



MG9 Series LED Screen
User Manual

audio/effetti®

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CAUTION

Warning: This is a CLASS A-level product. In the living environment, this product may cause radio interference. In this case, the user may be required to take practical actions for the interference.



Caution 1

In order to avoid any physical damage, please read carefully the User Manual before connecting the switches.

1. LED screen should only be operated by trained professionals.
2. Do not expose any parts of the LED screen to naked flame/smoke.
3. Personnel operating the LED screen are advised to wear a safety helmet during operation.
4. Check that all the AC power is connected before turning on the switch.
5. Turn off all switches of the LED screen, computer terminals, system box and monitors before performing any maintenance work.
6. Do not touch the power supply when the switch is turned on.

Caution 2

Please read the installation and operation instruction manual carefully in order to make sure the normal lifespan of LED screen and avoid any damage of electronic components, device driver and loss of data.

1. Turn off all switches including LED screen, computer terminal, system box and monitor before connecting any cables.

2. Wear an Anti-static wristband before replacing any electronic components.
3. Strictly prohibit the hot plugging of all computer connection cables. Ensure that all power supplies are turn off before disconnection, especially the serial port cables.
4. The cabinet should avoid working under the conditions of high organic solvent detergent (such as kerosene, rust-proof oil, etc).
5. Regular power-on test is required for an LED screen if long time in unused condition. (regular power-on test standard: at least 2 hours in a week and please increase gray scale stepwise)
6. The operating/storage environment should strictly adhere to the parameter sheet, (working temperature: -20°C - 40°C, storage temperature: -30°C - 60°C), otherwise it will damage the LED screen seriously.
7. In order to ensure safety, please inspect the condition of power cables every 3 months for rental screen, and every year for fixed installation.

Caution 3

1. Make sure the LED screen should be properly grounded before working.
2. LED screen grounding resistance must be less than 1Ω.
3. If the LED screen is equipped with flight cases, the flight cases should not be exposed to rain. After each performance is completed, please pay attention to the moisture-proof treatment of the flight cases.

Caution 4

1. Warnings regarding to the CE certification: this equipment is compliant with Class A of CISPR 32. In a residential environment, this equipment may cause radio interference.
2. Warnings regarding to the FCC certification: this device complies

with Part 15 of the FCC Rules. Operation is subject to the following two conditions :

- (1) This device can not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Warning: Any changes or modifications to this unit that are not expressly approved by the party responsible for compliance could result in the user not being authorized to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and radiates radio frequency energy. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Special statement:

Our company does not compensate for personal injury or material loss caused by the user's arbitrary transformation or maintenance of this product. If you need to repair or remould this product, please contact us in advance.

Caution 5

Pay attention to the use of dance floor:

1. Avoid metal sharps, shoe spikes, glass and other hard objects from scratching or hitting the floor.
2. Do not drag on the surface when moving heavy objects;
3. When the vehicle passes through the ramp pad, the speed of the vehicle should be slow and gentle, and it can not accelerate rapidly.
4. When water enters between the mask and the lamp surface, the mask should be removed to allow the water to dry naturally or with a fan.
5. When the cabinet is maintained, if disassemble the cabinet mask, the screw used for fasten the mask cannot be higher than the brim after finishing maintenance.
6. Please clean the sand and water stains on the surface of the mask of floor cabinets after finishing using the cabinets before putting it back into the flight case.

Caution 6

When using P3.9 masks, you should pay attention to:

1. There are two types of the outdoor P3.9 full-view mask: U-shaped and round-dot mask, both of masks have interactive functions.
2. Compared with the round-dot full-view mask, the U-shaped one has a better ability to protect the lamp, but the viewing angle is narrower. Compared with the conventional mask with a brim, the viewing angle is much better.
3. The U-shaped one is mostly used by rental customers who have no special requirements for the viewing angle and need to change different venues frequently.
4. Compared with the U-shaped full-view mask, the round-dot model has a weaker lamp protection ability, but the viewing angle is better, especially the 45-degree viewing angle. Compared with conventional masks with brims, the viewing angle is much better.
5. The round-dot mask is suitable for customers who have high

requirements for viewing angles and do not need to change different venues frequently. Such as, fixed installation projects, ceiling screens, and dance floor.

6. The anti-slip mask with dots is specially used for dance floor. It is used by customers who use tempered glass to cover on the front of the cabinet. The surface of the mask has an anti-slip damping function, which greatly reduces the phenomenon that the glass cover slides on the surface of the cabinets. Used together with the special dance floor rubber pad, it can better protect the toughened glass cover from colliding with each other and breaking.

Cautions in the use of dance floor

7. When the display is working outdoors or close to a heat source, please ensure that the temperature of the dance floor surface is less than 40 degrees when the dance floor is in a black screen display. When the dance floor is working, please ensure that the cooling system is working normally, the cabinet fans are turned on, and the surface temperature of the dance floor mask is less than 60°C. The continuous working time should be less than 1h. If the cooling system needs to be turned off, the dance floor display needs to reduce 50% of its brightness, and the surface temperature of the dance floor mask must be less than 60°C. Otherwise, it will affect the display effect of the screen and cause damage to the cabinet components.

8. If the dance floor screen is used outdoors and rainwater seeps into the gap between the led screen mask and the dance floor mask, please clean up the infiltrated rainwater in time. Generally you can take actions such as placing it upright, blowing with an air gun, or removing the dance floor mask to dry the infiltrated rainwater within 24 hours.

Special statement:

Our company does not compensate for the personal injury or material loss caused by the users' arbitrarily transformation or maintenance of this product. Please contact our company before handling when it is needed to repair or remould the product.

Warranty:

In principle, the product warranty period is based on the product warranty period specified in the quotation. During the warranty period, our company will not guarantee any problems due to the following reasons.

- Problems caused by the user's arbitrarily dismantling the product or failing to perform maintenance properly.
- Problems caused by incorrect transportation and storage.
- Problems caused by the use of exceeding the rated parameters of the product.
- Problems caused by improper installation.
- Problems caused by fires, earthquakes, storms, floods, lightning and other natural disasters or riots, wars, radioactivity and other natural and man-made disasters.

Signs of restricted use of hazardous substances in electrical and electronic products:



1. The logo indicates that the environmental protection use period of electronic and electrical products is 10 years.
2. It means that the electrical and electronic products contain certain hazardous substances and can be used with confidence within the environmental protection use period. After the environmental protection period is exceeded, they should enter the recycling system.

Preface

MG9 series cabinet adopts the high Polymer nanomaterials. It is very light and thin, the weight of each cabinet is only 7kg. The product's consistency is better, and the anti-corrosion and waterproof performance are better than the traditional metal plated cabinet. The installation is faster and more humanization. The aluminum alloy heat sink is integrated with the power box through in-mold injection molding, greatly improves heat dissipation performance. The refresh rate can be up to 3840Hz. Due to high refresh rate, the image will not show dark streaks and flashes when being captured by camera. With extra large display size, high brightness and curve installation, it can meet high demands of the market and wider applications. Our screen has become an important choice for stage performance/rent, exhibitions, shows and commercial advertising. Also, with different accessories, MG series can easily achieve "multi-function" like perimeter screen, dance floor, ceiling screen, and all the creative design.

To ensure that our products are used within reasonable conditions and get your recognition, we will explain installation process, using process and cautions in details. Please read this carefully before installing and testing the screen.

Chapter 1 LED Cabinet

The LED cabinet mainly includes power supply, modules and controlling & receiving part.

1.1 Cabinet Structure

The cabinet structure of MG9 series products is made of high polymer nanomaterial instead of the traditional aluminum alloy die-castings or steel material, which greatly reduces the weight of the cabinet. The cabinet size is 500mm*500mm*71mm. (Figure 1.1.1)

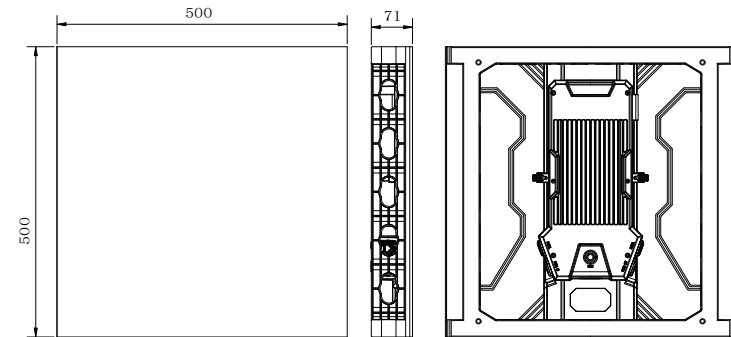


Figure 1.1.1 Cabinet view from all sides

Chapter 2 Cabinet Connection

2.1 Connectors and Cabinet Mounting Holes Connection

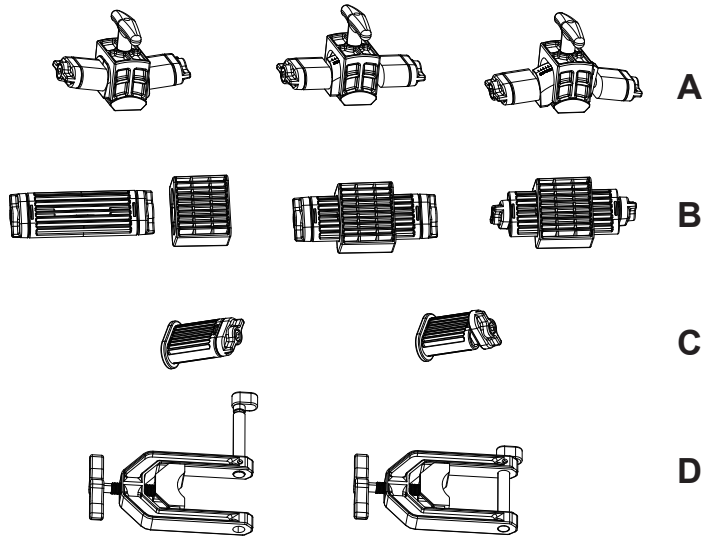


Figure 2.1.1 Connectors for cabinet

As shown in Figure 2.1.1, A (curve connector), B (horizontal connector), C (vertical connector) and D (U-shaped connector) are the connectors for cabinets. The connectors are used to connect the cabinets. Connectors A and B are used to connect the cabinets horizontally, while connector C is used to connect the cabinets vertically. Connector A is used for curved installation. After 2 cabinets are connected, they can be twisted, or stretched forth or back to form a cambered surface. Connector D is mainly used for fixed installation.

Connector A, MAX. horizontal bearing capacity is 500N, safety bearing capacity is 200N. It can be used more than 2000 times, and stored for

more than 3 years;

Connector B, MAX. horizontal bearing capacity is 1500N, safety bearing capacity is 500N. It can be used more than 2000 times, and stored for more than 3 years;

Connector C, MAX. Vertical bearing capacity is 7000N, safety bearing capacity is 1200N. It can be used more than 2000 times, and stored for more than 3 years.

The maximum vertical bearing capacity of Connector D is 5000N and the safety bearing capacity is 1000N. It can be used more than 2000 times and stored for more than 3 years.

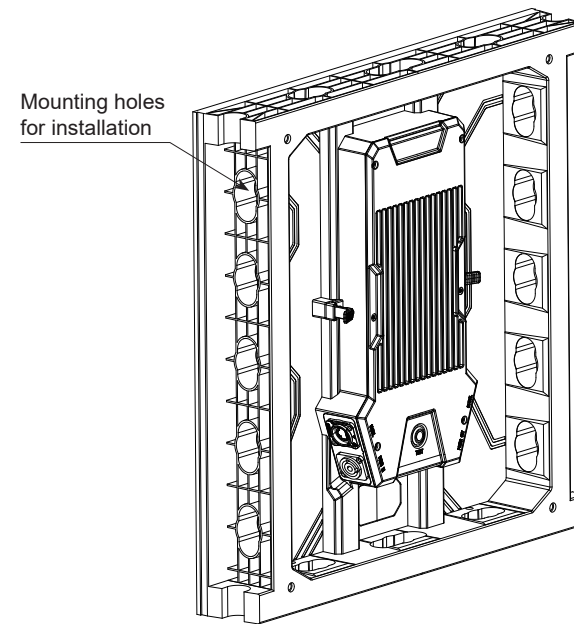


Figure 2.1.2 Mounting holes of the cabinet

As shown in Figure 2.1.2, there are 3 mounting holes and 2 semicircle round mounting holes on the top and bottom of the frame. There are 5 mounting holes on the left and right side of the frame where the connectors can be inserted. After inserting the connectors and tightly twisting the end of the connectors, the cabinets can be locked in place one by one. The cabinets can be connected easily and fast.

Please note: Our standard issue of the connectors would be 2 vertical connectors and 3 horizontal connectors as shown in Figure 2.1.3.

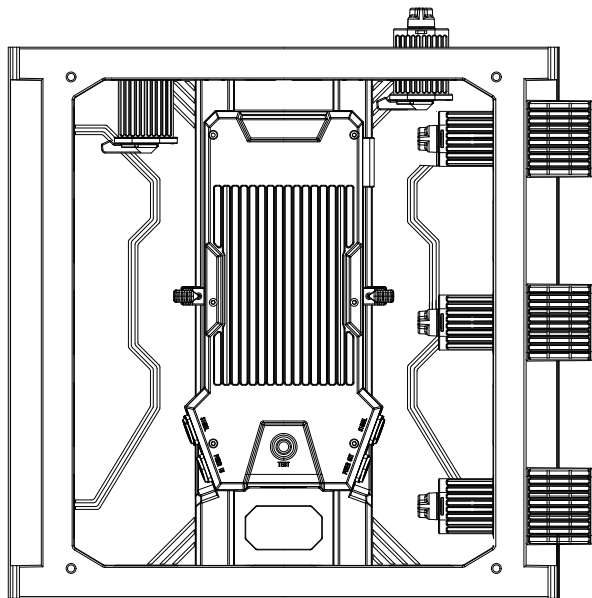


Figure 2.1.3 Standard connectors for cabinet

2.2 Signal and Power Cable Connection

Adopting Cat5 cable (signal cable) (Figure 2.21) and power cable (Figure 2.2.2) to connect each cabinet. MG9 standard cabinet uses two cables fixed on the cabinet, one signal cable and one power cable. The signal transmitting between the first cabinet of the screen and the

sending card end (PC, video processor, etc) uses the long signal cable while the signal transmitting between cabinet and cabinet uses the short fixed signal cable.

One cabinet is connected by 2 signal cables, which is designed for one input port and one output port. The input signal of the cabinet comes from the last cabinet output signal and the output signal of the cabinet connects next cabinet input signal. This connection way is the same as power cable.



Figure 2.21 Cat5 Cable (signal cable)



Figure 2.2.2 Power cable

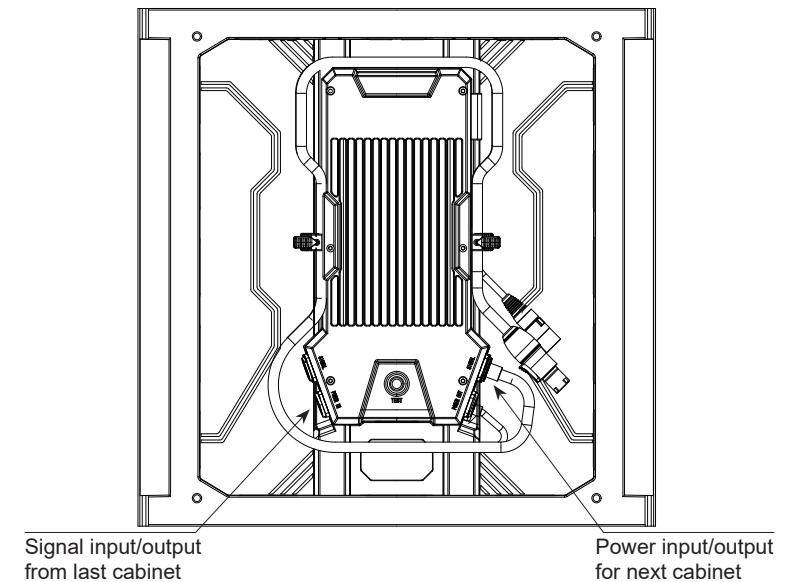


Figure 2.2.3 Signal cable and power cable connection between cabinets

Both of the signal ports can be flexibly as input or output according to your actual operation as shown in Figure 2.2.3.

The source of signal is the sending card end, including the PC with the sending card, independent control box and the video processor with sending card.

Chapter 3 LED Screen Installation

For LED screen installation, we provide customers with five methods: hanging installation, fixed installation, curved installation, dislocation installation and dance floor installation. Customers can choose an appropriate installation style according to the situation.

Note 1:

All installation methods are required to avoid collision of the frontage 4 corners of the cabinet (as Figure 3.1), causing unnecessary damage and affecting the normal use of the cabinet.

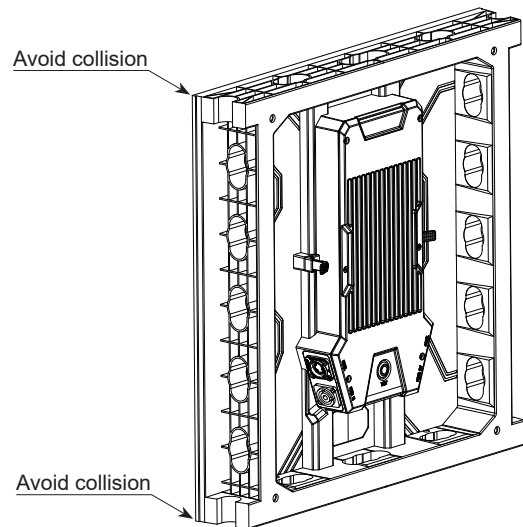


Figure3.1 Cabinet front corners

Note 2:

When moving cabinets from the flight case, be careful and keep the cabinets balanced. Avoid any possible friction between the flight case clapboard and the cabinet if the cabinet is inclined (Figure 3.2), which will affect the appearance and performance of the cabinet. When using flip-top flight case, pay attention to the placement of the cabinet (Figure 3.2). When you put the cabinet into flight case, the module sides of the first row and last row need to be towards the interior of the flight case to prevent surface damage during transportation.

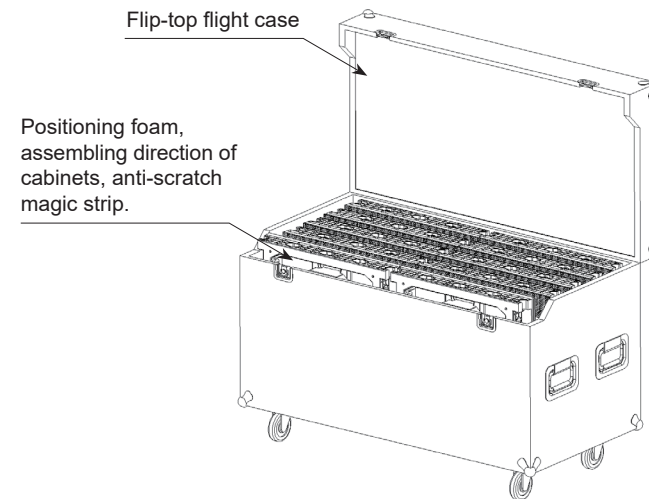


Figure 3.2 Putting the cabinets into the flight case

Note 3:

In general, unused cabinets must be placed in flight cases or cartons. However, in case of no flight cases or in other special conditions, the module side should be placed upwards, separating cabinets with foam or soft paper and when stacking (stacked layers ≤ 10 PCS cabinet). It is forbidden to place the cabinets vertically in the form of dominoes (Figure 3.3).

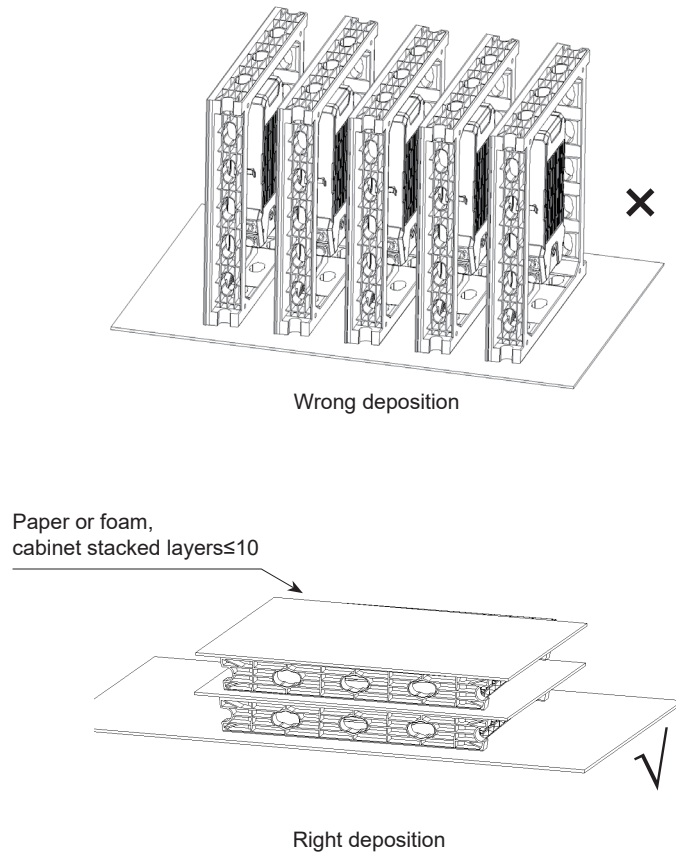


Figure 3.3 Cabinet deposition

Note 4:

When making the cascade connection of power cable and signal cable, in order to ensure the cables in queue and neat, cables between two cabinets can be connected through the mounting hole. After finishing the cascade connection of power cable and signal cable, the unused connector jack lid should be covered tightly (Figure 3.4).

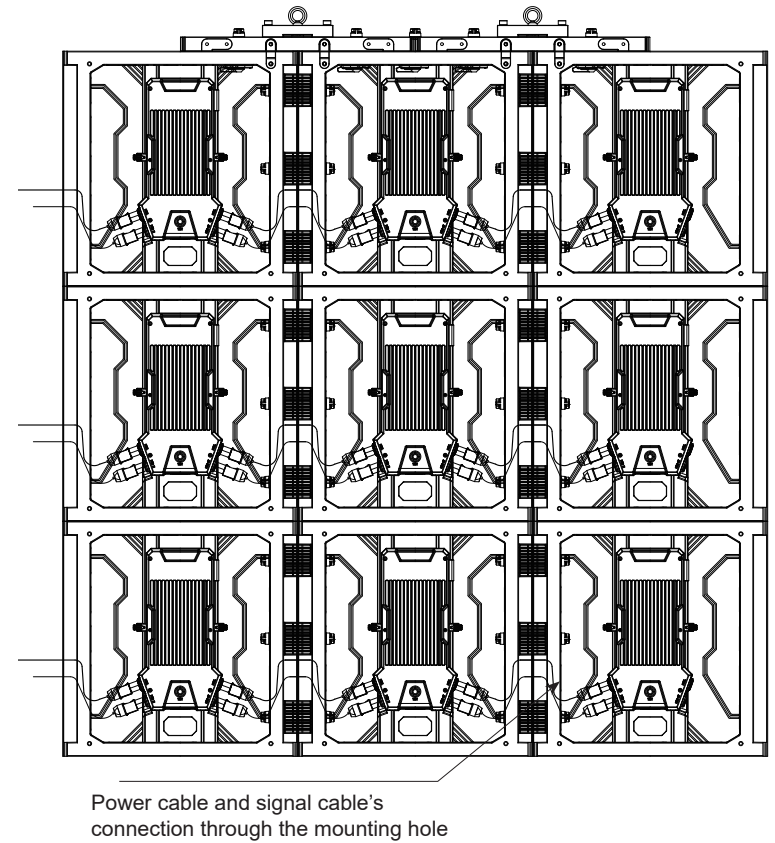


Figure 3.4 Power cable and signal cable connection through mounting hole

Note 5:

When the event is finished, the LED cabinets should be kept into the flight case or other places, please arrange the power cable and signal cable as Figure 3.5, put the cabinet in the right place after cleaning it. Handle gently when put the cabinets into the flight case.

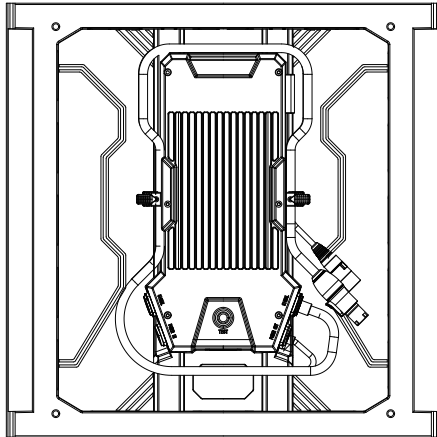


Figure 3.5 Cable putting

Note 6:

When the event is finished, the cabinets should be kept in the flight case or other places. Please arrange the power cable and signal cable as Figure 3.5, and put the cabinet in the right place after cleaning it. Handle gently when putting the cabinets into the flight case.

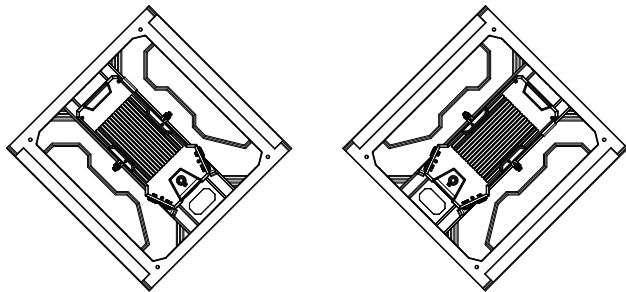


Figure 3.6 Cabinet can not be installed inclined (no more than 45°)

Note 7:

As shown in Figure 3.7, there are 4 multi-functional holes in the four corners of the cabinets. When used for fixing installation, they are for electrostatic discharge (ESD). It's necessary to ensure that the structural parts (including trusses, steel frames, etc.) connected to the four holes are grounded to the earth. When used for rental hanging installation, they are for fixing the plates between cabinets.

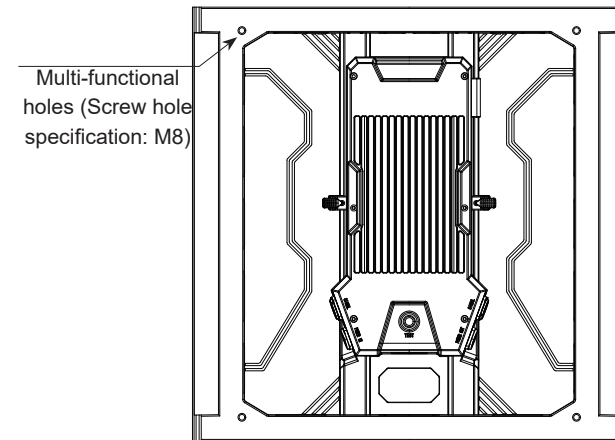


Figure 3.7 The diagram of position of multi-functional holes in the cabinet

Note 8:

When using all types of connectors, in order to ensure the maximum strength of connection effect, the locking head needs to be screwed into the right place, which means the locking head and the connector itself are in a vertical state.

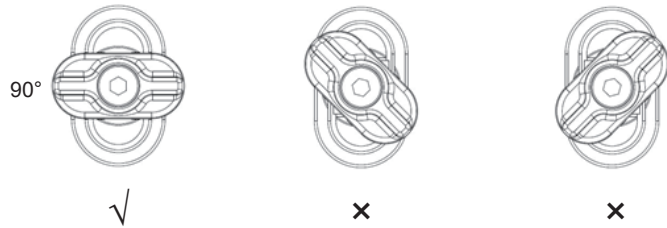
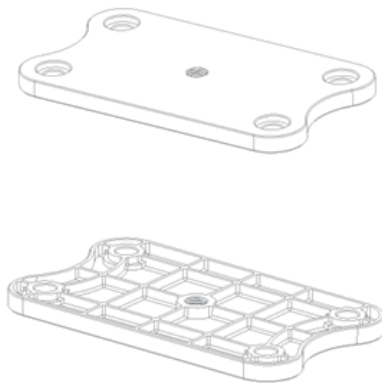


Figure 3.8 The using caution of the locking head of connector

Note 9:

In order to ensure the safe use of the cabinet and the better flatness of the LED screen, when the height of the hanging cabinet is $\geq 4\text{m}$ (eight cabinets' height), it is necessary to install the connecting piece, as shown in Figure 3.9.



The joining plate

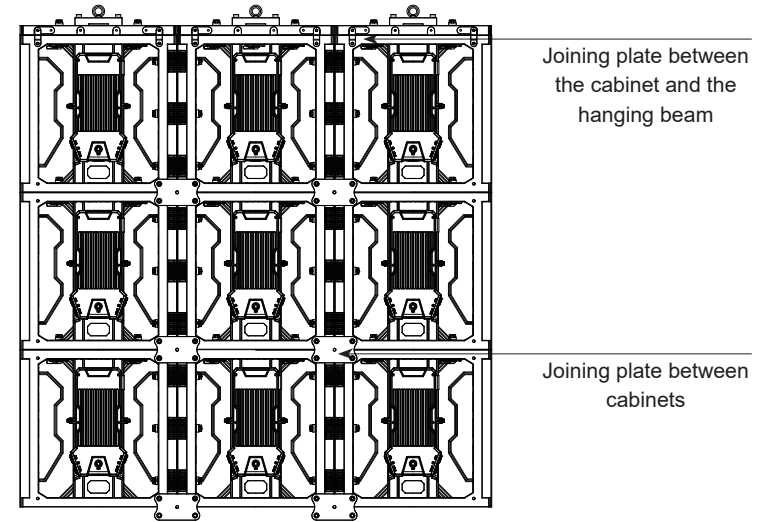


Figure 3.9 The diagram of installation of connecting piece

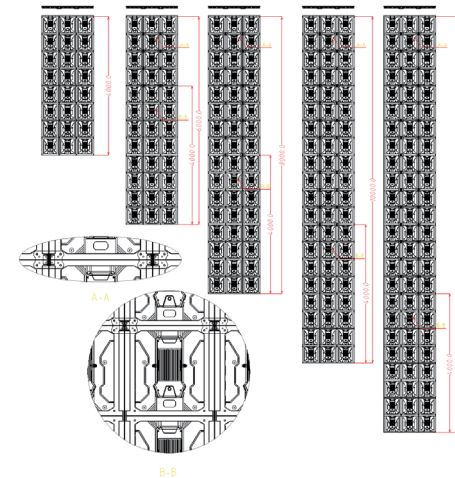


Figure 3.10 Hanging installation of 6m, 8m, 10m, 12m

If the hanging height exceeds 12m, please enhance the hanging structure or consult the technical engineer.

3.1 Hanging Installation

The hanging method is to connect the cabinet with the hanging beam. For such an installation method, it must have a suitable installation location, such as overhead beams or lintel being present. Furthermore, it is necessary to have a cover on the back of the LED screen. To install it in this way, it can also be mounted on TRUSS lifting frame or other similar firm structures, as Figure 3.1.1.2.

In this way, the uppermost of the screen is an aluminum hanging beam, and the below cabinets are connected with the beam. Then the lower cabinet is fastened with the upper one, and the right one is connected with the left one, thus it can form a whole screen. The hanging beam structure is shown in Figure 3.1.1.1, and the diagram of the hanging beam mounted on the TRUSS frame with rope is shown in Figure 3.1.1.2 and Figure 3.1.1.3. Each complete hanging beam is made up of several short hanging beams with 3 holes. C-connectors should be installed between hanging beams.

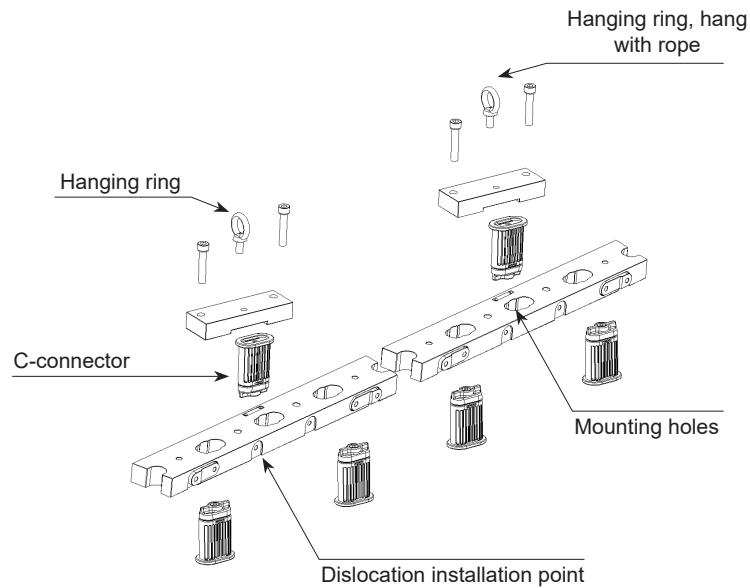


Figure 3.1.1.1 Aluminum hanging beam installation diagram

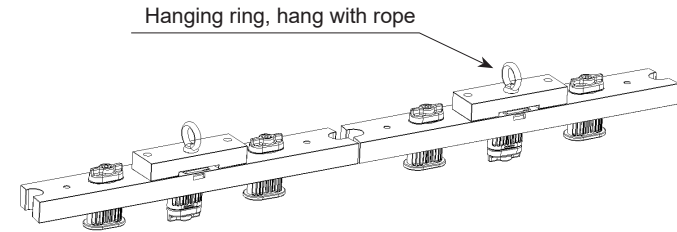


Figure 3.1.1.2 Aluminum hanging beam installation (rope and the TRUSS frame)

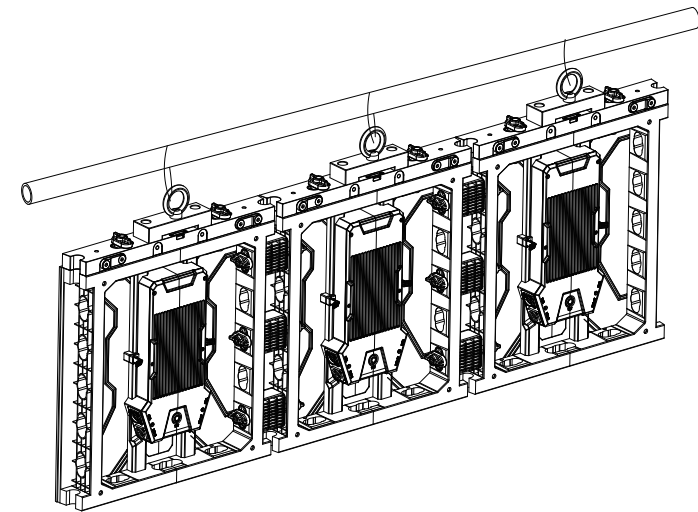


Figure 3.1.1.3 Hanging beam mounted on the TRUSS frame

There are two connection options between hanging beam and the cabinet:

- Option 1, the hanging beam is aligned with a single cabinet.
- Option 2, dislocation installation across two cabinets. Here we recommend the option 2, as shown in Figure 3.1.1.4.

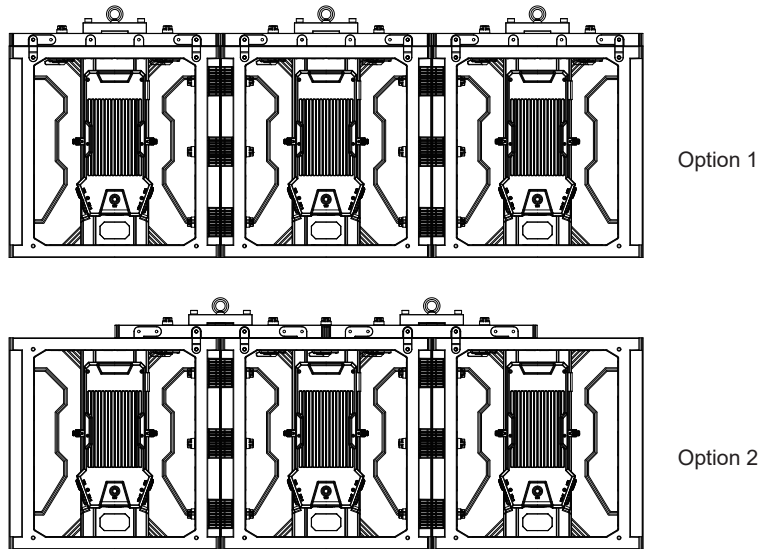


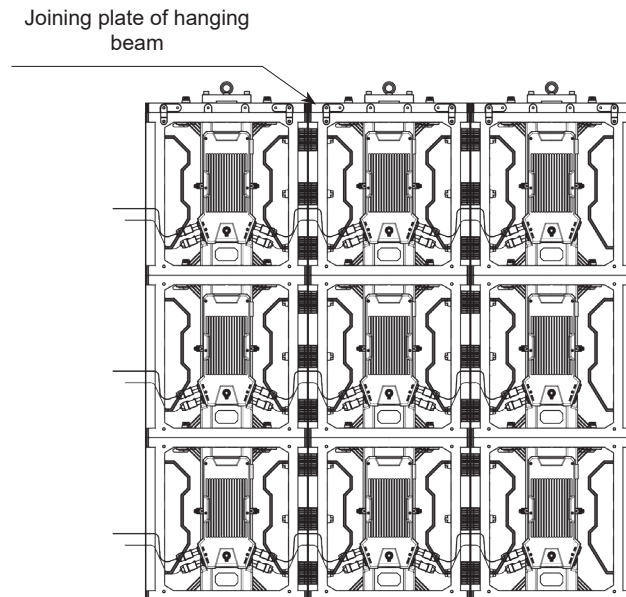
Figure 3.1.1.4 Two connection options of aluminum hanging beam

Based on our testing results, for the amount of mounting holes on the hanging beam, if using 4 hanging beam holes, the load weight is 12000N and the security index is 6:1, 200kg. It is safe with 20 cabinets in height. Therefore, we should pay special attention to choosing the quantity of connectors and using 4 pieces of C-connectors. Moreover, the joining plate must be used for the cabinets in a row next to the hanging beam. The C-connector must be inserted in a semicircle position on the corner of cabinet when two cabinets are connected. It is safe to keep the angle between the rope and hanging beam within 85°-95° in hanging installation. The design sketch is shown as Figure 3.1.1.5 & 3.1.1.6.

Note: When you use hanging rope for hanging installation, please make sure every rope bears the same weight (when the rope is tight). If the hanging height is less than 8 cabinets, using two C-connectors between cabinets can be adopted. If the hanging height is higher than 8 cabinets, the joining plate must be used.



Figure 3.1.1.5 Front side design diagram of hanging installation



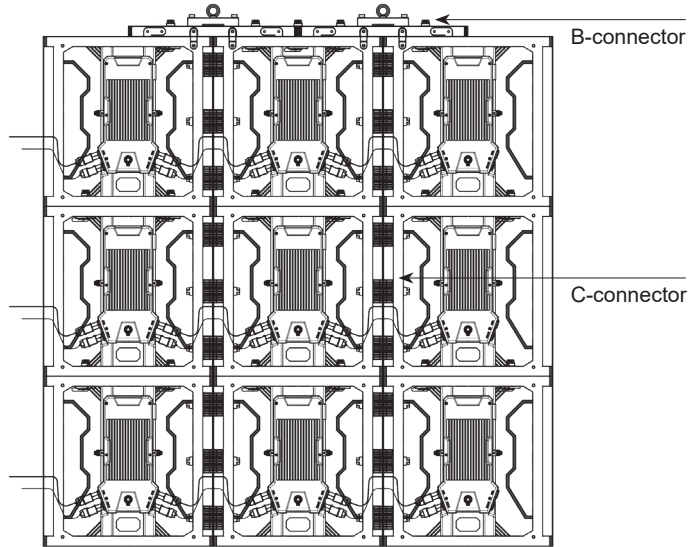


Figure 3.1.1.6 Diagram of two installation options of cabinets on the back side

2. In addition, the hanging beam can also be used as ground support. When the ground is uneven, using an aluminum beam can ensure a flat installation of the screen, as Figure 3.1.2.1,

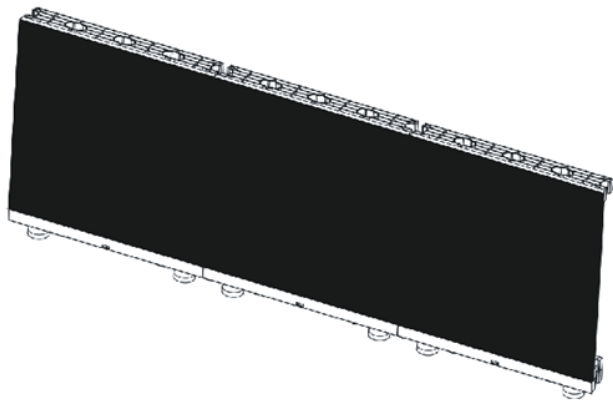


Figure 3.1.2.1 Design diagram of ground support installation at the front

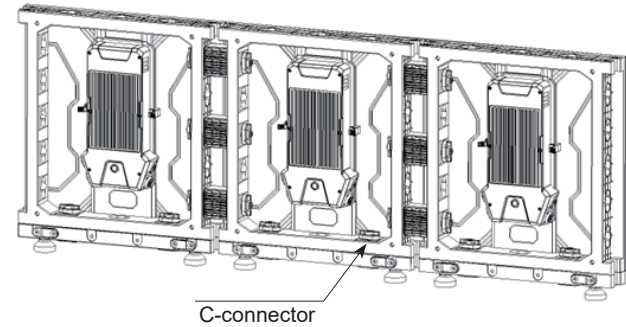


Figure 3.1.2.2 Design diagram of ground support installation on the back side

3.2 Fixing installation

Fixing installation means that the cabinet is fixed to the wall or steel frame by connectors. The wall must be safe and firm. Different bodies of cabinets are fixed on a steel frame through connectors and the steel frame is fixed in the wall to ensure firmness.

The difference between fixing installation and hanging installation is that the former uses a connector (D-connector as Figure 2.1.1) fixing on a steel frame rather than through a hanging beam. B-connectors must be installed by 3 pieces for each cabinet, and D-connectors must be installed by 1 piece/sqm, as Figure 3.2.1,3.2.2.



Figure 3.2.1 Design diagram of fixing installation from the front

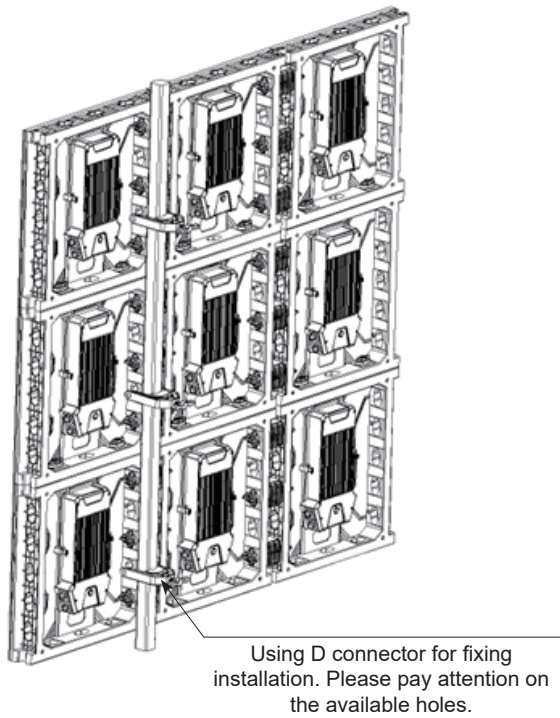


Figure 3.2.2 Design diagram of fixing installation on the back side

3.3 Curving installation

Curving installation adopts special connector to connect cabinet with each other. It twists the connector angles to form arc screen. The curving installation of LED screen is formed by using the curved connector which can be twisted (shown as Figure 2.1.1A-connector). The client can install the cabinet in concave, convex and "S" shape according to their requirements.

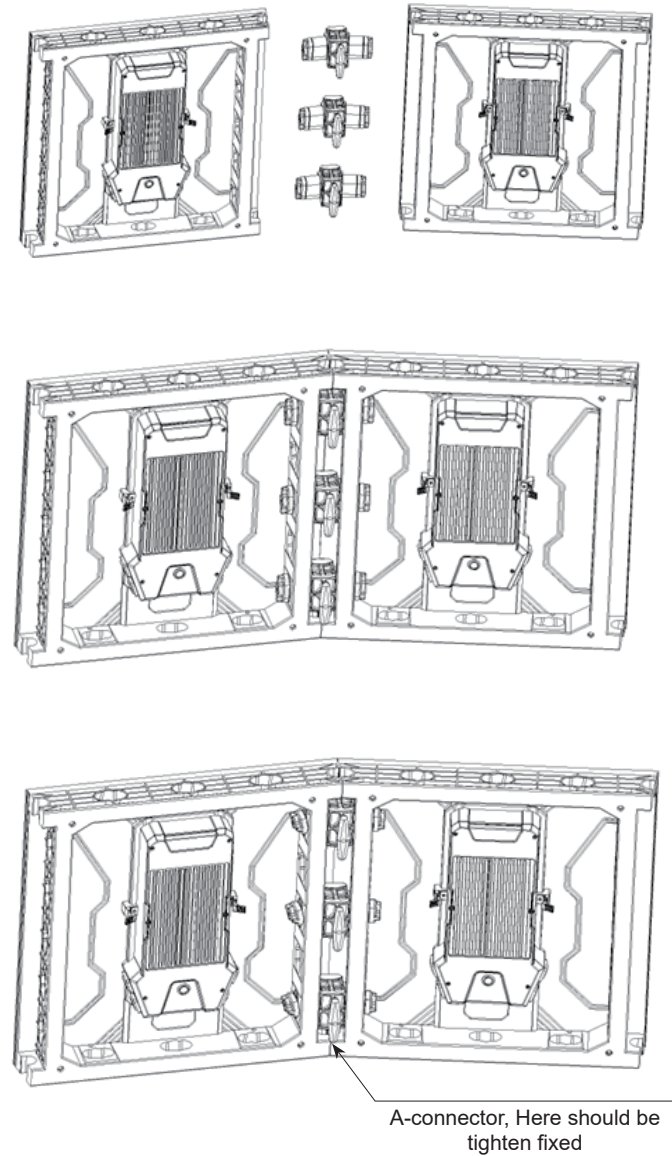


Figure 3.3.1 Curving installation diagram

As shown in Figure 3.3.1, here is the demonstration method of curved installation with two cabinets: Use an A-connector to connect the cabinet. After ensuring the flatness of the front of the cabinet, twist the two ends of the A-connector, and then tighten the above screws.

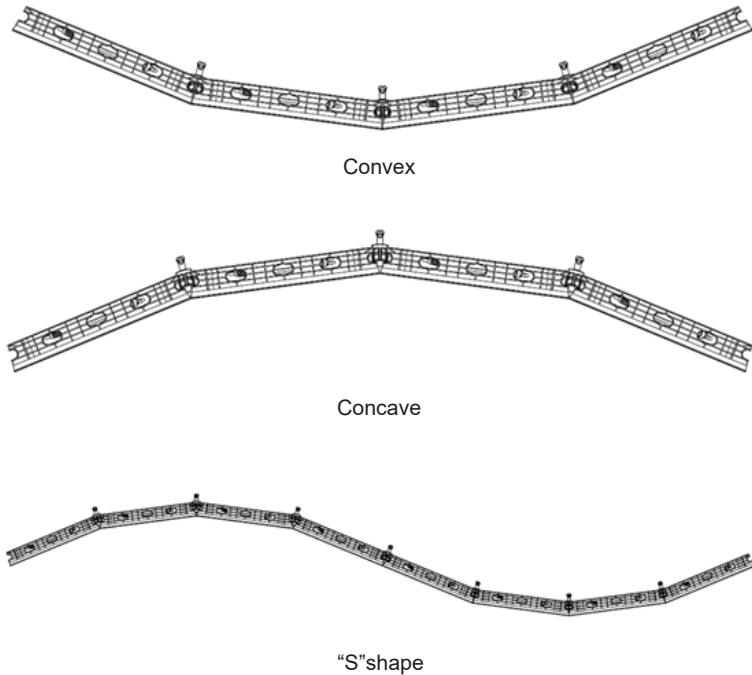


Figure 3.3.2 Top view of curving installation

3.4 Dislocation Installation

Compared to traditional LED screen, MG9 is designed with multiple dislocation mounting holes, providing more possibility for customers' creative installation. The dislocation installation of horizontal, vertical, front & back all can be achieved. However, before the specially shaped installation, it is necessary to remove the C-connector to meet the installation of different positions. Different installation chooses different holes. The specific details are shown in Figure 3.4.1-3.4.3.

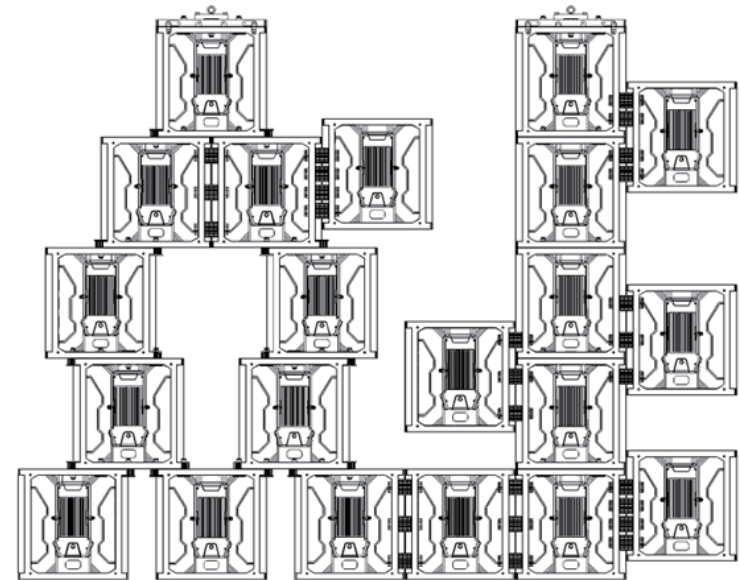


Figure 3.4.1 Horizontal/Vertical dislocation installation (creative design)

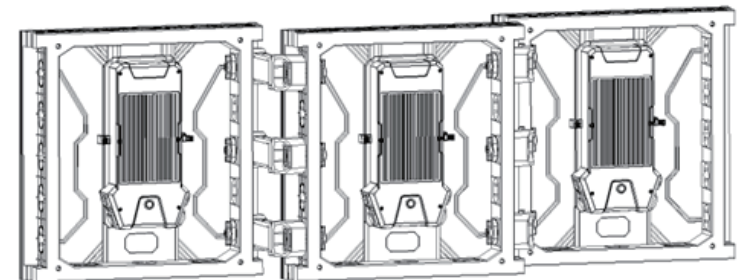


Figure 3.4.2 Front & rear dislocation installation 1 (creative design)

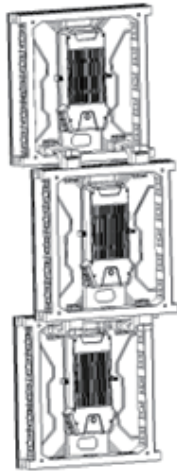


Figure 3.4.2 Front & rear dislocation installation 2 (creative design)

3.5 Dance Floor Installation

With MG mounting frame, the installation of the MG9 cabinet can turn into the dance floor installation. Figure 3.5.1 is the components for dance floor truss.

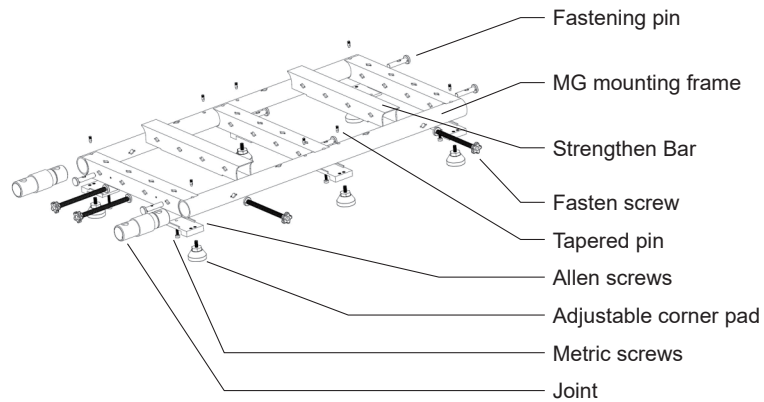


Figure 3.5.1 Components for dance floor truss

When using the joint to connect the MG mounting frame, the LOGO side needs to stay upwards and it is also necessary to tighten all the screws on the frame from all angles. After finishing the installation of the dance floor truss, use the ground adjustable feet to make the dance floor truss flatter. Then finally, install the screen. Figure 3.5.2 is the diagram of the dance floor truss installation.

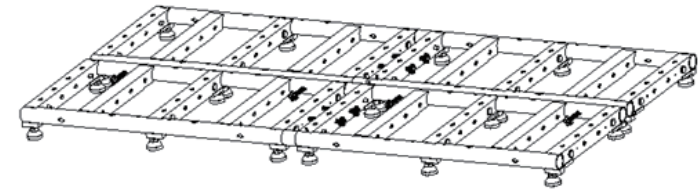


Figure 3.5.2 Dance floor truss installation

When fixing the MG mounting frame and the adjustable feet, please be careful that the foot pad is fully in contact with the MG mounting frame. What's more, the fastening pin and the metric screws should be tightly locked to fix the position of the foot pad. Please ensure that a proper hexagonal wrench is effective to adjust the height of the feet from the front, as shown in figure 3.5.3.

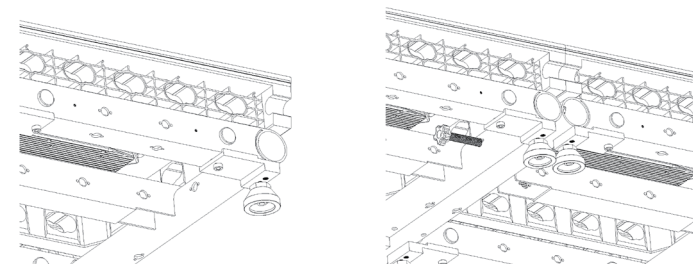


Figure 3.5.3 MG mounting frame fixing with adjustable feet

As Figure 3.5.4, when putting the cabinet directly on the MG mounting frame, it is needed to assemble the strengthening bar in the middle of each cabinet corresponding to the MG mounting frame. Also, it is necessary to add a tapered pin in the electrostatic discharge hole on the back of the cabinet. You can easily take out the cabinet with the front service tool.

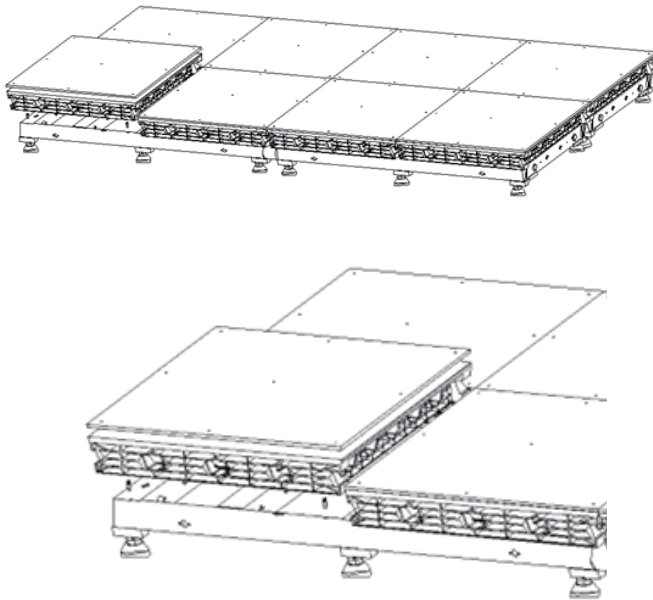


Figure 3.5.4 Cabinet fixing with dance floor truss

At the 4 corners and in the middle of the MG mounting frame, it is required to install the adjustable feet and use joints and fasten screws to connect and tighten. The screen surface shall use 500*500mm dance floor masks to protect.

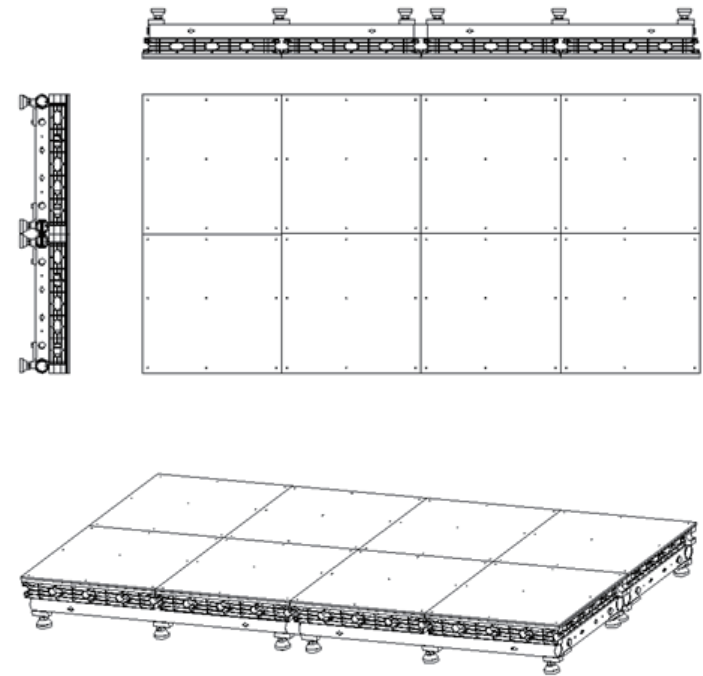


Figure 3.5.5 Dance floor with horizontal level adjustment function (with MG mounting frame)

Precautions for the use of the dance floor LED screens

When the display is working outdoors or close to a heat source, please ensure that the temperature of the dance floor surface is less than 40 degrees when the dance floor is in a black screen display. When the dance floor is working, please ensure that the cooling system is working normally, the cabinet fans are turned on, and the surface temperature of the dance floor mask is less than 60°C. The continuous working time should be less than 1h. If the cooling system needs to be turned off, the dance floor display needs to reduce 50% of brightness, and the surface temperature of the dance floor mask must be less than 60°C. Otherwise, it will affect the display effect of the screen and cause

damage to the cabinet components.

If the dance floor screen is used outdoors and rainwater seeps into the gap between the led screen mask and the dance floor mask, please clean up the infiltrated rainwater in time. Generally you can take actions such as placing it upright, blowing with an air gun, or removing the dance floor mask to dry the infiltrated rainwater within 24 hours.

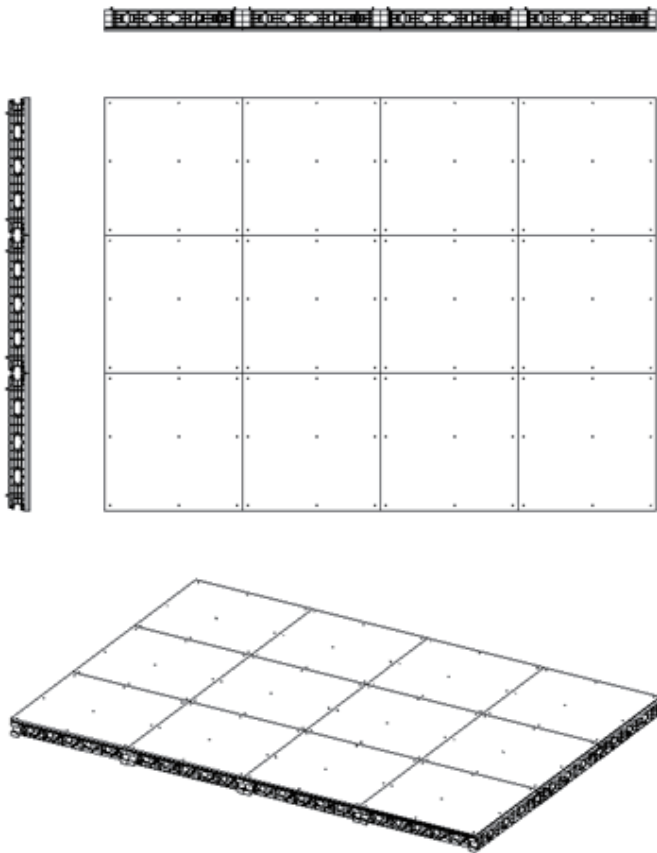
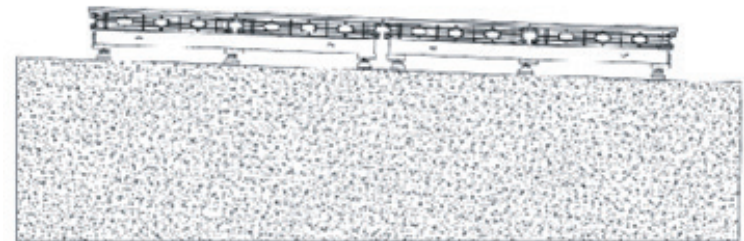


Figure 3.5.6 Dance floor without horizontal level adjustment function (without MG mounting frame)

Correct: The dance floor screen installation is horizontal balanced



Correct horizontal reference line



Incorrect: The dance floor screen installation is not horizontal balanced

Figure 3.5.7 Dance floor should be kept in horizontal installation

Safety Load-bearing Parameters of MG9 Dance Floor

500*500mm 6.5mm thickness of dance floor mask's ultimate pressure and references of bearing wheel force size and area											
No	Ultimate pressure (N)	Force area (sqm)	Ultimate pressure (Pa)	Safety factor	Bearing weight (Kg)	Bearing pressure (N)	Total force area	Wheels quantity	Length of wheel force area (m)	Width of wheel force area (m)	Single wheel force area (m ²)
1	22000	0.00188	1.17E+07	6	100	1000	0.000512727	4	0.011321741	0.011321741	0.000128182
2	22000	0.00188	1.17E+07	6	200	2000	0.001025455	4	0.01601136	0.01601136	0.000256364
3	22000	0.00188	1.17E+07	6	300	3000	0.001538182	4	0.019609831	0.019609831	0.000384545
4	22000	0.00188	1.17E+07	6	400	4000	0.002050909	4	0.022643482	0.022643482	0.000512727
5	22000	0.00188	1.17E+07	6	500	5000	0.002563636	4	0.025316182	0.025316182	0.000640909
6	22000	0.00188	1.17E+07	6	600	6000	0.003076364	4	0.027732488	0.027732488	0.000769091
7	22000	0.00188	1.17E+07	6	700	7000	0.003589091	4	0.029954511	0.029954511	0.000897273
8	22000	0.00188	1.17E+07	6	800	8000	0.004101818	4	0.032022719	0.032022719	0.001025455
9	22000	0.00188	1.17E+07	6	900	9000	0.004614545	4	0.033965223	0.033965223	0.001153636
10	22000	0.00188	1.17E+07	6	1000	10000	0.005127273	4	0.035802488	0.035802488	0.001281818
11	45000	0.02	2.28E+06	6	1100	11000	0.029333333	4	0.085634884	0.085634884	0.007333333
12	45000	0.02	2.28E+06	6	1200	12000	0.032	4	0.089442719	0.089442719	0.008
13	45000	0.02	2.28E+06	6	1300	13000	0.034666667	4	0.093094934	0.093094934	0.008666667
14	45000	0.02	2.28E+06	6	1400	14000	0.037333333	4	0.096609178	0.096609178	0.009333333
15	45000	0.02	2.28E+06	6	1500	15000	0.04	4	0.1	0.1	0.01
16	45000	0.02	2.28E+06	6	1600	16000	0.042666667	4	0.103279556	0.103279556	0.010666667
17	45000	0.02	2.28E+06	6	1700	17000	0.045333333	4	0.106458129	0.106458129	0.011333333
18	45000	0.02	2.28E+06	6	1800	18000	0.048	4	0.109544512	0.109544512	0.012
19	45000	0.02	2.28E+06	6	1900	19000	0.050666667	4	0.112546287	0.112546287	0.012666667
20	45000	0.02	2.28E+06	6	2000	20000	0.053333333	4	0.115470054	0.115470054	0.013333333
21	45000	0.02	2.28E+06	6	2100	21000	0.056	4	0.118321596	0.118321596	0.014

Chapter 4 Common Problems For LED Screen

4.1 Software Problems

1. The problem includes that the connection is interrupted or it prompts users that it is unable to find the control card. The interface of the software is not adjustable, which means it is in gray, and the LED control equipment list of the software does not have the control icons.

Solutions:

1. Change USB cable.
2. Check the equipment connection in the equipment manager.
3. Ensure that there is no virus in the computer.
4. If it is the internal sending card, the reason for the error may be the loose slot or the damage or interference of foreign matter. Please reinsert the slot or clean the interface with rubber.

2. Indicator light of the output port for sending card is not illuminated.

Solutions:

There are two possible situations:

1. Relevant control software has not been installed. Under this condition, please ensure that the software is successfully installed.
2. The FPD of the graphics card is off. Under this condition, please right click "My computer" on the desktop, and then click Properties->Settings->Advanced>Display->FPD.
3. Operating the cooling system of the cabinet.

Turn on the fan: Open the software version Nova LCT V5.4.1 or higher and click the Menu→Settings→Receiving Card Relay Settings→Receiving Card Relay Parameters →Click the "Connected".
Turn off the fan: Open software version Nova LCT V5.4.1 or higher and click the Menu→ Settings→Receiving Card Relay Settings→Receiving Card Relay Parameters→Click the "Disconnected".

Automatic fan operation: Open software version Nova LCT V5.4.1 or higher and click the Menu→Settings→Receiving Card

Relay Settings→Receiving Card Relay Parameters→Click the "Automatic"→Set the temperature value of the connected relay and the temperature value of the disconnected relay.

4.2 Hardware Questions

1. There is no content on the LED screen.

Solutions:

- a. Check whether the screen is powered on.
- b. Check whether the output signal is active.
- c. Check whether the display area is correct.

2. The cabinet of the LED screen is blurred or not bright enough in certain cabinets.

Solutions:

- a. Check whether the modules and HUB card are connected.
- b. Check whether the configuration file is loaded correctly.
- c. Check whether the calibration function is enabled or correct.
- d. Please change the broken mask if there takes place one.

3. The picture of the cabinet is in a wrong order.

Solution: Please recheck and connect the signal cables in the correct manner.

4. Some individual LED lamps are not illuminated.

Solution: Please repair these dead LEDs.

Chapter 5 LED Screen Maintenance

The correct use of LED screen is extremely essential to the service life and normal work of the equipment. Therefore, in our daily life, we need to pay attention to the maintenance and protection work.

1. Please read the MG9 series LED Screen User Manual carefully. The manufacturer do not take any legal liability of the consequence due to the incorrect, incomplete, irresponsible, or unsafe use of the installation system.
2. Handle the LED screen cabinet with care. Please avoid collision and strike.
3. Check the cabinet carefully to ensure that there is no loose screw before using
4. Please confirm that the steel frames and hanging rings are kept in place firmly before installation. For those screens that have already been installed for a long time, regular checking of the situation of the connection part is required. If you find any loose component, please adjust it timely, reinforce the component soon or change new hanging parts in time.
5. Keep the whole cabinet frame structure away from oil, acid and other corrosive material.
6. Pay attention to the anti-static work of the screen. Do not touch the LED face directly by hand. It is recommended to wear gloves when you install and debugging of the screen.
7. The null line and live line of the power cable in a computer or the control system can't be connected reversely. It should be connected strictly according to the original position.
8. If the power switch of screen trips frequently, please check the screen or replace the power supply switch.
9. Before turning on the screen, please turn on the PC first, then turn on the LED screen. When turning off the screen, please turn off the LED screen first, then turn off the PC. Otherwise, it will bring high-

brightness on the screen, which may lead to the serious consequence that the lamps are burnt.

10. If there is a short circuit, switch trip, wire burning, smoke or other abnormal phenomenon after removing, please don't repeat the electricity test but check the problem timely.

11. The proper way to remove a power supply: First, turn the cabinet back up and keep the connector upward. Second, loosen the screws on the aluminum cooling board and lift the aluminum cooling board up horizontally to 30~40mm (observe the inner power supply box at the same time). Third, overturn the aluminum cooling board to the right slowly (pay attention to prevent the radiator's fan from crashing other components). Finally, checking and repairing the inner box.

12. Master the methods of installation, recovery of the original data, backup, setting of the controlling parameter, and modification of the basic data preset.

13. Inspect virus regularly, and remove irrelevant data.

14. Software operation is under professional engineers.

15. Please do not perform in the storm, dust and strong wind.

16. Disassembly the LED screen after the events. Please clean the water stains and dust on the two sides of each cabinet before putting them into the flight case. The internal space of the flight case must be clean and dry. If it is moist, you must dry it in the sun or with the dryer. At the same time, too much friction should be avoided between cabinets and their inner parts of the flight case.

17. When installing or removing the LED screen, please pay attention to protecting the LEDs on the four sides of the cabinet to prevent them from damage.

The manual operation standard of the LED screen is as follows: First, the corner of the module of LED screen can not be placed first to touch the carrier and can not detach the surface of the carrier when carrying it. Secondly, use both hands during the operation. Thirdly, handle gently when using.

18. The maintenance of the connectors:

a. Fill the cleaning gun with the DJW-618X cleaning fluid (major ingredient: dichloroethane, trichloroethane or alcohol). Then, plug in the 220V power supply.

b. Keep the nozzle of the cleaning gun at a 45 angle and about 10-15 cm away from the dirty part of the connectors. Please press the button slightly with short pauses to spray and use the cleaning gun.

Attentions about cleaning the connectors:

a. The spray gun is high pressure device. Don't pick the gun towards people. Please keep it in a high position after use.

b. Please wear a mask and protection glasses to avoid the cleaning liquid splashing into the human eyes and mouth.

c. Smoking and flames are prohibited. All the cleaning work should be kept far away from fire and smoke.

d. Cleaning work should be arranged in a natural ventilation atmosphere or the open area.

19. Outdoor display is not only necessary to consider the moisture concerns, but also to do waterproof, dust proof, and other routine maintenance work. A well-sealed installation may help the LED screen reduce the risk of water entry. Regular cleaning of the dust on the interior and exterior of the screen also aids in heat dissipation and minimizes the water vapor.

20. Wet and rainy weather might generate dew on the wall. Please keep the cabinet away from the wet wall and the dew.

21. The warehouse where the products are placed must be kept ventilated and dry. Please do not let the moist air gathering in the warehouse. It is advised to choose a build the warehouse on high ground.

22. Precautions for the usage of the dance floor screen

a. When the display is working outdoors or close to a heat source, please ensure that the temperature of the dance floor surface is less than 40 degrees when the dance floor is in a black screen display. When the dance floor is working, please ensure that the cooling system is working normally, the cabinet fans are turned on, and the

surface temperature of the dance floor mask is less than 60°C. The continuous working time should be less than 1h. If the cooling system needs to be turned off, the dance floor display needs to reduce 50% of its brightness, and the surface temperature of the dance floor mask must be less than 60°C. Otherwise, it will affect the display effect of the screen and cause damage to the cabinet components.

b. When removing the dance floor mask, please ensure that you are using the matched electric screwdriver. The improper electric screwdriver is easy to damage the screw heads of the dance floor, which may result fail to remove the screws. If that happens, please find professional maintenance personnel to help removing to avoid secondary damage to the screen.

c. If the dance floor screen is used outdoors and rainwater seeps into the gap between the LED screen mask and the dance floor mask, please clean up the infiltrated rainwater in time. Generally you can take actions such as placing it upright, blowing with an air gun, or removing the dance floor mask to dry the infiltrated rainwater within 24 hours.



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2024.07 V1.0