

# Quick Start and Safety Manual



## JDC Line 500



Rev. 20211114-01 – Firmware v. 0.6.4



## Document revisions

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### GLP® JDC Line 500 Quick Start and Safety Manual

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## 1. Safety

### Key to symbols

The following symbols are used in this Guide:



**Warning!** Safety hazard.  
Risk of severe injury or death.



**Warning!** Hazardous voltage.  
Risk of lethal or severe electric shock.



**Warning!** See user manual for important safety information.



**Warning!** Fire hazard.



**Warning!** Risk of eye injury.



### General safety information

**Read this manual carefully before installing, using or servicing the JDC Line 500 lighting fixture.**

If you have any doubts or questions about how to use the fixture safely, contact your GLP® supplier for assistance. Your GLP supplier will be happy to help.

The user documentation for GLP JDC Line 500 lighting fixtures consists of:

- The **JDC Line 500 Quick Start and Safety Manual**, supplied with JDC Line 500 fixtures and available for download from [www.glp.de](http://www.glp.de). The Quick Start and Safety Manual contains important safety information and installation instructions that the installer and user must read.
- The **JDC Line 500 User Manual**, available for download from [www.glp.de](http://www.glp.de). The User Manual explains features and control of JDC Line 500 fixtures.
- The **JDC Line 500 DMX Channel Index**, available for download from [www.glp.de](http://www.glp.de). The Channel Index is a separate guide to the DMX control channel layout and DMX commands available.

All documents are available for download from [www.glp.de](http://www.glp.de).

The JDC Line 500 is intended for use by experienced professionals with the knowledge and skills to set up, operate, and maintain high-powered, remotely controlled lighting equipment safely and efficiently. These operations require expertise that may not be provided in this manual or in the user manual.

- Respect all warnings and directions given in the fixture's user documentation and on the fixture. Read the user documentation and familiarize yourself with the safety

precautions it contains before installing or using the fixture. GLP and affiliated companies will take no responsibility for damage or injury resulting from failure to act upon the information in the user documentation.

- Check the GLP website at [www.glp.de](http://www.glp.de) and make sure that you have the latest version of this manual. Check the fixture software version indicated on page 2 of this manual and then use the fixture's control panel to check the version installed in the fixture. If the versions are not the same, this manual may still cover the fixture, because software updates do not always affect the way you use the fixture. However, it is possible that this manual does not match the fixture perfectly. Software release notes can help clarify this question. You can consult software release notes and download the correct version of this manual on the GLP website if necessary.
- Make all user documentation – this Quick Start and Safety Manual as well as the User Manual – available to all installers and operators. Save both documents for future reference.
- If you have any questions about the safe operation of the fixture, please contact an authorized GLP distributor (see list of distributors at [www.glp.de](http://www.glp.de)).
- Use the fixture only as directed in this manual. Observe all markings in this manual and on the fixture.
- Refer all repairs and any service operation not described in this manual to a technician authorized by GLP.
- The light source in this fixture must not be changed by the end user.
- Read and follow the user documentation for all additional equipment.



### **Electrical safety**

- The fixture is for use in dry locations only. Do not allow the fixture to come into contact with water or moisture.
- Use only a source of AC mains power that complies with local building and electrical codes and has both overload and ground fault (earth fault) protection.
- Ensure that the fixture is electrically connected to ground (earth).
- Disconnect the fixture from AC mains power before carrying out any installation or maintenance work and when the fixture is not in use.
- Disconnect the fixture from power immediately if any cover, cable, connector or other component is wet, damaged, defective, deformed or showing signs of overheating. Do not reapply power until the fixture has been repaired and made safe by a technician authorized by GLP.
- Check that all power distribution equipment, cables and connectors are in perfect condition, rated for the electrical requirements of all connected devices, suitable for their application and suitable for the installation environment.

- Use only Neutrik PowerCON TRUE1 cable connectors for AC mains power input at the fixture's Mains IN connector and for relaying AC mains power from one fixture's Mains OUT (Thru) connector to another fixture's Mains IN connector.
  - Use minimum 14 AWG or 1.5 mm<sup>2</sup> power input and relay cables that are minimum 16 A-rated and temperature-rated to suit the application. In the USA and Canada the cables must be UL-listed, type SJT or equivalent. In the EU the cables must be type H05VV-F or equivalent.
  - Do not connect devices to power in a chain if the total maximum current draw of all the devices in the chain when added together will exceed the current rating of any cable or connector used at any point in the chain. The supplied power input cable is rated as follows:
    - US power cable: 16 A, 14 AWG, UL-listed, E304117, SJT, 4.9 ft.
    - EU power cable: 16 A, 1.5 mm<sup>2</sup>, H07RN-F, 1.5 m.
- Do not connect more than two (2) JDC Line 500 fixtures to power in a chain at 100-120 V, 60 Hz.
- Do not connect more than four (4) JDC Line 500 fixtures to power in a chain at 200-240 V, 50 Hz.
- The voltage and frequency at the Mains OUT socket are the same as the voltage and frequency applied to the Mains IN socket. Only connect devices to the Mains Out socket that accept this voltage and frequency.
  - If you suspect that a fuse has blown, disconnect the fixture from power. Open the fuseholder in the back of the fixture and replace the fuse with one of the same size and rating only.



### Fire safety and protection from burns

- Do not operate the fixture if the ambient temperature (Ta) exceeds 40° C / 104° F.
- The surface of the fixture's casing can reach up to 80° C / 176° F during operation. Avoid contact by persons and materials. Do not install the fixture in a location where there is a risk of accidental contact. Allow the fixture to cool for at least 20 minutes before handling
- Keep the fixture well away from flammable materials.
- Keep all combustible materials (e.g. fabric, wood, paper) at least 0.2 m / 8 in. away from the fixture.
- Ensure that there is free and unobstructed airflow around the fixture.
- Do not illuminate surfaces within 0.2 m / 8 in. of the fixture. The light output from the fixture is powerful enough to cause burns or fire in illuminated objects at very close range.
- Do not place any optical components other than JDC Line 500 accessories from GLP onto the front of the fixture.

- Do not stick filters, masks or other materials onto the fixture. Do not block the light output in any way. The front surface becomes hot during operation and can melt or ignite objects that are in contact with the surface. Ensure that the front surface is clean and unobstructed at all times in order to prevent a fire hazard and damage to the fixture.
- The fixture's optical components can focus the sun's rays, creating a risk of fire and damage. Do not expose the front of the fixture to sunlight or any other intense light source, even from an angle.



### Eye safety

- The JDC Line 500 is classified as a Risk Group 2 lighting fixture according to EN 62471. Possibly hazardous radiation emitted. Do not stare into the light output from the fixture. May be harmful to the eyes.
- Do not look at the fixture's light output with optical instruments or any device that may concentrate the light output.
- Make sure that persons near to or working on the fixture are not looking directly into the light output when the fixture lights up suddenly. This can happen when power is applied, when the fixture receives a DMX signal, or when certain control menu items are selected.
- Provide well-lit conditions to reduce the pupil diameter of anyone working on or near the fixture.



### Strobe safety

- Flashing light, particularly at 5 - 30 Hz, may cause seizures in persons with photosensitive epilepsy. Do not use strobe effects for extended periods.
- Comply with local regulations on the use of strobe lighting and notify the public in advance with highly visible warning signs when strobe effects are used.
- If a seizure occurs, stop using strobe effects. Seek professional medical help. Note the time that the seizure starts and finishes. Call emergency medical help urgently if the seizure lasts more than five minutes, if it is the person's first seizure, or if the person is injured. While waiting for help to arrive, protect the affected person from injuring themselves on hard or sharp objects. If necessary, move the person to a safe place. Lay them on their side with their head supported to prevent it from hitting the floor. Loosen any tight clothing around their neck. Do not use force to hold the person or restrict their movements. Do not put anything in their mouth, including your fingers.



## Installation safety and protection from personal injury

- Installation must be performed by qualified personnel only and carried out in accordance with all locally applicable regulations such as DIN VDE 0711-217.
- The fixture is not portable when installed.
- Ensure that the supporting structure and installation hardware used can hold at least ten times the weight of the load that they support.
- Fasten the fixture to a structure or surface only as directed in this manual and only with hardware that is specifically designed and rated for its purpose. Do not use a safety cable as the primary means of support. Check that installation hardware is in perfect condition. Fasteners must be steel grade 8.8 strength or better. Rigging clamps must be half-coupler type that completely encircle the rigging truss chord.
- Do not use a rigging clamp fastened into the end of the fixture to suspend the fixture vertically. You may suspend the fixture vertically from an eyebolt fastened into the end of the fixture so that the bottom of the fixture can move laterally in all directions.
- You may suspend a maximum of two (2) meters (4 x JDC Line 500 or 2 x JDC Line 1000 or a combination of these fixtures up to 2 meters in length) fastened together end-to-end in a vertical column on condition that you suspend the fixtures from an eyebolt fastened into the end of the top fixture so that the bottom of the column can move laterally in all directions.
- If the fixture is installed in a location where it may cause injury or damage if it falls, install as directed in this manual a safety cable or similar secondary attachment that will hold the fixture if a primary attachment fails. The secondary attachment must be approved by an official body such as TÜV as a safety attachment for the weight that it secures, it must comply with EN 60598-2-17 Section 17.6.6, and it must be able to support a static suspended load that is ten times the weight that it secures.
- If the fixture is installed in a location where it may be exposed to forces such as wind pressure, vibration or movement, make sure that the installation can withstand these forces. Monitor weather forecasts constantly. Take down the installation immediately if there is any risk of weather conditions that could destabilize the installation.
- Check that all covers and items of rigging hardware are secure before using the fixture. Do not operate the fixture with missing or damaged covers, shields or any optical component.
- Restrict access below the work area and work from a stable platform whenever installing, servicing or moving the fixture.
- If the fixture becomes damaged, stop using it immediately and disconnect it from power. Do not attempt to use a fixture that is obviously damaged.
- Do not modify the fixture in any way not described in its user documentation.
- Install genuine GLP parts only.

## 2. Avoiding damage to the fixture

**Important! Follow the directions in this section carefully, or the fixture may suffer damage that is not covered by the product warranty.**

### General precautions

Do not drop the fixture or expose it to mechanical stress.

Protect the onboard LED display and control panel from shocks, or they may suffer damage that is not covered by the product warranty.

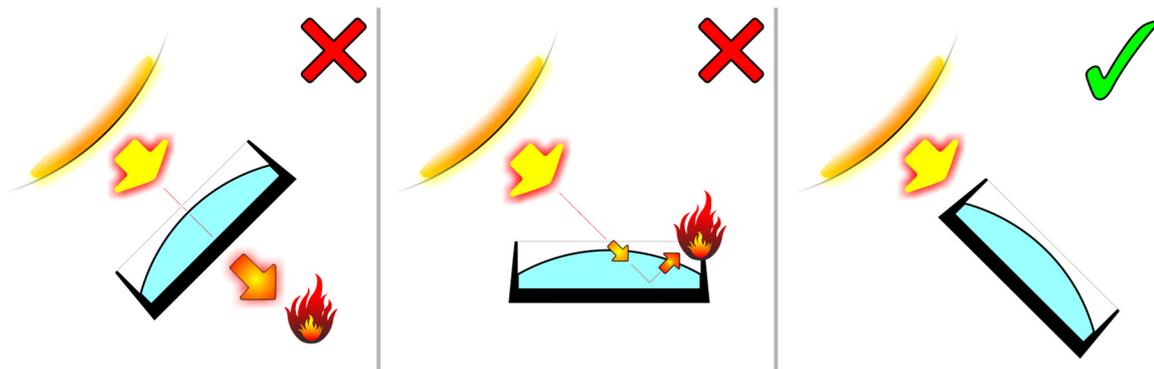
Do not expose the fixture to heat (from other lighting fixtures for example).

Clean optical components only as directed. Oils, solvents, and other chemicals commonly used for cleaning can damage the lens coatings and surfaces.

Use only original spare parts. Do not make any structural modifications to the fixture or you will void the product warranty.

### Avoiding damage from light sources and heat

Strong light can cause internal damage to the fixture, melting components or starting an internal fire within seconds.



**Figure 1. Avoiding damage from light sources**

Damage can occur whether the fixture is powered on or off. See Figure 1. Damage can also occur if the light hits the front of the fixture at an angle: the fixture does not need to be pointing *directly* at the sun or other light source for damage to occur.

To avoid problems from strong light sources:

- Do not expose the front of the fixture to sunlight or any other strong light source.
- In outdoor applications during daylight, make sure that the front face of the fixture is shielded or points away from the sun, even when not in use.
- Do not aim other high-powered beam lights directly at the fixture.

Do not operate the fixture in ambient temperatures above 40° C / 104° F. Allow free airflow around the fixture.

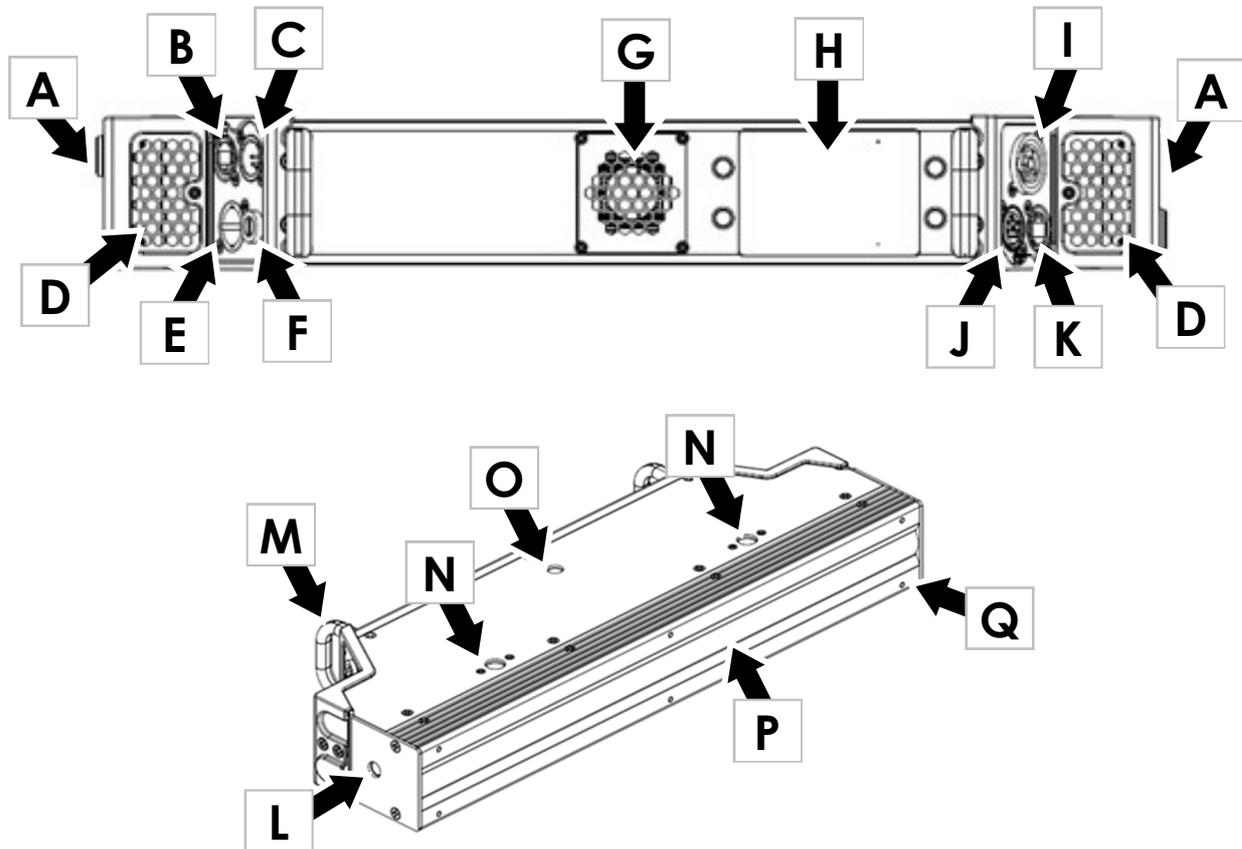
### **Avoiding damage from dust and airborne particles**

- Carry out regular visual inspections of the fixture to make sure that there is no accumulation of dirt, especially on the front of the fixture.
- If cleaning is necessary, follow the instructions in 'Service' on page 24.

### **Transportation and storage**

- If fixtures have been fastened together, undo and/or remove all fasteners and separate the fixtures before transport. Do not transport fixtures that are fastened together, or shocks during transport will expose fixtures to leverage forces and may cause damage that is not covered by the product warranty.
- Transport the fixture in its original packaging to protect it from damage caused by shocks during transportation.
- Store the fixture in a dry location when not in use.

### 3. JDC Line 500 overview



**A** – End bracket / side-to-side alignment points

**B** – Network port A (EtherCON), failsafe

**C** – DMX IN (5-pin XLR)

**D** – Air vent

**E** – AC mains power IN (Neutrik powerCON TRUE1)

**F** – Fuseholder

**G** – Main cooling fan

**H** – Control panel with multi-color backlit LED display

**I** – AC mains power OUT/THRU (Neutrik powerCON TRUE1)

**J** – DMX OUT/THRU (5-pin XLR)

**K** – Network port B (EtherCON), failsafe

**L** – 2 x End mounting points (M10 threaded, depth 16 mm)

**M** – 2 x Safety cable attachment points / carrying handles

**N** – Top / bottom mounting points (M10 threaded, depth 16 mm)

**O** – Quarter-turn fastener point

**P** – White LEDs, RGB LEDs

**Q** – 6 x M4 threaded holes for permanent mounting of accessories

## 4. Features

The JDC Line 500 from GLP can be used indoors in permanent and temporary installations. Fixtures can be placed on a level surface or suspended from a suitable structure as directed in this manual.

Power and data can be daisy-chained and fixtures interlocked for ease of installation.

The JDC Line 500 is not suitable for household use, for use in any location where unattended children have access to it, or for use in locations that may become submerged in water.

### Fixture control

This Quick Start and Installation Manual gives a very basic overview of control options and functions. See the JDC Line 500 User Manual available for download from [www.glp.de](http://www.glp.de) for full details of control, fixture setup, pixel layout, etc.

## 5. Installation



**Warning!** Read 'Safety' starting on page 4 for important safety information that you must understand before you install or operate the fixture. Install JDC Line 500 fixtures only as described in this chapter, or you may create an installation that is unsafe.

It is the installer's responsibility to provide a stable, secure supporting structure that is suitable for the environment and application and that meets all applicable codes and legal requirements. Note the requirement to secure lighting fixtures with safety cables in temporary installations.

### Permitted mounting options

An JDC Line 500 fixture may be installed in one of the following ways:

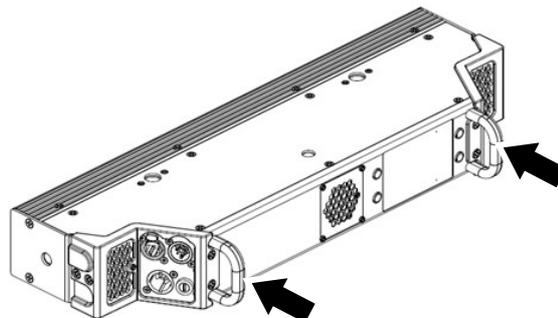
1. Placed horizontally on a horizontal surface.
2. Fastened to a rigging truss or similar structure at any angle by means of:
  - a JDC Line 500 Rigging Bracket with rigging clamp,
  - a JDC Line 500 Installation Bracket with one omega bracket and one rigging clamp, or
  - a rigging clamp bolted directly to the fixture.
3. Fastened to a surface at any angle by means of a JDC Line 500 Rigging Bracket with bolts or similar fasteners.
4. Suspended vertically from a rigging truss or similar structure by means of an M10 threaded eyebolt screwed into the end of the fixture with an M10 locknut and washer.

### Installing a safety cable



**Warning!** In temporary installations, if a fixture can cause injury or damage if it falls you must secure it with a secondary attachment such as a safety cable that will hold it if the primary means of attachment fails.

The safety cable must be approved for the weight that it secures. In multiple installations each fixture must have its own safety cable.



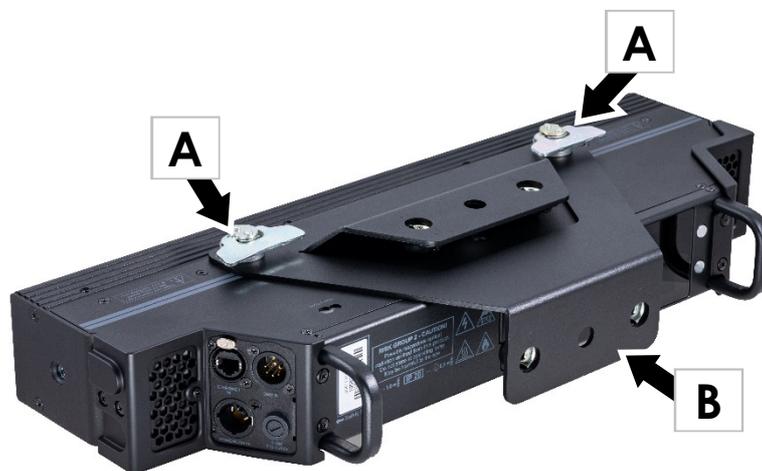
**Figure 3. Use handles for safety cable attachment**

To secure a JDC Line 500 fixture with a safety cable:

1. Loop a safety cable around a secure anchoring point such as a truss chord or fixed structure.
2. See Figure 3. Loop the cable around one of the fixture's handles. Take up as much slack as possible in the cable (by looping it more than once around the truss chord, for example), then close the cable so that it will catch the fixture if the rigging hardware fails.

### Installing a Rigging Bracket

The JDC Line Rigging Bracket is supplied with the JDC Line 500. You can use it to suspend the fixture from a rigging truss or fasten the fixture to a secure surface or structure at any angle. Rigging clamps for fastening the Rigging Bracket to a truss are available from GLP as optional accessories.



**Figure 4. JDC Line Rigging Bracket**

To install the Rigging Bracket on a fixture:

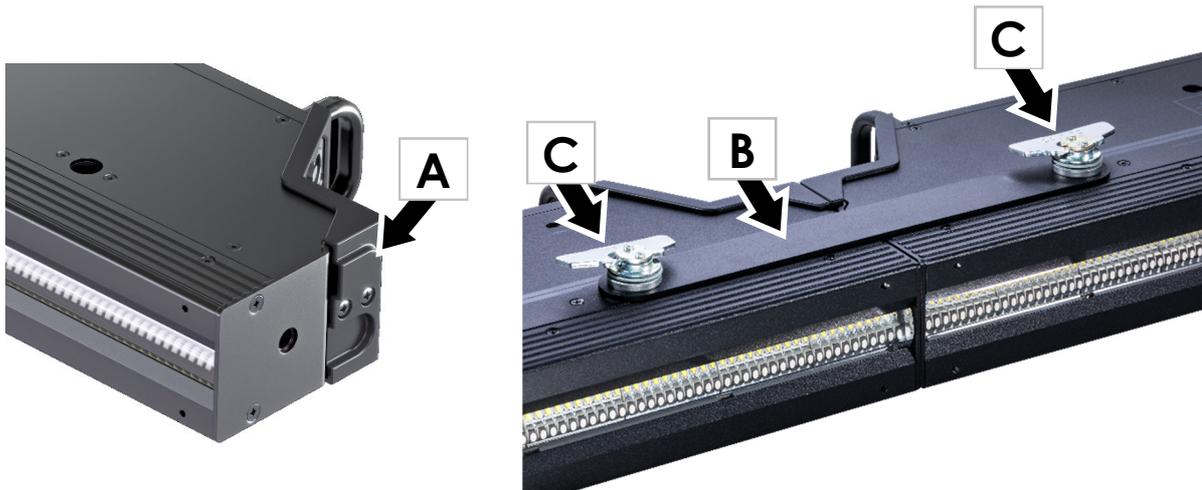
1. See Figure 4. Push the quarter-turn fasteners **A** on the Rigging Bracket **B** into the quarter-turn mounting holes on the top of the fixture.
2. Turn both quarter-turn fastener handles a full 90° clockwise to lock the Rigging Bracket to the fixture.

## Installing Alignment Brackets



**Warning!** You can use the JDC Line's Alignment Brackets to align any number of fixtures, but you may only use them to support weight in the case of maximum four (4) JDC Line 500 fixtures fastened together and hanging vertically.

The JDC Line 500 system includes Alignment Brackets that can be locked onto the top and bottom surfaces of two fixtures to fasten them end-to-end.



**Figure 5. JDC Alignment Bracket**

To fasten up to four JDC Line 500 fixtures end-to-end:

1. See Figure 5. Place the fixtures on a flat surface with enough space for the fixtures to lie end-to-end. Slide the ends of the fixtures together so that the alignment profiles **A** engage.
2. Fasten an Alignment Bracket **B** onto the tops of each pair of fixtures using the bracket's quarter-turn fasteners **C**. Turn the quarter-turn fasteners a full 90° to lock.
3. Keeping the fixtures supported and in a straight line, turn them over as one unit and fasten a second Alignment Bracket onto the opposite side of each pair of fixtures as you did with the first bracket. Check that the fixtures are now fastened securely to each other.

## Placing on a horizontal surface

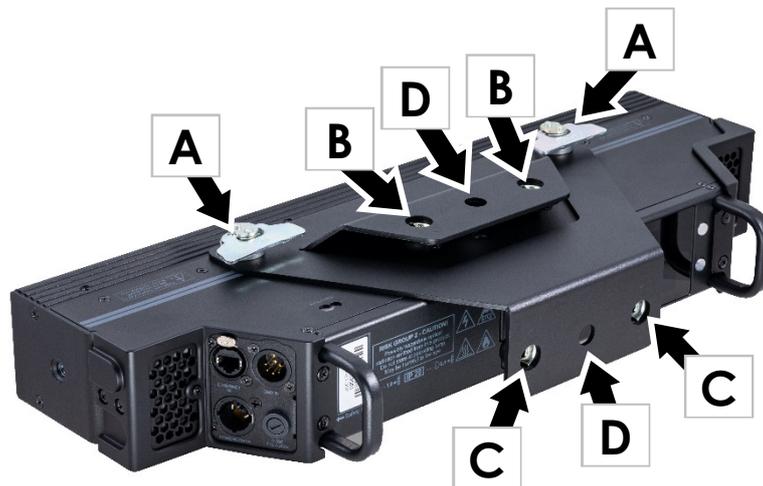
You can place a JDC Line 500 fixture on a horizontal surface so that the fixture is lying horizontally.

You can stack multiple fixtures on top of each other in a column but you must stabilize the column with hardware fastened to the M10 threaded holes on the tops and bottoms of fixtures and to secure anchoring points so that it is impossible for the column of fixtures to fall.

## Installing on a rigging truss

To install the JDC Line 500 on a rigging truss or similar structure:

1. Check that the truss or bar is secure and can safely hold the weight of fixtures, hardware and cables. Check that all hardware is approved for the weight that it will support and is in perfect condition.
2. See Figure 6. Fasten a Rigging Bracket to the fixture using the bracket's quarter-turn fasteners **A**.
3. Either:
  - Bolt a rigging clamp to an 89 mm Omega Bracket from GLP with a high-strength steel bolt and self-locking nut, then fasten the Omega Bracket to the Rigging Bracket using quarter-turn fasteners locked into two receptacles **B** or **C**, or
  - bolt a rigging clamp directly to the Rigging Bracket using a high-strength M12 steel bolt passed through one of the holes **D** and fastened with a self-locking nut.



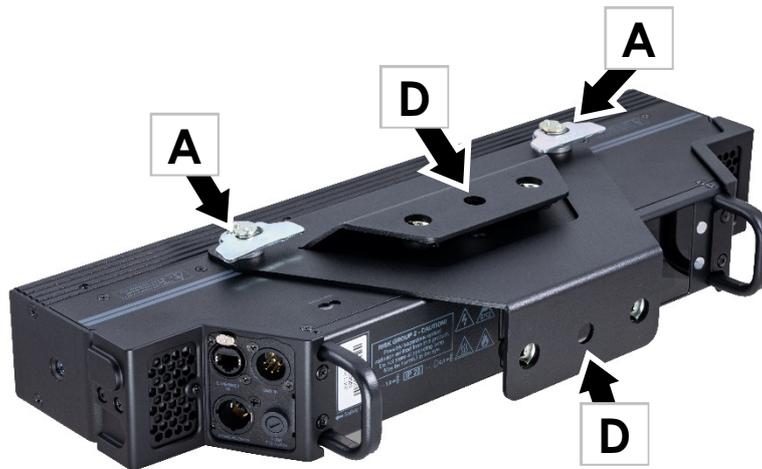
**Figure 6. Suspending from a truss using the Rigging Bracket and rigging clamps**

4. Hold the fixture up to the truss, pass the rigging clamp around the truss chord, then tighten the clamp to install the fixture securely on the truss.
5. Secure the fixture with a safety cable as described in 'Installing a safety cable' on page 13 if there is any risk that the fixture will cause injury or damage if it falls.

## Mounting on a surface

To bolt the JDC Line 500 to a surface or structure using its Rigging Bracket:

1. Check that the surface or structure is secure and can safely hold the weight of fixtures, hardware and cables. Check that all hardware is approved for the weight that it will support and is in perfect condition.
2. See Figure 7. Fasten a Rigging Bracket to the fixture using the bracket's quarter-turn fasteners **A** as described on page 14.
3. Bolt the Rigging Bracket securely to the surface or structure with a high-strength M12 steel bolt and self-locking nut (or similar fastener that is appropriate for the application) passed through one of the holes **D**.



**Figure 7. Mounting on a surface using the Rigging Bracket**

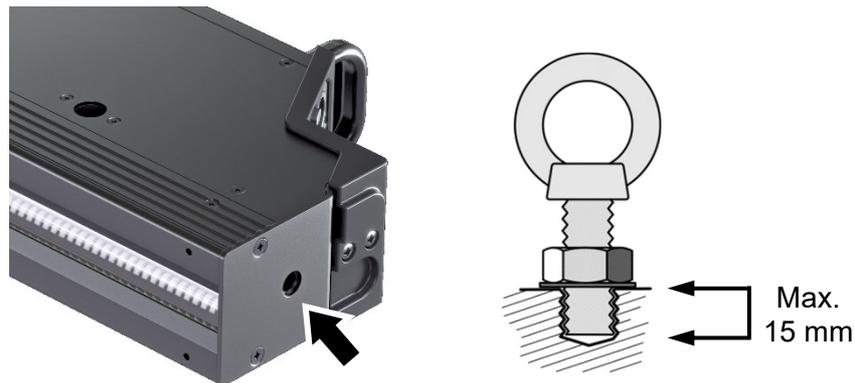
4. Secure the fixture with a safety cable as described in 'Installing a safety cable' on page 13 if there is any risk that the fixture will cause injury or damage if it falls.

## Vertical suspension from a rigging structure



**Warning!** Do not suspend a JDC Line 500 fixture from a **rigging clamp** fastened into one of the M10 threaded holes at the ends of the fixture, as the fixture will act as a lever. Any movement at the bottom end of the fixture will distort the top end of the fixture and may cause it to fall. Instead of a rigging clamp, use an **eyebolt** fastened into the top end of the fixture together with a rigging cable or similar means of fastening the eyebolt to the supporting structure. An eyebolt will allow lateral movement at the lower end of the fixture without distortion of the mounting point at the upper end.

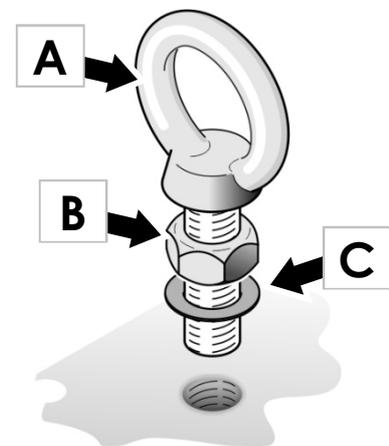
**Warning!** The M10 threaded holes in the end plates of the JDC Line 500 are 16 mm deep. See Figure 8. Do not allow any bolt to protrude more than 15 mm into the fixture.



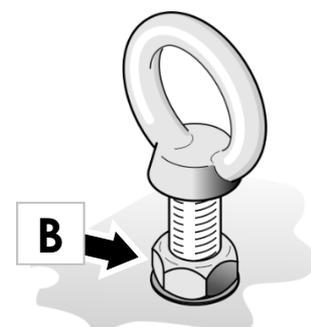
**Figure 8. Maximum protrusion into hole in end of fixture**

To suspend the JDC Line 500 vertically from a rigging truss or similar structure:

1. See Figure 9. Obtain an M10 eyebolt **A** that is approved for the weight that it will support, an M10 nut **B** and washer **C**.
2. Thread the nut onto the eyebolt and pass the washer over the end of the eyebolt.
3. Screw the eyebolt with the nut and washer into the threaded hole in one end of the fixture by hand without applying excessive force.
4. When approx. 16 mm of the eyebolt is threaded into the fixture, the eyebolt will reach the bottom of the hole. Unscrew the eyebolt by a quarter-turn to a half-turn to back it up from the bottom of the hole.
5. See Figure 10. Holding the eyebolt to prevent it from turning, tighten the nut **B** until it locks the eyebolt in position in the end of the fixture.
6. Suspend the fixture by passing a cable that is approved for the weight that it will support through the eyebolt and around a rigging truss chord or similar anchoring point.
7. Secure the fixture with a safety cable as described in 'Installing a safety cable' on page 13 if there is any risk that the fixture will cause injury or damage if it falls.



**Figure 9. Installing an eyebolt**



**Figure 10. Eyebolt locked**

## Suspending fixtures vertically in a two-meter column



**Warning!** Use Alignment Brackets to support weight only when fixtures are fastened together and suspended in a vertical column maximum two (2) meters high. Do not use Alignment Brackets to support the weight of a fixture at any other angle than hanging vertically downwards. Do not create a vertical column that contains more than:

- four (4) JDC Line 500 fixtures,
- two (2) JDC 1000 fixtures, or
- two (2) JDC Line 500 fixtures and one JDC Line 1000 fixture.

**Warning!** Use only an eyebolt to support the column. Do not use a rigging clamp, as any lateral movement at the bottom of the column can apply leveraged forces and cause this arrangement to fail.

To suspend JDC Line fixtures in a vertical column:

1. Fasten the fixtures together as described in 'Installing Alignment Brackets' on page 15.
2. Hold the fixtures in a vertical column up to the rigging truss and suspend the top fixture as described in 'Vertical suspension from a rigging structure' on page 17.
3. Secure the fixtures with a safety cable as described in 'Installing a safety cable' on page 13 if there is any risk that the arrangement will cause injury or damage if it falls.

## 6. AC mains power



**Warning!** Read 'Safety' starting on page 4 for important safety information that you must understand before you install or operate the fixture.

Check that all cables and connectors are suitable for the installation environment and application (see recommendations in 'Avoiding damage to the fixture' on page 9).

Use H07 RN-F 3 x 2.5 mm<sup>2</sup> / SJT 12 AWG cables with original Neutrik powerCON TRUE1 connectors to supply power to fixtures.

Line up the keyways in connectors carefully. Do not try to insert or twist a connector if it feels excessively stiff. Resistance to insertion or twisting is a sign that connectors may be incorrectly lined up.

### Included items

The JDC Line 500 is supplied with a power cord with Neutrik powerCON TRUE1 connector.

### Connecting to power

The AC mains power supply must include a connection to ground / protective earth. It must be protected against ground / earth leakage and overload. The fixture's internal auto-sensing power supply accepts AC power at 100-240 V, 50/60 Hz. Do not connect the fixture to power at any other voltage or to an external dimmer.

The JDC Line 500 does not have a power ON/OFF switch. Power is applied to the fixture as soon as the power cable becomes live.

The JDC Line 500 has a 3-conductor Neutrik powerCON TRUE1 Mains IN power input socket that accepts AC power from a TRUE1 female cable connector. Although TRUE1 connectors support hot plugging, it is still good practice to shut down power to power cables before connecting them to fixtures.

To connect the fixture to power:

1. If convenient, shut down power to the power input cable.
2. Note the position of the keys and keyways on the TRUE1 power cable connector and Mains IN socket and align them with each other. Insert the cable connector into the socket and twist clockwise to lock. Do not use force. If the connector feels excessively stiff, remove it and check again that it is lined up correctly.
3. Before applying power to the power cable, check that nobody is looking directly into the front of the fixture.

To disconnect the fixture from power, pull the latch on the cable connector outwards to release it, then twist the connector counterclockwise and pull to remove it from the socket.

### Installing power connectors

If you intend to draw power from convenience receptacles / consumer mains power sockets, it is possible to install a suitable cord cap / power plug on the supplied power

cord / input cable. If you do this, check that the cord cap / plug is rated minimum 250 V, 16 A, that it has a connection to ground / earth and that it has an integral cable grip. Follow the cord cap / plug manufacturer's assembly instructions.

If you need to install a Neutrik powerCON TRUE1 connector on a power cable, follow the instructions given in the Support area of the Neutrik website at [www.neutrik.com](http://www.neutrik.com).

Respect the color coding used in the supplied power cable and in your local mains power wiring system. US and EU systems use the color coding shown below:

	Live or L	Neutral or N	Ground / Earth or Ⓧ
<b>US system</b>	Black	White	Green
<b>EU system</b>	Brown	Blue	Yellow/green

## Connecting multiple fixtures to power in a chain

You can connect fixtures to power in a daisy-chain to simplify your power circuit layout.

JDC Line 500 fixtures have 2.5 mm<sup>2</sup> internal wiring from Power IN to Power THRU connectors.



**Warning!** Do not connect more than two (2) JDC Line 500 fixtures in total to power in one chain at 100-120 V, 60 Hz. Do not connect more than four (4) JDC Line 500 fixtures in total to power in one chain at 200-240 V, 50 Hz.

The power input cable supplied with the fixture is rated 16 A maximum. Add together the maximum current draw ratings of all the devices that you intend to connect to power in a daisy chain and do not create a chain with a total maximum current draw of more than 16 A, or you will create a risk of fire and electric shock.

To connect fixtures to power in a chain:

1. Obtain power relay cables that have male and female Neutrik powerCON TRUE1 connectors. Cables must be minimum 14 AWG or 1.5mm<sup>2</sup> conductor cross-section, rated minimum 16 A, and suitable for the environment and application.
2. Connect the power input cable to the Mains IN socket of the first fixture as described under 'Connecting to power' on page 20.
3. Connect a power relay cable to the Mains OUT / THRU socket of the first fixture and to the Mains IN socket of the second fixture.
4. If you are using 100-120 V, 60 Hz AC mains power, do not connect anything to the second fixture's Mains OUT / THRU socket. The chain at 100-120 V may contain a maximum of two fixtures.
5. If you are using 200-240 V, 50 Hz AC mains power you may connect a maximum of two (2) more fixtures, Mains OUT / THRU to Mains IN, so that the chain contains a maximum of four (4) fixtures total.

## 7. Connecting to DMX data

Check that all cables and connectors are suitable for the installation environment and application (see recommendations in 'Avoiding damage to the fixture' on page 9).

The JDC Line 500 supports USITT DMX 512A, Art-Net and sACN DMX control data signal protocols. It also supports RDM (Remote Device Management).

Two types of data connection are available:

- Two 5-pin XLR connectors for IN and THRU connections on a DMX data link using standard DMX protocol. We recommend the use of digital 110 Ohm DMX cable with original Neutrik 5-pin XLR HD connectors if connecting to the XLR connectors.
- Two EtherCON sockets for IN and THRU connections on a DMX data link using Art-Net or sACN protocol. You can use either socket for data IN or data THRU. Use CAT6 or better Ethernet cables for the data link if connecting to the Ethernet ports.

The EtherCON sockets use fail-safe technology that allows data through even if the fixture is powered off.

If you would like advice with planning and installing a DMX link, your GLP supplier will be happy to provide assistance.

## 8. Starting and stopping operation



**Warning!** Before you apply power to the fixture or operate it after a blackout, make sure that nobody is looking directly into the front of the fixture.

The JDC Line 500's TRUE1 mains power input connector supports hot-plugging, and connecting and disconnecting a live power cable is an option, especially if you need to shut down power urgently, but it is still good practice to shut down power to the AC mains power circuit before connecting and disconnecting power cables.

To start operation, check that nobody is looking into the front of the fixture, then apply power to the AC mains power circuit.

To stop operation, shut down power to the AC mains power circuit.

## 9. Service



**Warning!** There are no user-serviceable parts inside the fixture. Opening the fixture can cause damage that is not covered by the product warranty. Any service operation that requires removal of a cover must be performed by a professional service technician with the tools, skills, and personal protective equipment to maintain high-powered lighting equipment safely and efficiently.

### Cleaning

JDC Line 500 fixtures require occasional cleaning to prevent the buildup of dust, dirt, and residue from atmospheric effects. Failure to keep the fixture clean will significantly reduce light output and may cause heat buildup and damage that is not covered by the product warranty. Regular cleaning will ensure maximum performance and reliable operation.

The cleaning schedule depends on the operating environment. Check fixtures regularly for signs of dirt buildup.

You can clean the fixture using a soft cloth slightly dampened with a household or automotive glass cleaning product. Do not apply pressure to the clear front or display on the back of the fixture, as you may scratch these surfaces.

### Installing optical accessories

Optical accessories that soften or modify the angle of the light output can be installed on the front of the fixture in seconds using the magnetic system.

An asymmetrical effect filter is included in the standard JDC Line 500 pack. Other filters can be supplied as optional accessories on request. Please contact your GLP dealer for more information.



**Figure 11. Optical accessory safety cable attachment**

See Figure 11. If you install a GLP accessory on the front of the fixture, secure it by fastening the clip on its safety cable into the receptacle marked **Safety Cable** (arrowed) on the top of the fixture.

You can also use the 6 x M4 threaded holes on the front of the fixture to install optical accessories permanently or to install custom accessories. It is the installer's responsibility

to ensure that any custom accessories installed will not create a fire hazard or any other safety risks. Observe the safety warnings given in the 'Safety' chapter starting on page 4.

To install an optical accessory such as a GLP diffuser on the JDC Line 500:

1. Hold the diffuser up to the front of the fixture and snap the diffuser's magnetic mounts into place so that they hold the diffuser in its correct position over the fixture's front glass.
2. Secure the diffuser from falling by fastening its integrated safety cable into the attachment point in the top of the fixture as shown in Figure 11. Insert the safety cable's fastener into the attachment point and slide it to lock. Check that it is held securely.

In permanent installations or in the case of custom optical accessories, fasten the accessory onto the front of the fixture using the six M4 threaded holes around the front of the fixture (see 'JDC Line 500 overview' on page 11).

## **GLP Service and Support**

Contact information for the nearest GLP Service and Support is available online at [www.glp.de/en/service](http://www.glp.de/en/service), by email at [info@glp.de](mailto:info@glp.de), or by telephone at the following numbers:

- GLP Germany: +49 (7248) 927 19-55
- GLP N. America: +1 818 767-8899
- GLP UK: +44 1392 690140
- GLP Asia: +852 (3151) 7730
- GLP Nordic: +46 737 57 11 40

## 10. Technical specifications

### Optics

Light source: 100 x white LEDs in 20 segments, 200 x RGB LEDs in 40 background segments

### Effects

All pixels controllable individually

Dimmer: 0-100% continuously variable 16-bit, Soft and Linear dimming curves

Color mixing and segment control: 0-100% continuously variable 8-bit

White point selection (RGB): 6500 K, 8000 K or Raw

Color temperature correction (RGB): 10 000 K -2500 K

Shutter/strobe: RGB, White and RGBW strobe

Strobe control: Adjustable flash intensity, adjustable flash rate, adjustable flash duration, selectable intensity effects

FX engine with static and animated patterns, variable sync, speed and crossfading options

### Control

Control systems: DMX, RDM, sACN, Art-Net

Number of DMX control modes: 7

DMX channel footprint: 16 / 34 / 84 / 47 / 98 / 158 / 38 depending on control mode

Pixel mapping options: Whole fixture as one RGBW segment, 20 White and 20 RGB segments, 20 White and 40 RGB segments, 5 white and 5 RGB quad segments

Setting and addressing: Backlit multi-color LED display, RDM, DMX on Control / Settings DMX channel

DMX compliance: USITT DMX512

RDM compliance: ANSI/ESTA E1.20

### Installation

Options: Placed on horizontal surface, mounted on rigging truss or other structure or surface at any angle

Operating position: Any

Minimum distance to combustible materials: 0.2 m (8 in.)

Minimum distance to illuminated surfaces: 0.2 m (8 in.)

Installation environment: Indoor use in dry locations only

Secondary attachment: Two handles used for safety cable attachment

### Electrical

AC mains power: 100-240 V nominal, 50/60 Hz

Power supply unit: Auto-ranging electronic switch mode

Maximum power consumption, all LEDs at 100% output: 700 W

#### **Maximum permitted number of fixtures daisy-chained to power**

2 x JDC Line 500 total per chain @ 100-120 V, 60 Hz

4 x JDC Line 500 total per chain @ 200-240 V, 50 Hz

## Connections

Power IN and THRU: Neutrik powerCON TRUE1

DMX data IN and THRU via DMX cable: 5-pin XLR

DMX data IN and THRU via Art-Net and sACN network: EtherCON, fail-safe

## Construction

Fixture housing: High-impact flame-resistant thermoplastic, aluminum, steel

Ingress protection: IP20

Color: Black

## Thermal

Cooling: Convection

Minimum ambient temperature: -10° C / 14° F

Maximum ambient temperature: 40° C / 104° F

Max. total heat dissipation (calculated): 2390 BTU/hr.

## Included items

Power cable with Neutrik powerCON TRUE1 mains input plug

JDC Line 500 Rigging Bracket

JDC Line 500 Alignment Bracket

JDC Line 500 Diffuser A (asymmetrical)

## Dimensions and weight

Height without Rigging Bracket: 74 mm / 2.91 ins.

Height including Rigging Bracket: 90 mm / 3.55 ins.

Width: 507 mm / 19.96 ins.

Depth: 202 mm / 7.94 ins.)

Weight: 6 kg / 13.3 lbs.

## 11. Dimensions

All dimensions are in millimeters

