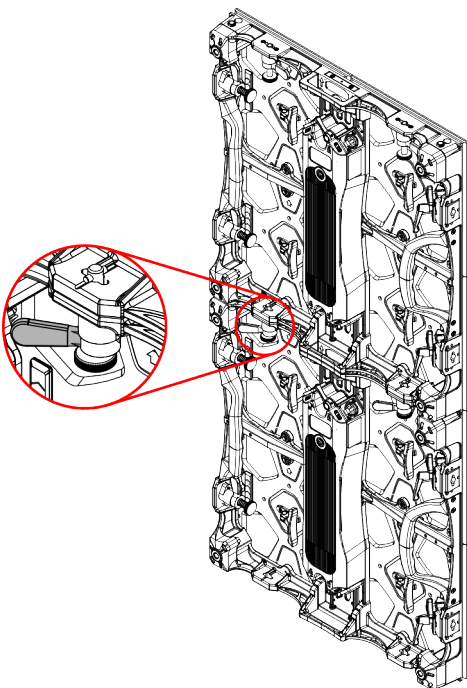
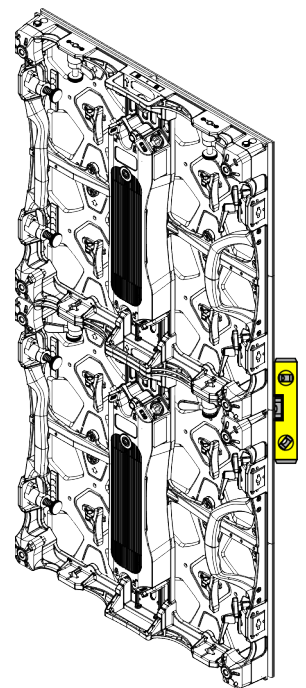


Figure 44



4.7.2. Horizontal Installation

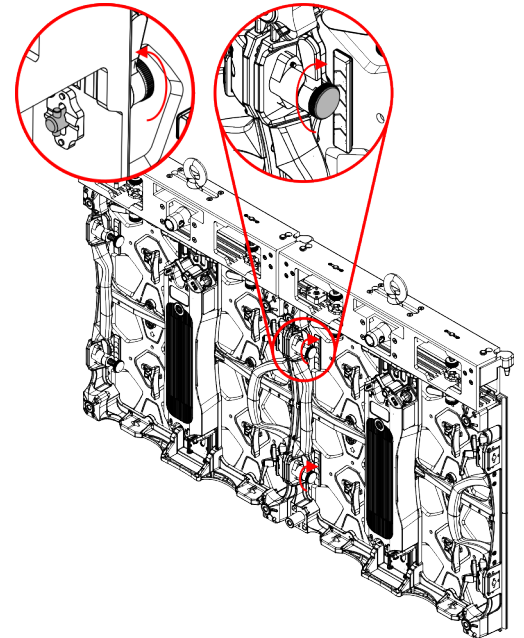
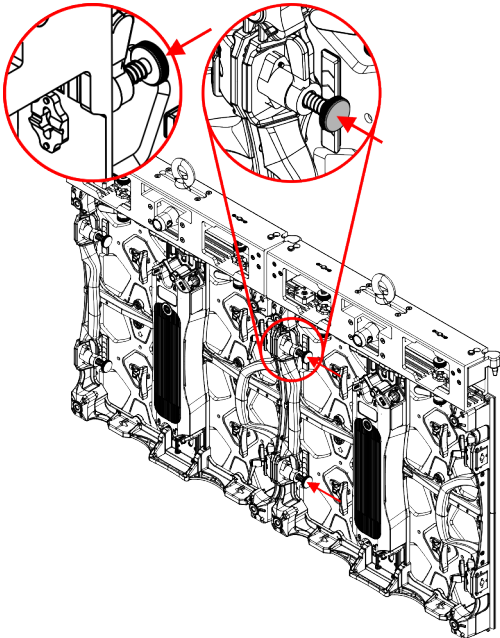
By the horizontal installation, 2 LED screens are connected next to one another.

To connect horizontally 2 LED screens, follow the steps below:

- 01) Turn **lever (A)** of the top **locking mechanism (16)** of the 2nd LED screen counterclockwise.
- 02) Push the **spring-loaded fast-lock (B)** of the top **locking mechanism (16)** of the 2nd LED screen and turn it by 90° clockwise or counterclockwise, as shown in Fig. 45 and 46.

Figure 45

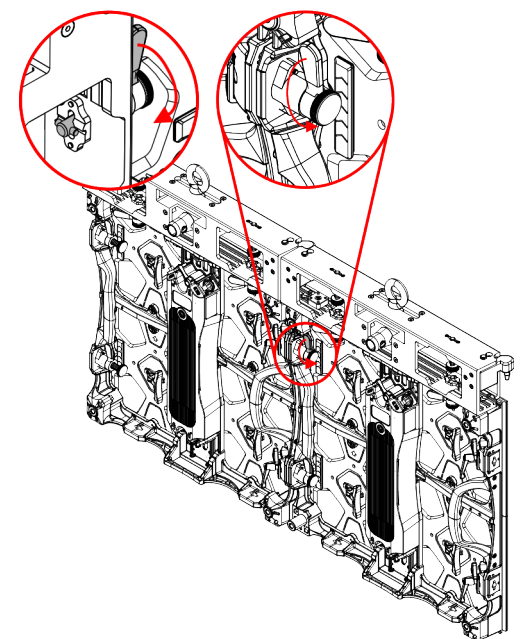
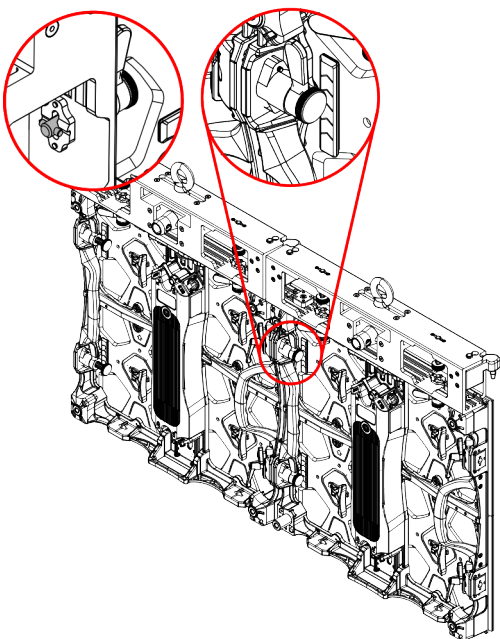
Figure 46



- 03) Make sure that the **pins (C)** of the top **locking mechanism (16)** are firmly locked in the **fast-lock opening (11)** of the previous LED screen, as shown in Fig. 47.
- 04) Turn **lever (A)** of the top **locking mechanism (16)** clockwise to tighten the LED screen to the previous LED screen, as shown in Fig. 48 and 49.
- 05) Repeat steps 1–4 for the bottom **locking mechanism (16)** of the LED screen.

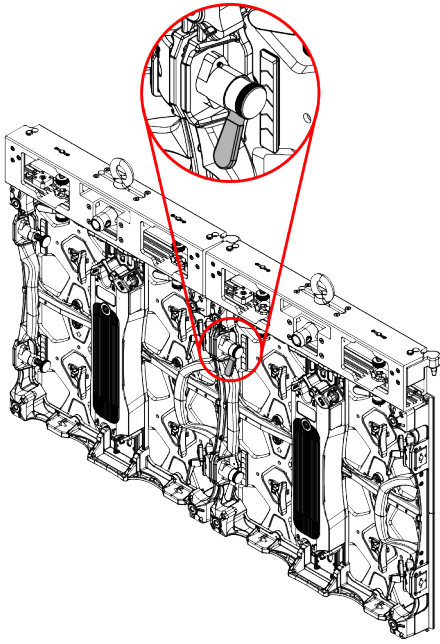
Figure 47

Figure 48



- 06) Make sure that the LED screen is leveled before you continue with the installation. For more information see Fig. 14 and 15 on page 15.
- 07) If you want to add more LED screens to the setup, repeat steps 1–6.

Figure 49



4.7.3. Curved Installation

You can create a curved setup with multiple devices. The Alpha series 3.9i LED screen can be placed in a curved setup at -5° , 5° , and 10° angle. For more information about curved installation of the rigging bar, see the user manual of the Single Rigging Bar/ Double Rigging Bar (101820/101821).

To create a curved setup of multiple LED screens, follow the steps below:

- 01) Turn the top vertical **locking handle (09)** 360° counterclockwise to unlock the inclination mechanism, as shown in Fig. 50.
- 02) Turn the top **triangular screw (07)** counterclockwise to set the angle, as shown in Fig. 51–52. There are 4 options available: -5° , 0° , 5° , 10° , as shown in Fig. 54–57.
- 03) Turn the top vertical **locking handle (09)** 360° clockwise to lock the **inclination mechanism (08)**, as shown in Fig. 53.
- 04) Repeat steps 1–3 for the bottom **locking handle (09)** of the LED screen.

Figure 50

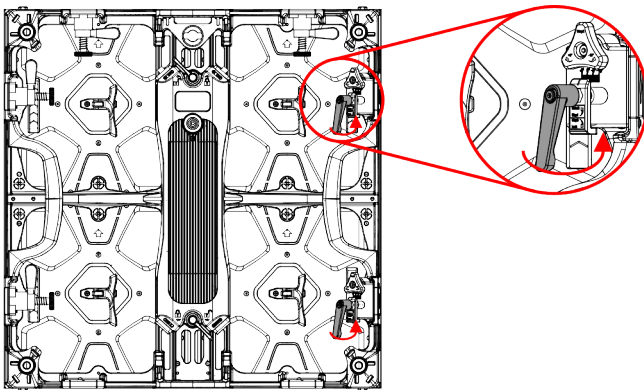


Figure 51

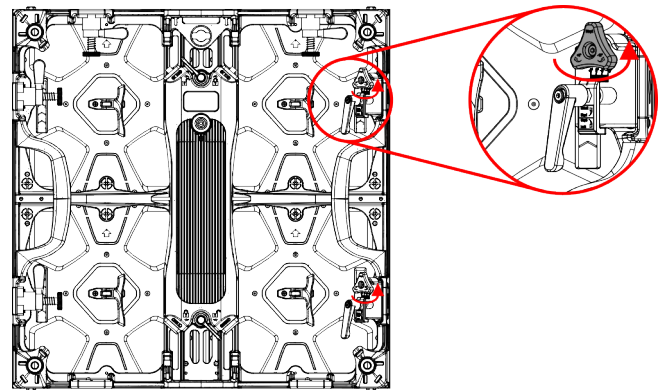


Figure 52

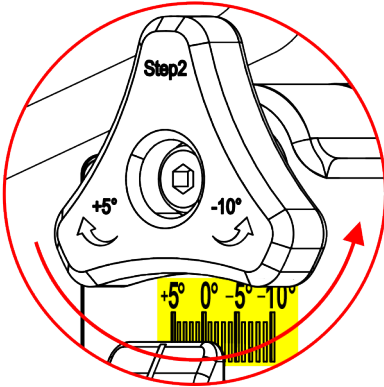


Figure 53

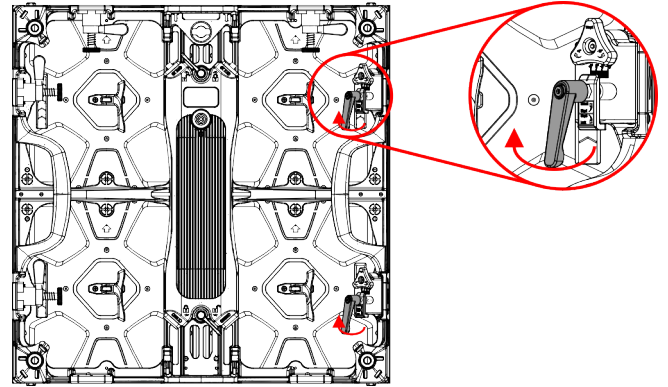


Figure 54

Figure 55

Curved at -5°

Curved at 0°

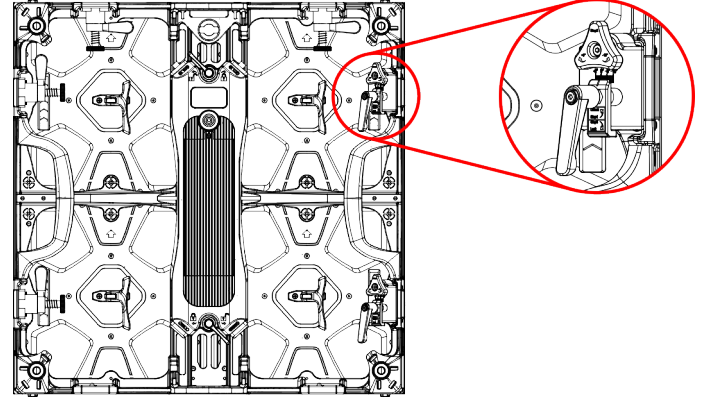
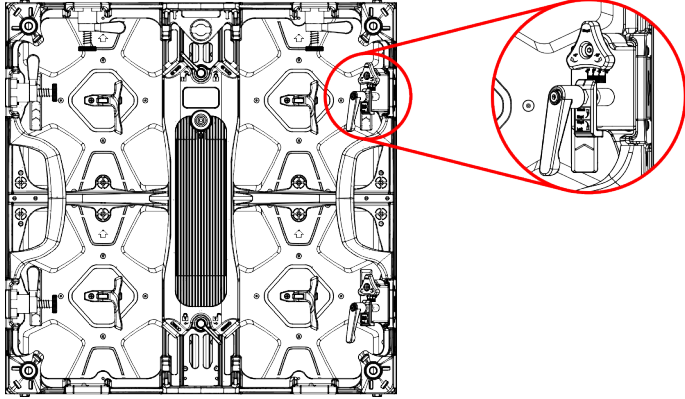
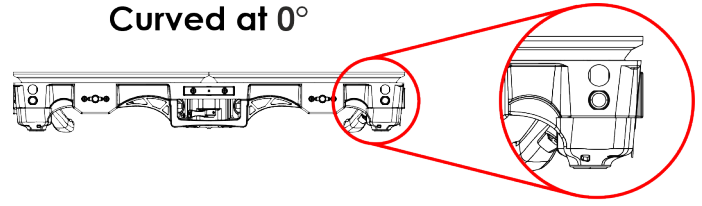
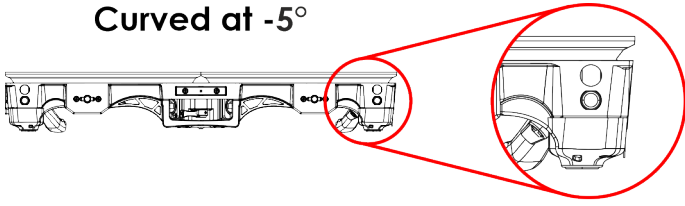
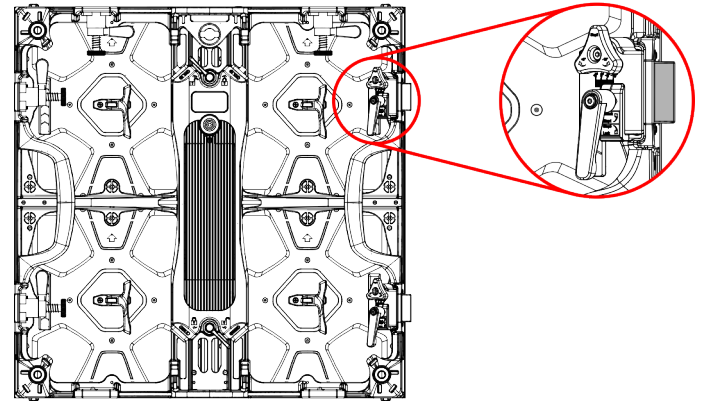
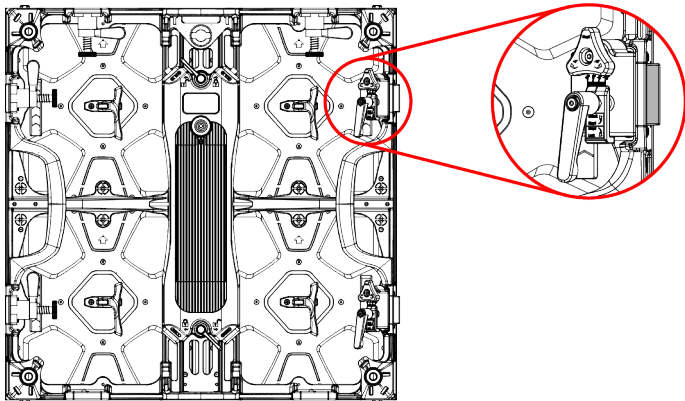
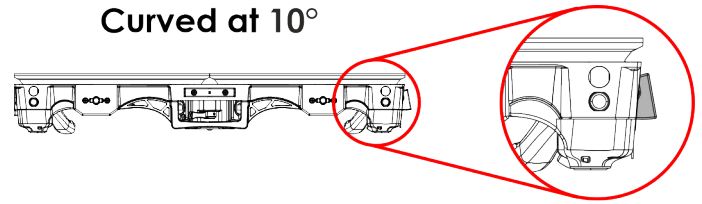
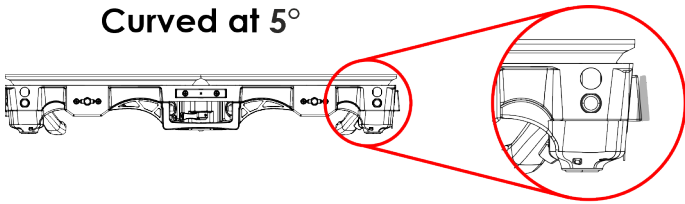


Figure 56

Figure 57

Curved at 5°

Curved at 10°



5. Setup

5.1. Warnings and Precautions



Attention

Connect all data cables before supplying power.

Disconnect power supply before connecting or disconnecting data cables.

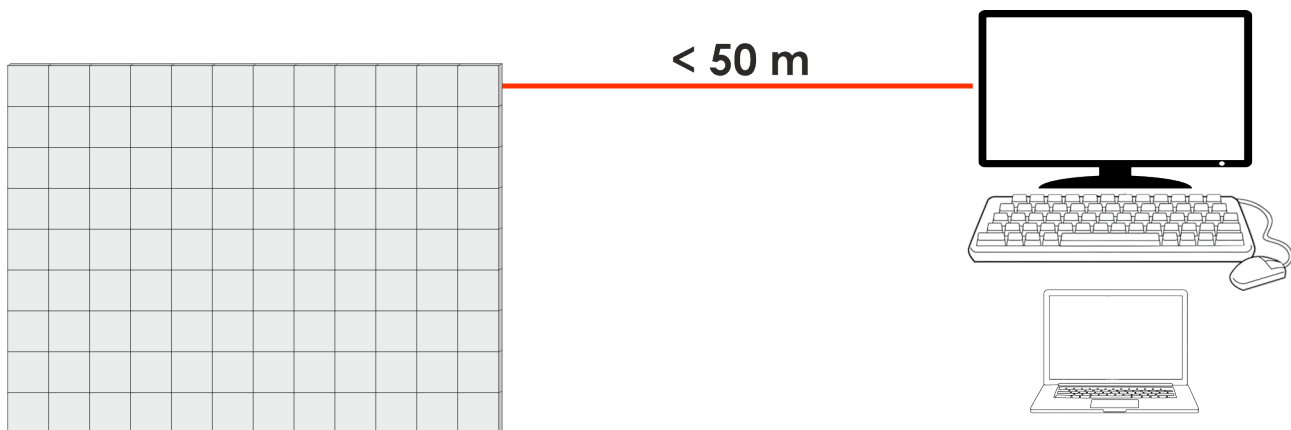
5.2. Setup Examples

5.2.1. Connecting Directly to a Personal Computer

You can connect the device directly to a personal computer, when the distance from the personal computer to the device is less than 50 m, as shown in Fig. 58.

To connect the device to a personal computer, see [Connecting multiple Devices on one Data Link](#) (see [5.3. Connecting Multiple Devices on One Data Link](#) on page 29).

Figure 58

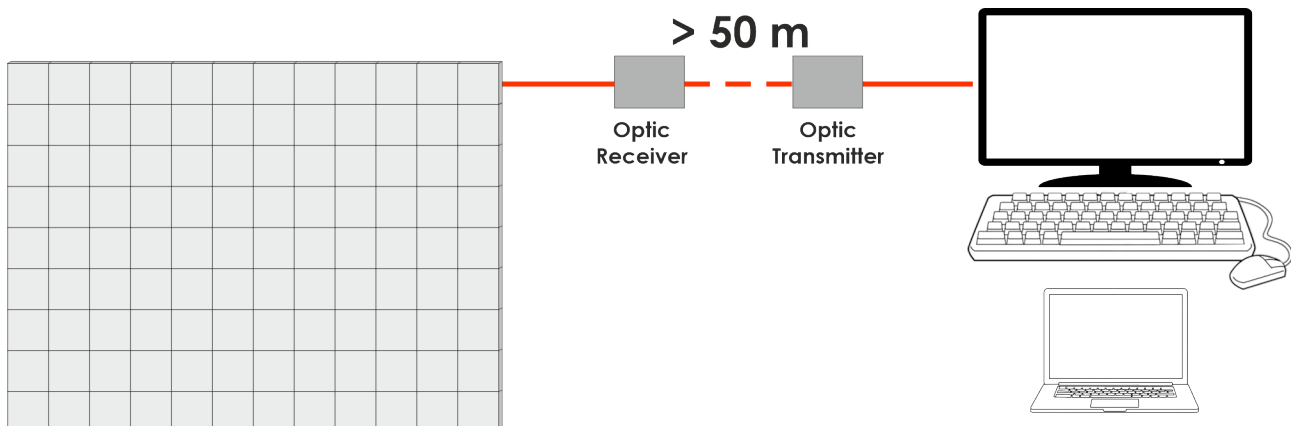


5.2.2. Connecting via an Optic Transmitter/Receiver

If the distance between the personal computer and the device is more than 50 m, you need to use optic transmitter and receiver. The device must be connected to the receiver and the transmitter must be connected to the personal computer. For more information see Fig. 59.

To connect the device to a personal computer, see [Connecting multiple Devices on one Data Link](#) (see [5.3. Connecting Multiple Devices on One Data Link](#) on page 29).

Figure 59



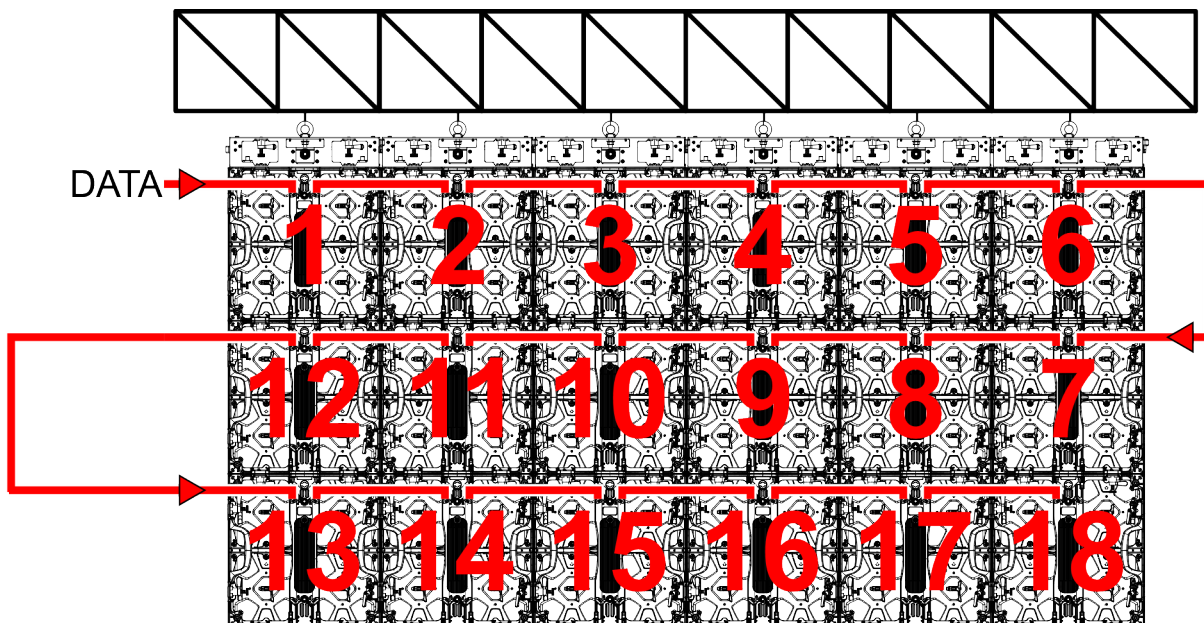
5.3. Connecting Multiple Devices on One Data Link

To connect multiple devices on one data link, follow the steps below:

- 01) Make sure that the devices are not connected to the power supply.
- 02) Make sure that the 1st device is not connected to the personal computer.
- 03) Connect the **Data IN/OUT (04)** of the 1st device to the **Data IN/OUT (02)** of the 2nd device in the setup.
- 04) Repeat step 3 to connect all other devices in a daisy-chain as shown in Fig. 60.
- 05) Connect the **Data IN/OUT (02)** of the 1st device to the personal computer.

- Note:**
- For horizontal connection, for example between LED screen 1 and 2, use the supplied horizontal signal link ProCat cable.
 - For vertical connection, for example between LED screen 6 and 7, use a long signal link ProCat cable. The long signal link ProCat cable is not supplied with the device. You can use a cable from the FL57 series. Contact your Highlite International dealer for more information.

Figure 60



5.4. Connecting to Power Supply



DANGER
Electric shock caused by short-circuit

The device accepts AC mains power at 100–240 V and 50/60 Hz. Do not supply power at any other voltage or frequency to the device.

This device falls under IEC protection class I. Make sure that the device is always electrically connected to the ground (earth).

Before connecting the device to the socket-outlet:

- Make sure that the power supply matches the input voltage specified on the information label on the device.
- Make sure that the socket-outlet has ground (earth) connection.

Connect the device to the socket-outlet with the power plug. Do not connect the device to a dimmer circuit, as this may damage the device.

Note:
When creating setups with multiple rows of devices, do not connect the first device of each row to the power supply before you complete the setup. See [Power Linking of Multiple Devices](#) (see 5.5. Power Linking of Multiple Devices on page 30) for more information.

5.5. Power Linking of Multiple Devices

This device supports power linking. Power can be relayed to another device via the power OUT connector. Note that the input and the output connectors have different designs: one type cannot be connected to the other.

Power linking of multiple devices must be carried out only by instructed or skilled persons.



WARNING

Incorrect power linking may lead to overload of the electrical circuit and result in serious injuries and damage of property.

To prevent overload of the electrical circuit, when power linking multiple devices:

- Use cables with sufficient current-carrying capacity. The power cable supplied with the device is not suitable for power linking of multiple devices.
- Make sure that the total current draw of the device and all connected devices does not exceed the rated capacity of the power cables and the circuit breaker.
- Do not link more devices on one power link than the maximum recommended number.

Maximum recommended number of devices:

- at 100–120 V: 5 devices Alpha Series A1.9i
- at 200–240 V: 10 devices Alpha Series A1.9i

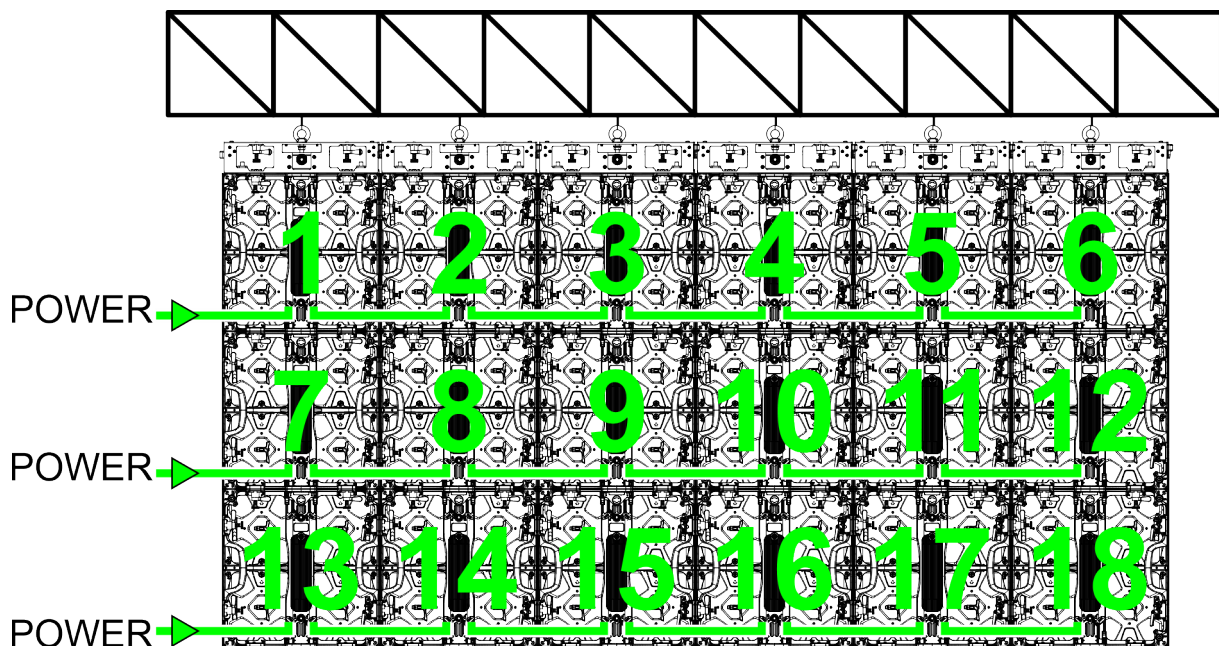
To connect multiple devices on one power link, follow the steps below:

- 01) Make sure that the devices are not connected to the power supply.
- 02) Connect the **Power OUT (12)** of the 1st device to the **Power IN (14)** of the 2nd device with the supplied power cable.
- 03) Repeat step 2 to connect the rest of the devices in the setup, as shown in Fig. 61.
- 04) Connect the 1st device on each row, respectively the 1st device on one power link, to the power supply.

Note:

Make sure that maximum recommended number of devices on one power link is not exceeded.

Figure 61



6. Operation

6.1. Safety Instructions for Operation

**Attention**

This device must be used only for the purposes it is designed for.

This device is intended for professional use as a LED screen for integration as a partial image area of a larger display screen area. This device is not intended for use as a standalone display. It can be installed only indoors. This device is not suitable for households.

Any other use, not mentioned under intended use, is regarded as non-intended and incorrect use.

6.2. Control Modes

The device is equipped with a built-in NovaStar control module.

You can control the device with a personal computer with the NovaStar software.

For more information about how to control the device, visit the website of NovaStar: <https://www.novastar.tech/downloads/>.

7. Troubleshooting

This troubleshooting guide contains solutions to problems which can be carried out by an ordinary person. The device does not contain user-serviceable parts.

Unauthorized modifications to the device will render the warranty void. Such modifications may result in injuries and material damage.

Refer servicing to instructed or skilled persons. Contact your Highlite International dealer in case the solution is not described in the table.

Problem	Probable cause(s)	Solution
The device does not function (LEDS on the backside are OFF). See LED Indicator Status (see 8.5.3. LED Indicator Status on page 35)	No power to the device	<ul style="list-style-type: none"> Make sure that the device is connected to power supply and the cables are connect
	Internal fuse is blown	<ul style="list-style-type: none"> Disconnect the device and contact your Highlite International dealer
The device does not function (LEDS on the backside are ON). See LED Indicator Status (see 8.5.3. LED Indicator Status on page 35)	The device is not connected correctly	<ul style="list-style-type: none"> Make sure that the signal cables are connected correctly Replace the signal cables
	The device cannot output the received signal	<ul style="list-style-type: none"> Make sure the connected devices (NovaStar processor) work correctly Make sure the connected devices (processor) are compatible with NovaStar
The device responds erratically	The settings of the device are changed	<ul style="list-style-type: none"> Reset the device's parameters to the default factory settings. See control modes (see 6.2. Control Modes on page 31)
One device in the setup does not respond to data control	The signal cables to the control box are not connected	<ul style="list-style-type: none"> Connect the signal cables
	The control box is defective	<ul style="list-style-type: none"> Try using another control box. Contact your Highlite International dealer
Individual LED pixels on the LED screen do not work or flicker	Individual LED pixels on the LED screen module are damaged	<ul style="list-style-type: none"> Disconnect the device and replace the LED screen module (see 8.4. Replacing a LED Screen Module on page 34). Contact your Highlite International dealer for a spare LED screen module
	The driver of one of the LED screen modules is defective	<ul style="list-style-type: none"> Disconnect the device and replace the LED screen module (see 8.4. Replacing a LED Screen Module on page 34). Contact your Highlite International dealer for a spare LED screen module

8. Maintenance

8.1. Safety Instructions for Maintenance



DANGER
Electric shock caused by dangerous voltage inside

Disconnect power supply before servicing or cleaning.

Maintenance may be carried out by instructed or skilled persons. Service shall be carried out only by skilled persons. Contact your Highlite International dealer for more information.

8.2. Preventive Maintenance



Attention
Before use, examine the device visually for any defects.

Make sure that:

- There are no deformations on housings, fixations and installation points.
- The power and data cables are not damaged and do not show any material fatigue.
- All connection elements used for installing the device or parts of the device are tightly fastened and are not corroded.
- The locking mechanisms are not damaged.

8.2.1. Basic Cleaning Instructions

To clean the device, follow the steps below:

- 01) Disconnect the device from the electrical power supply.
- 02) Allow the device to cool down for at least 5 minutes.
- 03) Remove the dust collected on the external surface with dry compressed air and a soft brush.



Attention

- Do not immerse the device in liquid.
- Do not use alcohol or solvents.

8.3. Corrective Maintenance

The device does not contain user-serviceable parts. Do not open the device and do not modify the device.

Refer repairs and servicing to instructed or skilled persons. Contact your Highlite International dealer for more information.

8.4. Replacing a LED Screen Module

To replace a LED screen module, follow the steps below:

- 01) Turn the **service handle (15)** clockwise, as shown in Fig. 62.
- 02) Hold the **service handle (15)** with one hand and push the LED screen module out of the **cabinet frame (18)**, as shown in Fig. 63 and 64.
- 03) While holding the LED screen module by the **service handle (15)**, turn the LED screen module carefully sideways and remove it from the backside of the **cabinet frame (18)**, as shown in Fig. 65–67.
- 04) Install the new LED screen module by following steps 1–3 in reverse order.

Figure 62

Figure 63

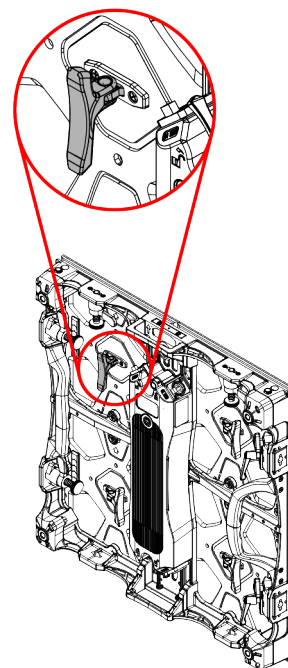
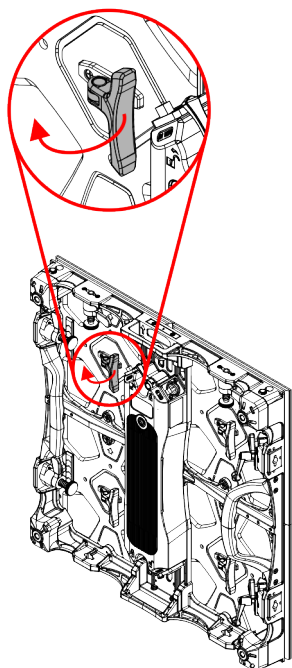


Figure 64

Figure 65

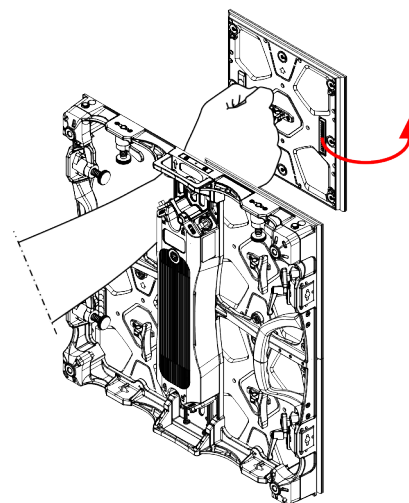
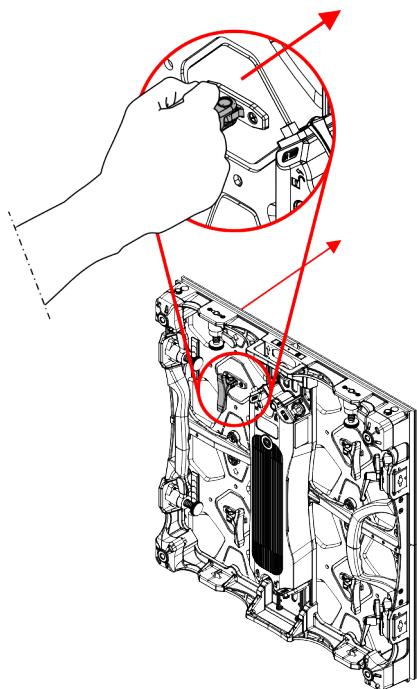


Figure 66

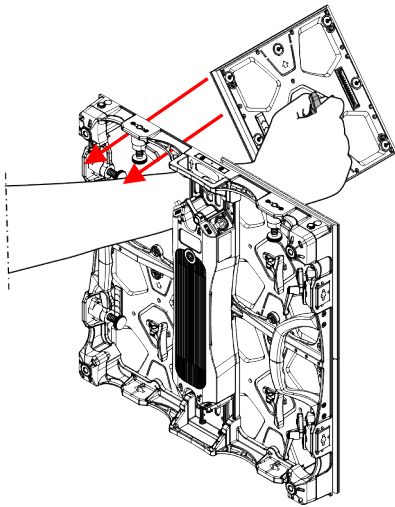
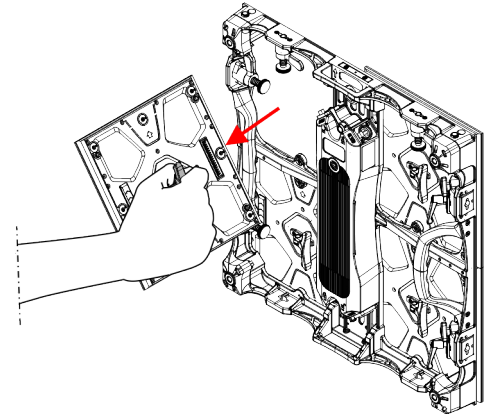


Figure 67



8.5. LED Screen Module Calibration

To upload the calibration data from the control box to a newly installed LED screen module, follow the steps below:

8.5.1. Manual Calibration

- 01) Disconnect all data cables.
- 02) Disconnect the device from the power supply.
- 03) Hold down the **test button (05)** and connect the device to the power supply. The LED screen will power up and the power LED indicator inside the **test button (05)** will light up red.
- 04) Continue to hold down the **test button (05)** for 10 seconds.
- 05) Release the **test button (05)**. The green LED indicator inside the **test button (05)** flashes rapidly. The newly installed LED screen module downloads the calibration data from the control box. After the calibration is finished, the green LED indicator inside the **test button (05)** flashes once every 2 seconds. The brightness of the newly installed LED screen module automatically matches to the rest of the LED screen. This ensures that all 4 LED screen modules are calibrated in the same way.

8.5.2. Digital Calibration

See the <https://www.novastar.tech> for instructions on how to perform a calibration with a personal computer.

8.5.3. LED Indicator Status

The LED indicator in the **test button (05)**, on the back of the control box, shows the current status.

LED Indicator:	Description
Red LED indicator ON	Power ON
Green LED indicator rapidly flashes	Downloading the calibration data
Green LED indicator flashes once every 2 seconds	Calibration finished

8.6. Replacing the Control Box

To replace the control box, follow the steps below:

- 01) Turn the top **locking lever (13)** counterclockwise, to loosen the control box from the LED screen, as shown in Fig. 68.
- 02) Turn the bottom **locking lever (13)** counterclockwise to loosen the control box from the LED screen on the bottom of the LED screen.
- 03) Carefully take off the control box, as shown in Fig. 69.

Figure 68

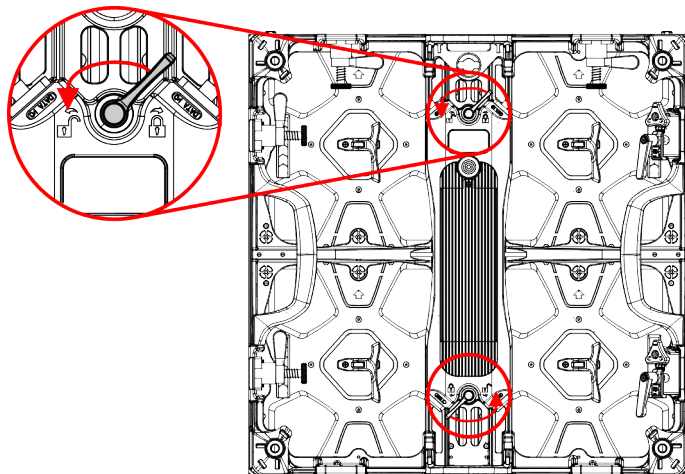
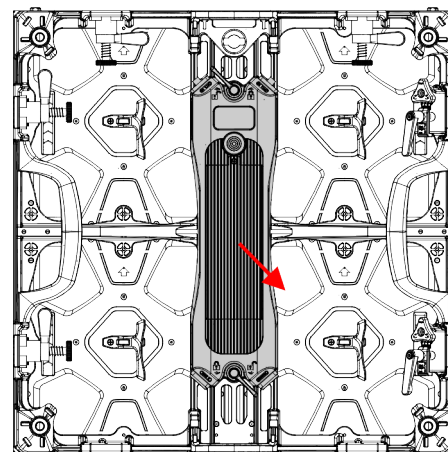
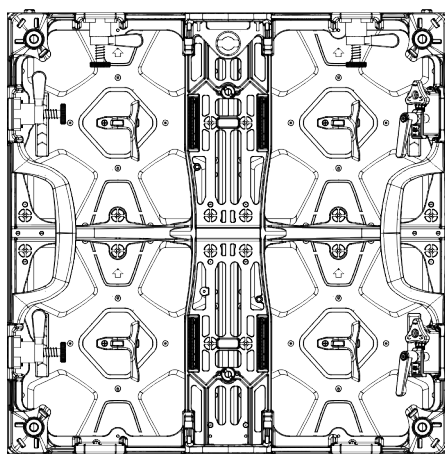


Figure 69



- 04) Remove the control box, as shown in Fig. 70.

Figure 70



9. Deinstallation, Transportation and Storage

9.1. Instructions for Deinstallation



WARNING

Incorrect deinstallation can cause serious injuries and damage of property.

- Let the device cool down before dismounting.
- Disconnect power supply before deinstallation.
- Always observe the national and site-specific regulations during deinstallation and derigging of the device.
- Wear personal protective equipment in compliance with the national and site-specific regulations.

To deinstall the device, follow the steps from the Installation (see [4. Installation](#) on page 12) and Setup (see [5. Setup](#) on page 28) chapters in reverse order.

9.2. Instructions for Transportation

- Use the original packaging to transport the device, if possible.
- Always observe the handling instructions printed on the outer carton box, for example: "Handle with care", "This side up", "Fragile".

9.3. Storage

- Clean the device before storing.
- Store the device in the original packaging, if possible.

10. Disposal

Correct disposal of this product



Waste Electrical and Electronic Equipment

This symbol on the product, its packaging or documents indicates that the product shall not be treated as household waste. Dispose of this product by handing it to the respective collection point for recycling of electrical and electronic equipment. This is to avoid environmental damage or personal injury due to uncontrolled waste disposal. For more detailed information about recycling of this product contact the local authorities or the authorized dealer.

11. Approval



Check the respective product page on the website of Highlite International (www.highlite.com) for an available declaration of conformity.

