User Manual
MC-7F/9F/12F/18F
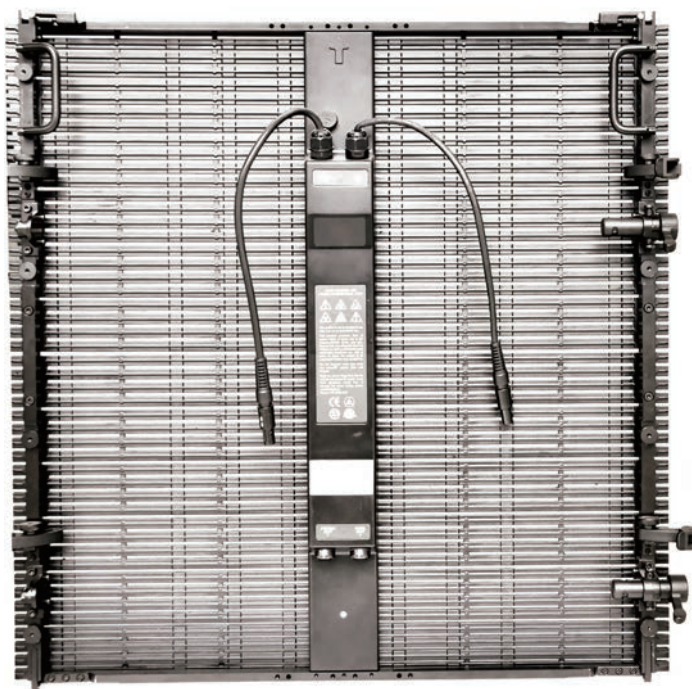
Contents

01 Safety Information:

> ## WARNING!
> ## Read the safety precautions in this section before installing, powering, operating or servicing this product.

The following symbols are used to identify important safety information on the product and in this manual:

WARNING!
Safety hazard.
Risk of severe
injury or death.

WARNING!
Refer to
manual before
installing,
powering or
servicing.

WARNING!
Hazardous
voltage. Risk of
lethal or severe
electric shock.

WARNING!
Hot surface. Do
not touch.

WARNING!
Fire hazard.

WARNING!
Emission
hazardous to
eyesight.

This product is for professional use only. It is not for household use.

This product presents risks of severe injury or death due to fire hazards, electric shock and falls.

Read this manual before installing, powering or servicing this product, follow the safety precautions listed below and observe all warnings in this manual and printed on the product.

If you have questions about how to operate the panel safely, please contact your Radiant supplier.

PROTECTION FROM ELECTRIC SHOCK

· Connect the product to AC mains power within the range 100-240V nominal at 50 or 60Hz only.

· Disconnect the product from power when not in use.

· Always ground (earth) the product electrically.

· Before using the product, check that all power distribution equipment and cables are in perfect condition and rated for the current requirements of all connected devices.

· Do not use the product if the power cable or a power plug is in any way damaged, defective or showing signs of overheating.

· Do not attempt to open any cover.

· Refer any service operation not described in this manual to a qualified technician.
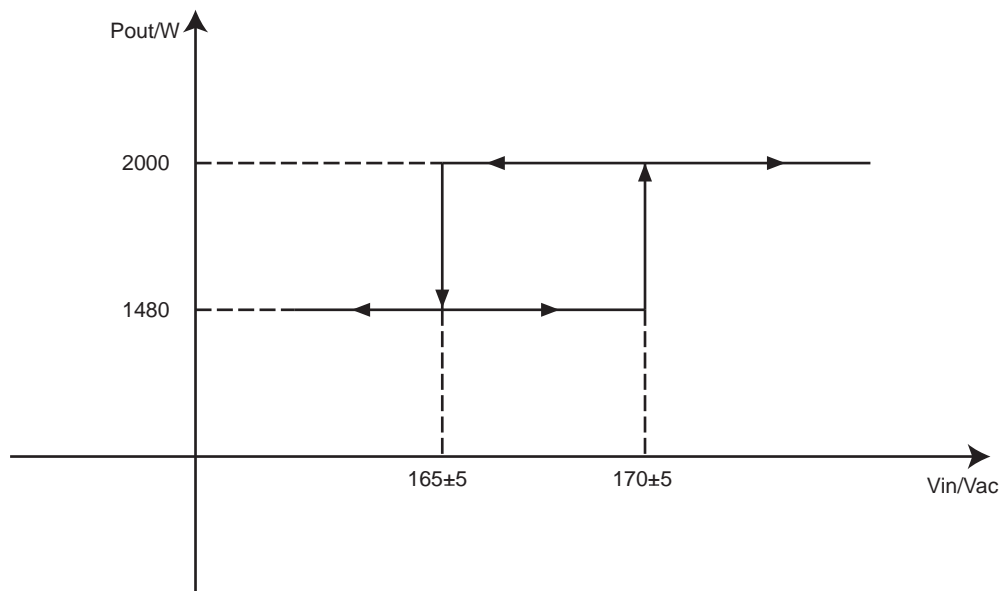
PROTECTION FROM FIRE

Do not stick filters, masks or other materials directly onto LED modules.

Do not modify the product in any way not described in this manual.

Install only genuine Radiant parts in or on the product unless an alternative is described in this manual.

Do not operate the product full load if the ambient temperature of power units (Ta) exceeds 45℃ (113° F) or less than -20℃(−4° F)

PROTECTION FROM INJURY

Create an installation by installing panels at the top and working downwards. Disassemble an installation by removing panels at the bottom and working upwards.

Check that all external covers and rigging hardware are securely fastened.

Block access below the work area and work from a stable platform whenever installing, servicing or moving the product.

Important warnings

Maximum and minimum ambient temperature:
The maximum ambient temperature for the LED wall is 45 °C; the minimum temperature is -20 °C.

High leakage current:
The combination of power boxes in an installation results in increased levels of Leakage current. In order to avoid risk of electric shock due to high leakage current, proper grounding of the installation is required.

This equipment MUST be earthed:
In order to protect against risk of electric shock, the installation should be properly grounded. Defeating the purpose of the grounding type plug will expose you to the risk of electric shock.

Power system

Mains cords:
The power cords delivered with this system have special properties for safety. They are not user Serviceable. If the power cords are damaged, replace them only with new ones. Never try to repair a power cord.

Data cables:
The data cables provided with this system have special properties for safety. They are not user serviceable. If the data cables are damaged, replace them only with new ones. Never try to repair a data cable. Per requirements of the National Electrical Code® in the USA, the length of a data cable must not exceed 100 m (332 feet). Avoid exposure of data cables to accidental contact with lightning or power conductors.

LINX LED Panels cannot be hot swapped:
Always disconnect the power cord from the control box before connecting or disconnecting the cable string or one of LINX LED Panels.

MC LED Panels is lightweight and virtually transparent LED display.They offer wide viewing angles with excellent image integrity and color uniformity, owning the common characteristics of light - weight and firm structure. With the amazing flexibility and high density, both of them can be able to multi-angle folded, satisfy your solution for applications with long viewing distances.

MC-7F Specification:

Pixel Pitch	7.5mm
LED Type	3in1 SMD
Brightness(Nit or CD/m^2)	Cree 3435,4200/NationStar 3535,4000
Transparency	7%
Module Size(mm) W×H×D	600.0×600.0×50.0
Module Area	0.36m^2
Pixels/Module	80×80
Pixels/m^2	17778
Viewing Horizontal/Vertical	160 °
Weight/Module	7.0kg/15.43lbs
IP（Front/Reverse）	IP65
Color Depth	16 bit
Scan	1/5
Refresh Rate	1800Hz
Max Power/Module	180W
Certificates	ETL/TUV/CE
Working Temperature	-20 to 45°C

MC-7F Dimensions:
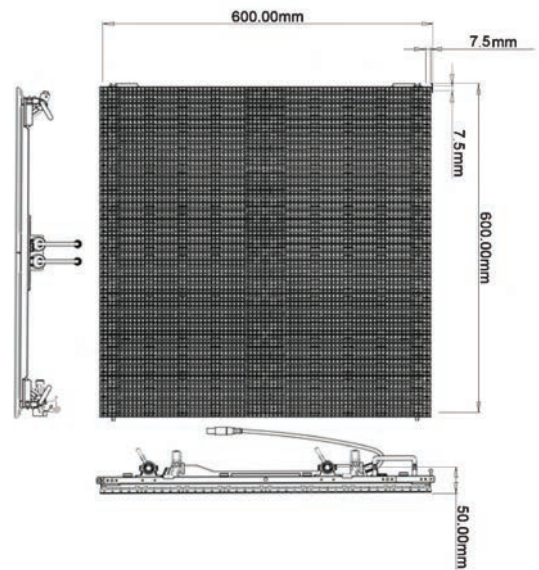
MC-9F Specification:

Pixel Pitch	9.375mm
LED Type	3in1 SMD
Brightness(Nit or CD/m^2)	Cree 3435,4200/NationStar 3535,4000
Transparency	17%
Module Size(mm) W×H×D	600.0×600.0×50.0
Module Area	0.36m^2
Pixels/Module	64×64
Pixels/m^2	11378
Viewing Horizontal/Vertical	160 °
Weight/Module	6.3kg/13.89lbs
IP（Front/Reverse）	IP65
Color Depth	16 bit
Scan	1/4
Refresh Rate	3500Hz
Max Power/Module	180W
Certificates	ETL/TUV/CE
Working Temperature	-20 to 45°C

MC-9F Dimensions:
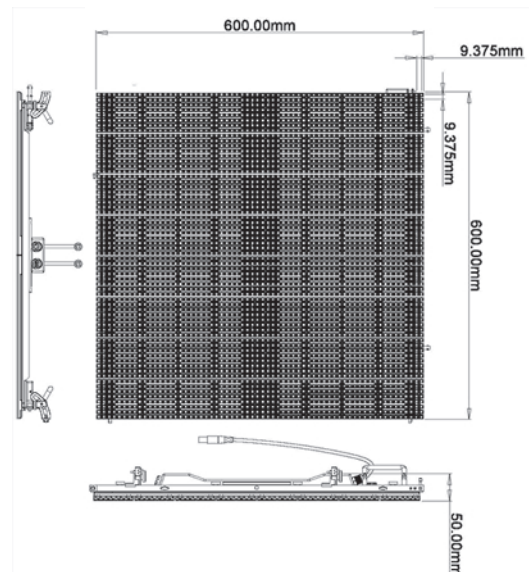
MC-12F Specification:

Pixel Pitch	12.5mm
LED Type	3in1 SMD
Brightness(Nit or CD/m^2)	Cree 3435,4200/NationStar 3535,3500
Transparency	21%
Module Size(mm) W×H×D	600.0×600.0×50.0
Module Area	0.36m^2
Pixels/Module	48×48
Pixels/m^2	6400
Viewing Horizontal/Vertical	160 °
Weight/Module	5.8kg/12.79lbs
IP(Front/Reverse)	IP65
Color Depth	16 bit
Scan	Static
Refresh Rate	4000Hz
Max Power/Module	180W
Certificates	ETL/TUV/CE
Working Temperature	-20 to 45°C

MC-12F Dimensions:
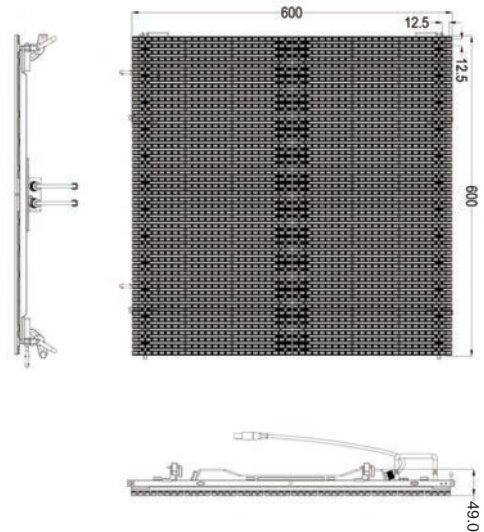
MC-18F Specification:

Pixel Pitch	18.75mm
LED Type	3in1 SMD
Brightness(Nit or CD/m^2)	Cree 3435,4000/NationStar 3535,3600
Transparency	37%
Module Size(mm) W×H×D	600.0×600.0×50.0
Module Area	0.36m^2
Pixels/Module	32x32
Pixels/m^2	2844
Viewing Horizontal/Vertical	160 °
Weight/Module	5.4kg/11.90lbs
IP(Front/Reverse)	IP65
Color Depth	16 bit
Scan	Static
Refresh Rate	4000Hz
Max Power/Module	180W
Certificates	ETL/TUV/CE
Working Temperature	-20 to 45°C

MC-18F Dimensions:
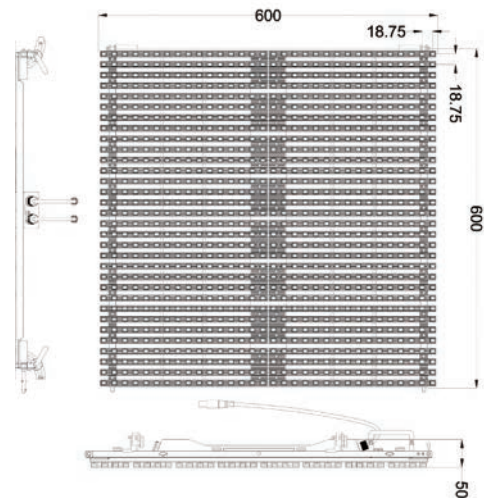
Backside diagram
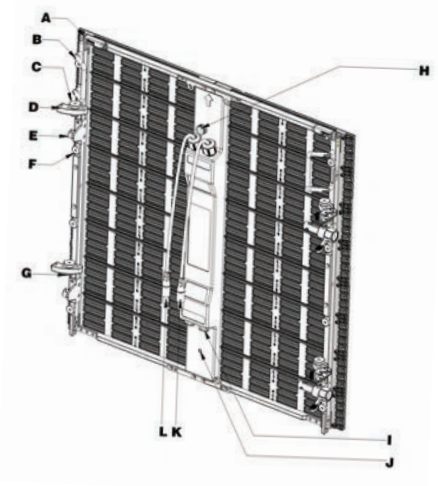
Note:

A．Vertical connector
B．Handle
C．Arc connector-rotation angles
D．Button-Fix the arc
E．Horizontal connector
F．Disassemble button

G．Breather valve
H．Indicator light
I．Female data socket
J．Female power socket
K．Data cable
L．Power cable

03 Connection:
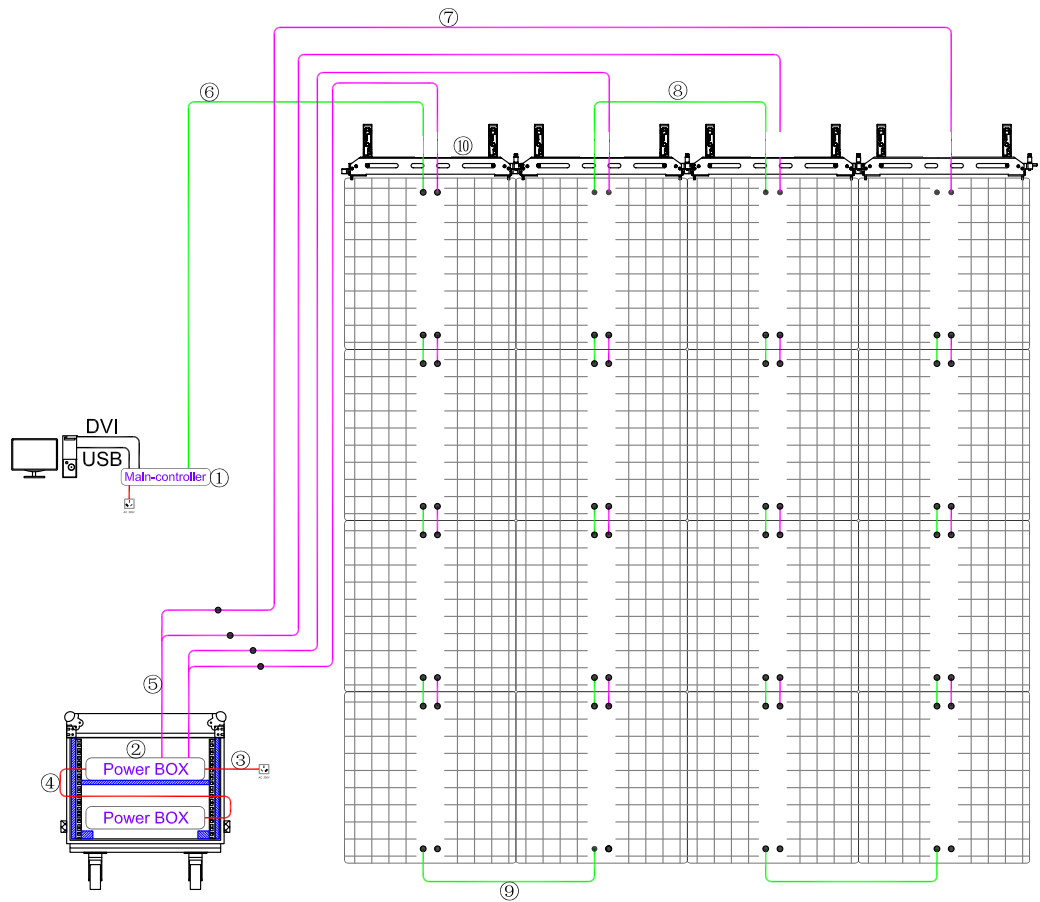
Accessories quantity for (4*4) tiles:

①. 1× Sending card (SDR-30001)
   1× DVI cable
   1× USB cable
②. 1× Power Box (PSU-41001)
③. 1× Power Cable (PWC-30500)
④. 0× Power Cable (PWC-30200)
⑤. 2×Power Cable (PWC-20024)
⑥. 1×CAT-5 (CAT-30001)
⑦. 4× Power Cable (PWC-23004)
⑧. 1×CAT-5 (CAT-00821)
⑨. 2×CAT-5 (CAT-00811)
⑩. 4×Hanging Bar (RIG-06022)

04 Accessories

①	②	③
Main controller **Part No. :(SDR-30001)**	**Power box** **Part No. :(PSU-41001)**	Name : Power Cable Part No. : PWC-30500 Dimesion : 5000mm Weight : 1.50kg Max Current : 32A

④	⑤	⑥
Name : Power Cable Part No. : PWC-30200 Dimesion : 2000mm Weight : 0.62kg Max Carrent : 32A	Name : Power Cable Part No. : PWC-20024 Dimesion : 200mm Weight : 0.15kg Max Current : 20A	Name : CAT-5 Part No. : CAT-30001 Dimesion : 30000mm Weight : 1.33kg Max Length : 100m

⑦	⑧	⑨
Name : Power Cable Part No. : PWC-23004 Dimesion : 30000mm Weight : 2.47kg Max Current : 20A	Name : CAT-5 Part No. : CAT-00821 Dimesion : 800mm Weight : 0.06kg	Name : CAT-5 Part No. : CAT-00811 Dimesion : 800mm Weight : 0.05kg

⑩		
Name : Header Part No. : RIG-06022 Dimesion : L620×W193.6×H72mm Weight : 3.80kg Material : Cold Rolled Steel Max Capacity : 32 tiles of MC-F	**Flightcase 2pcs/case** **Part No. :FLS-01001**	**Flightcase 12 pcs/case** **Part No. :FLS-03001**

05 Header Assembly:

Standard Header:

Figure 1: Clamp
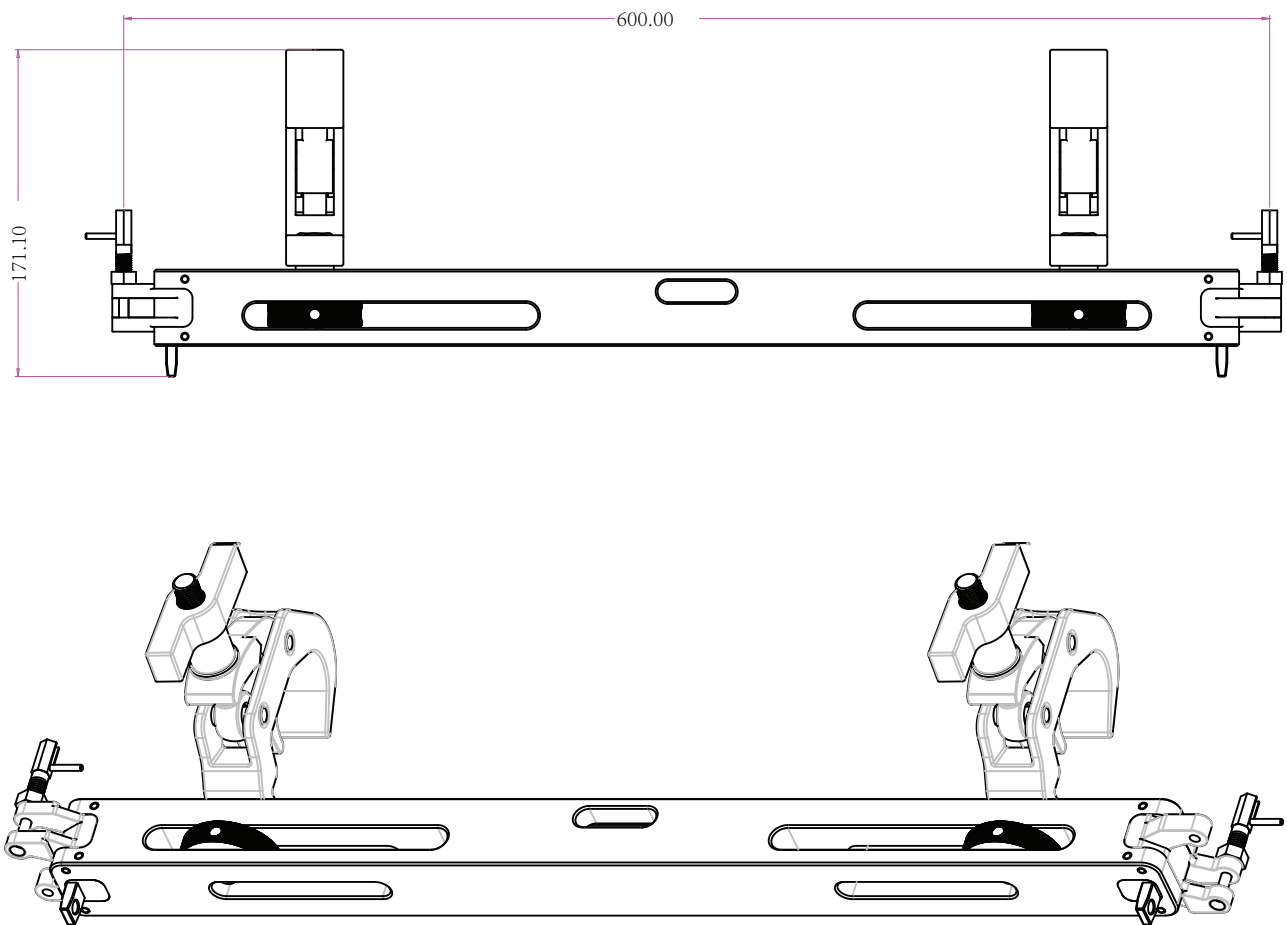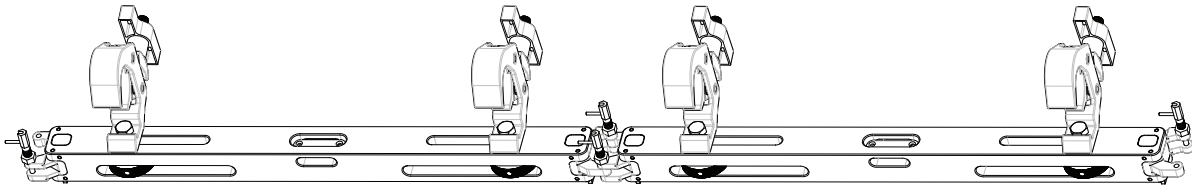
156.88

Figure 2: Headers

600.00

171.10
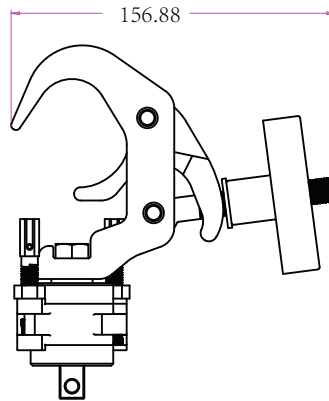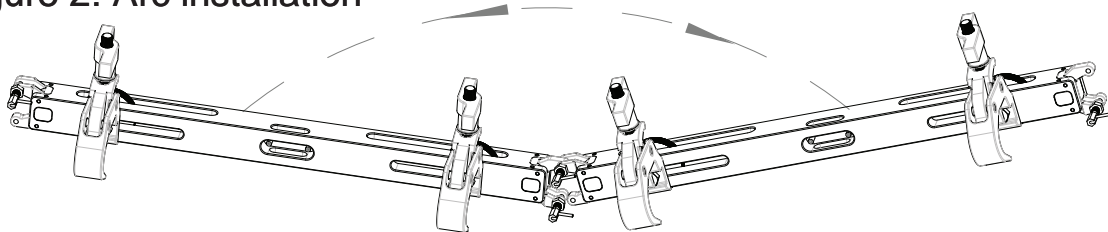
Figure 1: Straight installation

Step 1: Match the holes in straight line.

Step 2: Turn the knob and fit securely.

Step 3: Push the bolt in.

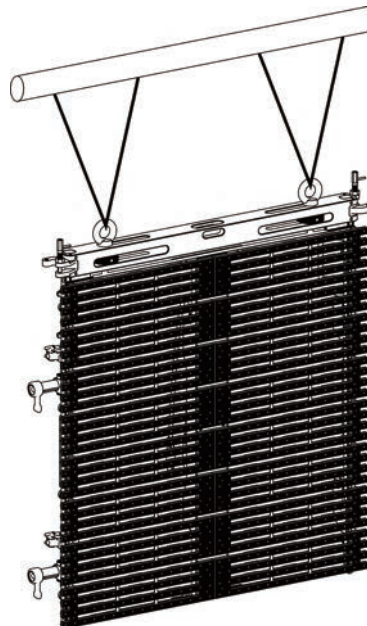> **Note:** Adjust the height of header with the pulley.

Figure 2: Arc installation

Step 1: Match the holes in the angle.

Step 2: Turn the knob and fit securely.

Figure 3: The function of ring

Note: The ring suggest to be used in big show, special stage design, high level background
display…
Headers suggest be used in car show, TV show…some close view distance display.
The ring is not included in standart accessary rist.

06 Physical Connection:
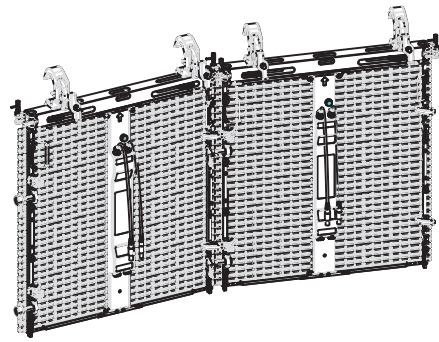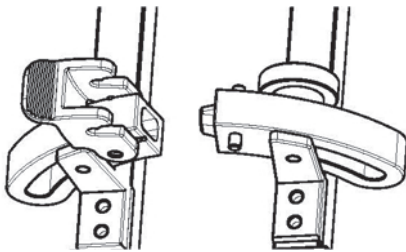
Straight installation

Step1:
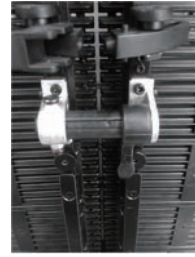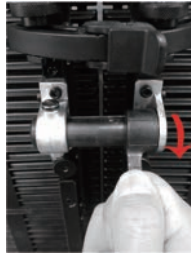
Step2:
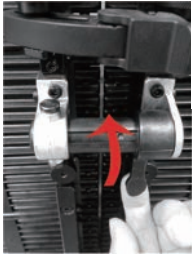
Curve Installation

1. Loosen the knob and buttons on the header and panels.
2. Adjust the angle.
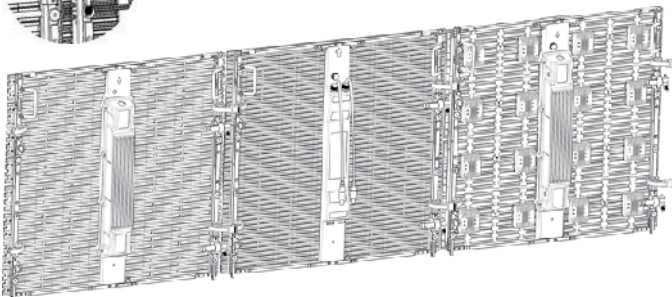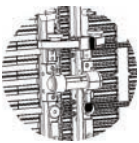3. Tighten the knob and bottom.

Note:
Headers can reach the angle of 50°both front and back direction.
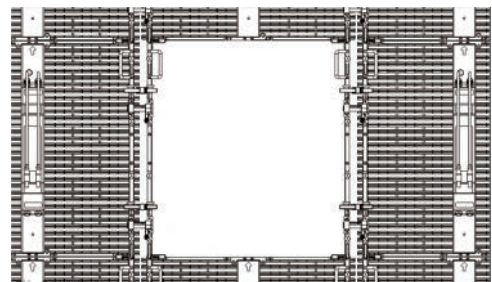Panels can reach the angle of 40°.
For perfect visual effect,seamless curveable is 15°(Both front/back direction).

MC-F&Hybrid mixing using

Note: Depending on unified frame structure,all of
MC families and hybrid can be integrated
together.

Hollow-design

1. Install all the panels securely.
2. Loosen six buttons and take down the panel.
3. Connect the cables above and below nearby.

07 Control System:

The control system of MC-F series consist of receiving card and sending card.Receiving card is integated with LED panels.

Specification	
Working voltage	100-240VAC
Power	＜10W
Working temperature	-20℃～ 45℃
Input port	DVI
Output ports number	2 ports
Communication port	USB/RJ45
Max resolution	1280x1024
Data transmission port	1000M Ethernet
Material	SPCC
Dimension	L460xW215xH40mm
Weight	1.48kg

Main controller (SDR-30001)
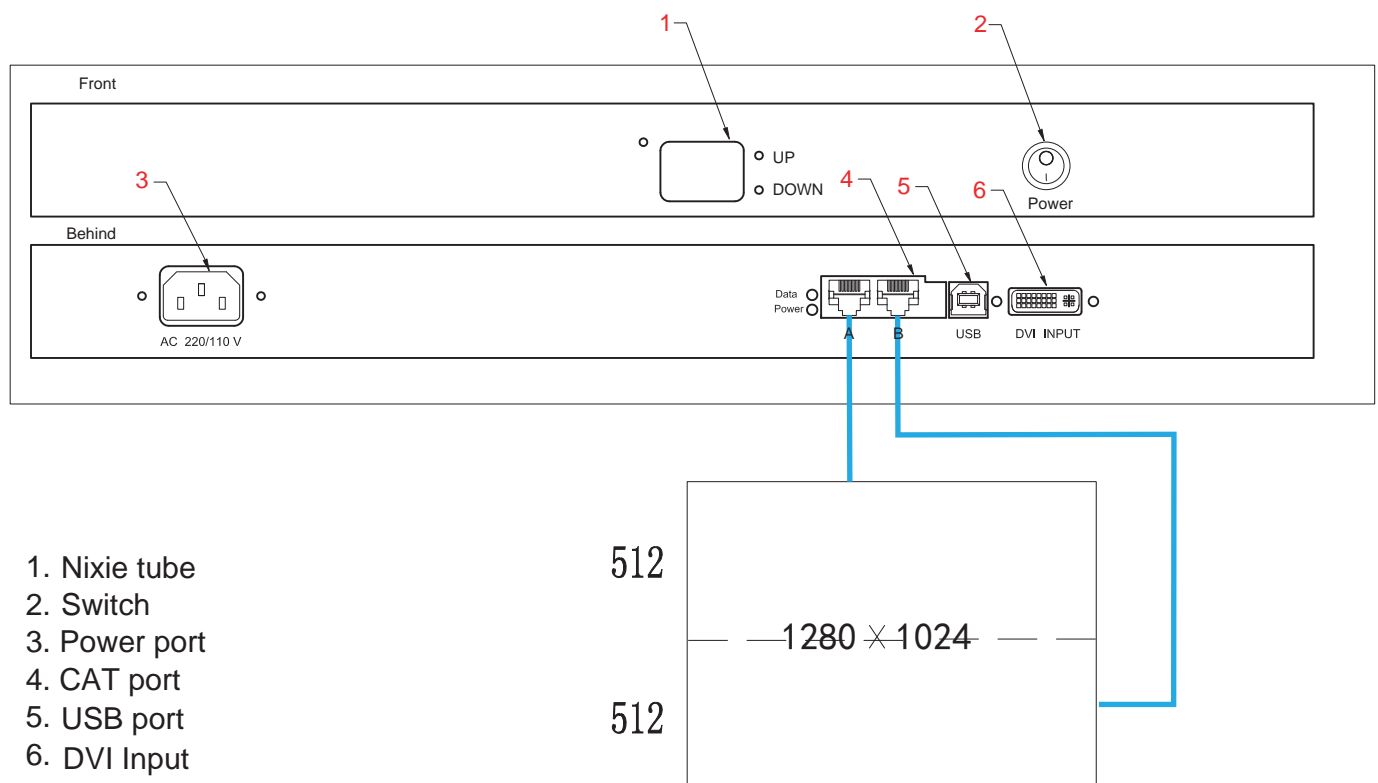
1. Nixie tube
2. Switch
3. Power port
4. CAT port
5. USB port
6. DVI Input

Software:

Please read software manual or download from the link as below:

MC-F power box

Specification	
Working Voltage	100-240VAC
Power Output	4000W
Working temperature	-20℃~45℃
DC36V Output	2 ports available
Mounting	Fixed on Head / Settle on the ground
Max Capacity	16 tiles / 8 tiles per port
Material	SPCC
Dimension	L420xW380xH130mm
Weight	12.16kg
IP	IP62

Power box (PSU-41001)
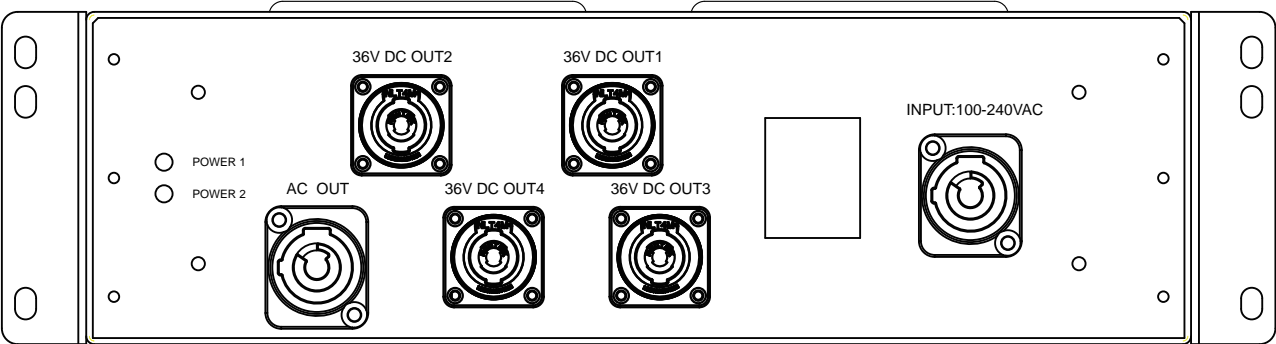
Power box (PSU-41001)

Power box installation:

Power box installation

PSU-41001 can be suspended on the truss,also can be settled on the ground in smart flight case.

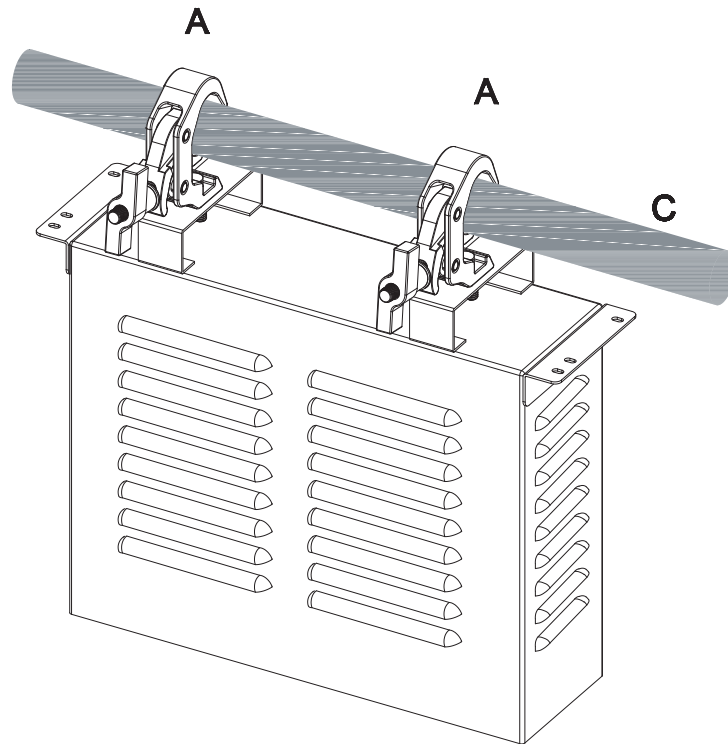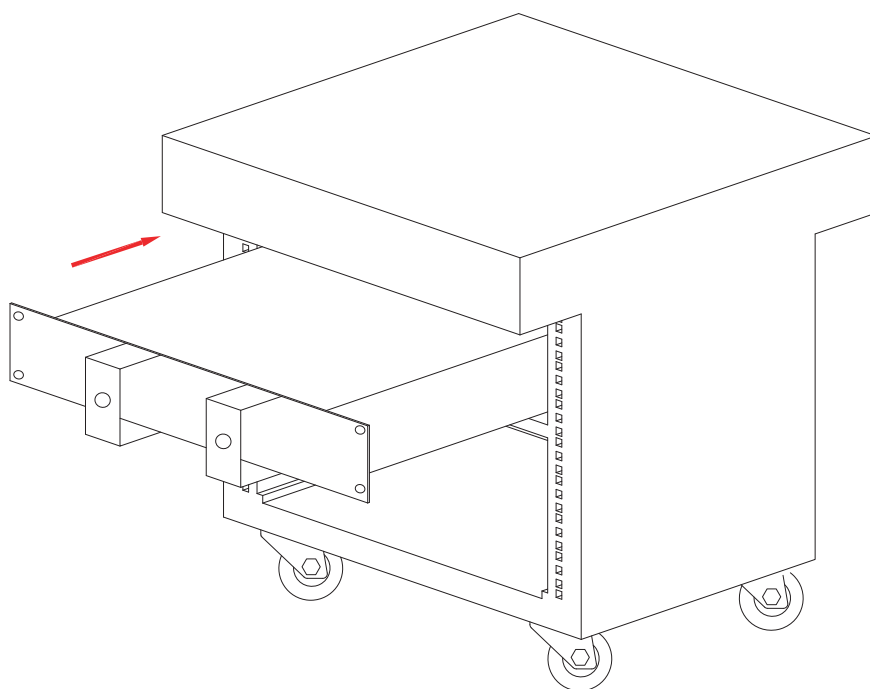Figure 1: Installation on the truss

Figure 2: Installation in the flight case

08 Service and Maintance:

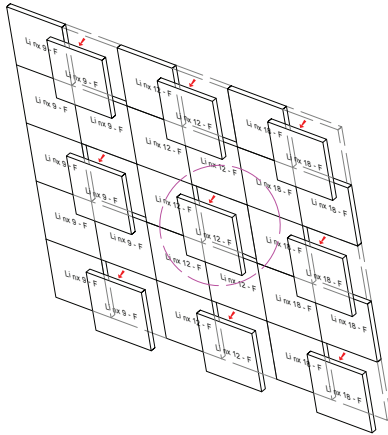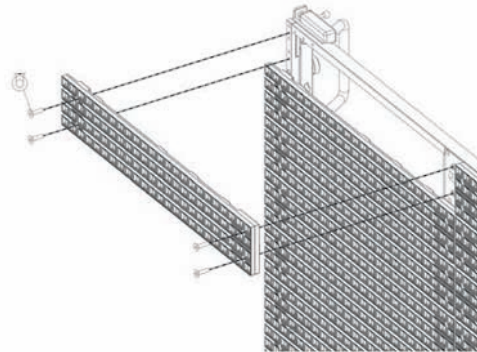### Figure 1 : Maintenance on overall installation

Figure 2 : Replacement of LED strips

1. Loosen six buttons and replace the faulty pane.
2. Do repair for the faulty panel.

Light status on the backside of MC-F Series

Power	Data	Color of Light	Factors
OK	Signal input from top to bottom	Green (2Hz/second)	Normal
OK	Signal input from bottom to top	Blue (2Hz/second)	Normal
OK	Error receiving card	Red (Always)	The receiving card doesn't work.
Above 36V or below 24V	OK	Red (2Hz/second)	The supply voltage is above 36V or below 24V.
OK	OK	Green (Always)	The temperature of panel exceeds 50℃.
OK	Wrong signal	Blue (Always)	1.The bad connection between the receiving cards. 2.The pins on the receiving card is curved or broken.
OK	No signal	Yellow (2Hz/second)	Disconnected the UTP cable between the receiving card and the panel.

Note： When the failure occurs,the color of indicator light will show the prority in the following order.
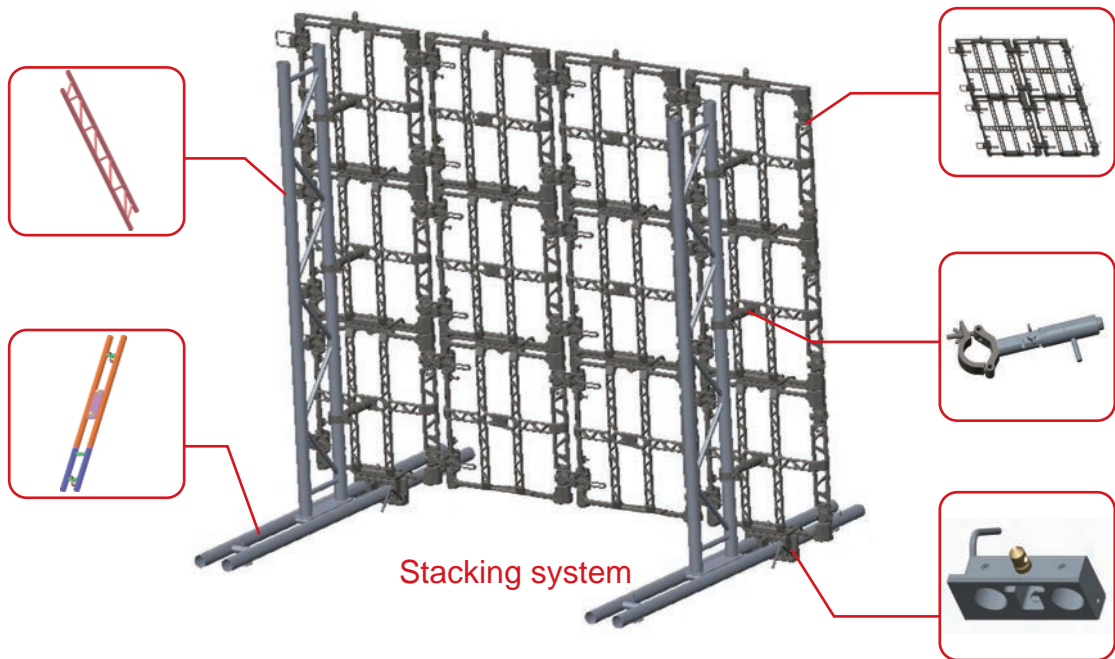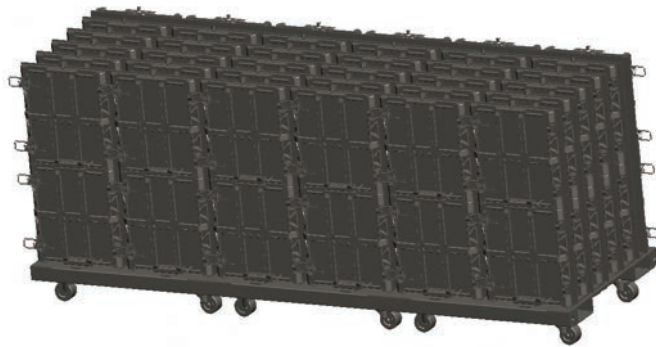1. Error receiving card.
2. The power is above 36V or below 24V
3. Excessive panel temperature.
4. Wrong signal.
5. No signal.

12 pcs LED panels per flightcase
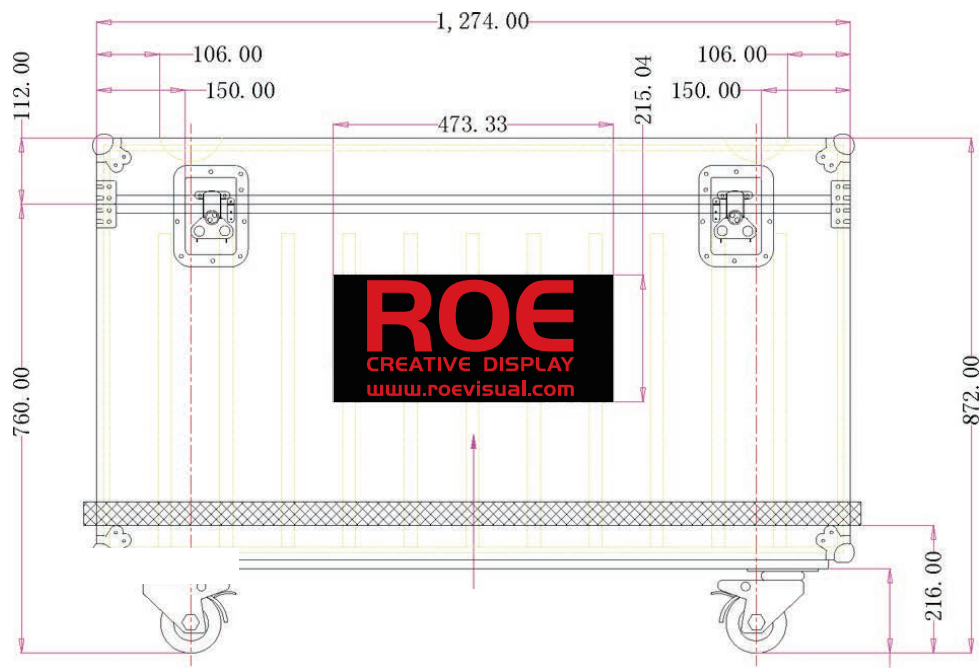
10 Touring system:

Stacking system

Touring system is a set of accessories which is especially designed for the touring rental market.
It includes robust and strong frames, carts and a stacking system.
The frams made of very lightweight alloys can be climbedon directly. Single panels can be removed for service easily.
Transport carts can load 24 panels combined as 6 frames to save transport space.
The stacking system can be used to build a screen when air suspension is not available.
All these accessories greatly improve the installation, transport and use of MC and Hybrid and make it the perfect choice for touring applications.

The end

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