

MIRACKLE Indoor Led Panels

User Guide



MIRACKLE®



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DOCUMENT VERSION

Please check WWW.MIRACKLE.US for the latest revision/update of this guide

Date	Document Version	Notes
05/20/21	1	Indoor Panels Guide 1

***Saving electric energy is a key to help protect the environment. Please turn off all electrical products when they are not in use. To avoid power consumption in idle mode, disconnect all electrical equipment from power when not in use. Thank you! The planet will appreciate it.**

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GENERAL INFORMATION

INDOOR MIRACKLE P1.99MM

PIXEL PITCH P1.99mm

Size: 640 x 480 x 75mm / 25.2"x18.9"x 3"

Viewing distance: 4ft.

High Refresh rate 3840 hz

Weight: 15.2lbs. / 7Kg

Operation power: 100~240V 50-60Hz

Max power consumption: 100W/per panel

Avg, consumption: 50W/per panel



INDOOR MIRACKLE P2.97MM

PIXEL PITCH P2.97mm

Size: 500 x 500 x 75mm / 19.7"x19.7"x 3"

Viewing Distance: 6ft.

High Refresh rate 3840 hz

Weight: 15.2lbs. / 7Kg

Operation Power: 100~240V 50-60Hz

Max power: 100W/per panel

Avg. Consumption: 50W/per panel



INDOOR MIRACKLE P2.97MM

PIXEL PITCH P3.91mm

Size: 500 x 500 x 75mm / 19.7"x19.7"x 3"

Viewing distance: 8ft.

High refresh rate: 3840 hz

Weight: 16 lbs / 8 Kg

Operation power: 100~240V 50-60Hz

Max power consumption: 120w/panel

Avg. power consumption: 60w/panel



INDOOR MIRACKLE P5MM

PIXEL PITCH P5mm

Size: 960 x 960 x 80 mm / 37.9"x37.9"x3"

Viewing distance: 16ft.

High refresh rate: 3840 hz

Weight: 55 lbs / 25 Kg

Operation power: 100~240V 50-60Hz

Max power consumption: 425w/panel

Avg. power consumption: 240w/panel



Each **Mirackle**© panel is fitted with a powerCON input and output socket allowing the power supply for multiple panels to be linked. Locking etherCON input and output sockets are also provided for each panel, allowing the signal data to daisy-chain across each panel to make up a larger screen.

Mirackle© offers full packages with video processors, software, cabling, rigging bars and flight cases so that you have everything you need to get up and running.

LIMITED WARRANTY (USA ONLY)

- A. MIRACKLE® Products hereby warrants, to the original purchaser, products to be free of manufacturing defects in material and workmanship for a prescribed period from the date of purchase. This warranty shall be valid only if the product is purchased within the United States of America, including possessions and territories. It is the owner's responsibility to establish the date and place of purchase by acceptable evidence, at the time service is sought.
- B. For warranty service, send the product only to the MIRACKLE® factory. All shipping charges must be prepaid. If the requested repairs or service (including parts replacement) are within the terms of this warranty, MIRACKLE® will pay return shipping charges only to a designated point within the United States. If the entire instrument is sent, it must be shipped in its original package and packaging material. No accessories should be shipped with the product. If any accessories are shipped with the product, MIRACKLE® shall incur no liability whatsoever for loss of or damage to any such accessories, nor for the safe return thereof.
- C. This warranty is void if the product serial number and/or labels are altered or removed; if the product is modified in any manner which MIRACKLE® concludes, after inspection, affects the reliability of the product; if the product has been repaired or serviced by anyone other than MIRACKLE®, unless prior written authorization was issued to purchaser by MIRACKLE®; if the product is damaged because it was not properly maintained as set forth in the product instructions, guidelines and/or user manual.
- D. This is not a service contract, and this warranty does not include maintenance, cleaning, or periodic checkup. During the period specified above, MIRACKLE® will replace defective parts at its expense with new or refurbished parts, and will absorb all expenses for warranty service and repair labor by reason of defects in material or workmanship. The sole responsibility of MIRACKLE® under this warranty shall be limited to the repair of the product, or replacement thereof, including parts, at the sole discretion of MIRACKLE®.
- E. MIRACKLE® reserves the right to make changes in design and/or improvements upon its products without any obligation to include these changes in any products theretofore manufactured.
- F. No warranty, whether expressed or implied, is given or made with respect to any accessory supplied with products described above. Except to the extent prohibited by applicable law, all implied warranties made by MIRACKLE® in connection with this product, including warranties of merchantability or fitness, are limited in duration to the warranty period set forth above. And all warranties, whether expressed or implied, including warranties of merchantability or fitness, are limited in duration to the warranty period set forth above. The consumer's and/or dealer's sole remedy shall be such repair or replacement as is expressly provided above; and under no circumstances shall MIRACKLE® be liable for any loss and/or damage, direct and/or consequential arising out of the use of, and/or inability to use this product.
- G. This warranty is the only written warranty applicable to MIRACKLE® Products, and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.

MANUFACTURER'S LIMITED WARRANTY PERIODS:

Non-LED MIRACKLE® Products = 3 years from purchase date.

LED MIRACKLE® Products = 3 years from purchase date.

CUSTOMER SUPPORT INFORMATION

Contact MIRACKLE® Service for any product related service and support needs. Also visit www.MIRACKLE.us with questions, comments or suggestions.

MIRACKLE® SUPPORT –

Monday - Friday 9:00am to 4:30pm 1 (888) 590-1720

<https://www.mirackle.us/contact>

SAFETY GUIDELINES

These panels are a sophisticated piece of electronic equipment. To guarantee a proper operation, it is important to follow all instructions and guidelines in this manual. MIRACKLE® is not responsible for injury and/or damages resulting from the misuse of this panel due to the disregard of the information printed in this manual. Only qualified personnel should perform the installation of this panel and all included and/or rigging accessories. Only the original included rigging parts and/or rigging accessories for this panel should be used for proper installation. Any modifications to the panel, included and/or rigging accessories will void the original manufacturer's warranty and increase the risk of damage and/or personal injury.



PROTECTION CLASS 1 - PANEL MUST BE PROPERLY GROUNDED

***DAMAGES RESULTING FROM MODIFICATIONS TO THIS PANEL AND/OR THE DISREGARD OF SAFETY INSTRUCTIONS AND GUIDELINES IN THIS MANUAL VOID THE MANUFACTURER'S WARRANTY AND ARE NOT SUBJECT TO ANY WARRANTY CLAIMS AND/OR REPAIRS.**



***DO NOT PLUG PANEL INTO A DIMMER PACK! NEVER OPEN THIS PANEL WHILE IN USE!**

***UNPLUG POWER BEFORE SERVICING PANEL! NEVER TOUCH FRONT OF PANEL DURING OPERATION, AS IT MAY BE HOT! KEEP FLAMMABLE MATERIALS AWAY FROM PANEL.**



INDOOR / DRY LOCATIONS USE ONLY!

DO NOT EXPOSE PANEL TO RAIN AND/OR MOISTURE!

DO NOT SPILL WATER AND/OR LIQUIDS ON OR INTO THE PANEL!

DO NOT touch panel housing during operation. Turn OFF power and allow approximately 15 minutes for the panel to cool down before serving.

DO NOT: Operate a panel if any cover is open and/or removed.

DO NOT shake the panel, avoid brute force when installing and/or operating the panel.

DO NOT: Expose any part of the panel to open flame or smoke. Keep panel away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

DO NOT: Install or use panels in extreme hot/humid environments, or handle without ESD precautions.

DO NOT: Exceed an operation temperature of 40°C (104°F), doing so will damage the panel.

DO NOT operate the panel if power cord is frayed, crimped, damaged and/or if any of the power cord connectors are damaged and do not insert into the panel securely with ease. **NEVER** force a power cord connector into the panel. If the power cord or any of its connectors are damaged, replace it immediately with a new one of similar power rating.

DO NOT block air ventilation slots/vents. All fan and air inlets must remain clean and never blocked. Allow approximately 6" (15cm) between panel and other devices or a wall for proper cooling.

ALWAYS disconnect the panel from the **main power source** before performing any type of service and/or cleaning procedure. Only handle the power cord by the plug end, never pull out the plug by tugging the wire portion of the cord.

ALWAYS use the original cases to transport the panels.

CAUTION: Always mount panels in a safe and stable manner.

CAUTION: Outdoor use will void the warranty.

CAUTION: Wear appropriate safety equipment during panel installation.

CAUTION: Turn OFF power to panel, computers, servers, system boxes, and monitors before making any type of power or data connections and performing any maintenance work.

CAUTION: Read user manual carefully to ensure normal operation and lifespan of the panel.

CAUTION: Electronics used in this panel are ESD (Electrostatic Discharge) sensitive. To protect devices from ESD, wear a grounded ESD wrist strap or similar grounding device when handling panels.

CAUTION: Panel must be properly grounded before operating. (resistance must be less than 4Ω)

CAUTION: Ensure all power is disconnected from the panel before unplugging any data cables from the panel, especially serial line ports.

CAUTION: Route power and data cables so that they are NOT likely to be walked on or pinched.

CAUTION: Air conditioning is required if operating environment temperature exceeds 30°C (86°F).

CAUTION: Test panel for 2-hours per week, if not used regularly or for an extended period of time.

MAINTENANCE GUIDELINES

Careful and regular maintenance is necessary to optimize the potential functional lifespan of MIRACKLE© LED Video Panels.

1. Read the instructions for correct operation of the MIRACKLE© LED Video Panels.
2. Although MIRACKLE© LED Video Panels are designed and built to withstand some impact forces when installed correctly, take care to avoid impact damage when handling or transporting them, especially corners and edges, which are particularly fragile during transportation.
3. The fixture should be serviced by a qualified service technician when:
 - A. Objects have fallen, or liquid has been spilled into the fixture
 - B. The fixture has been exposed to rain or water conditions.
 - C. The fixture does not appear to operate normally or exhibits a marked change in performance
 - D. The fixture has been subjected to extreme handling.
4. Check each MIRACKLE© LED Video Panel for loose screws and other fasteners.
5. If the MIRACKLE© LED Video Panels installation is fixed or displayed for a lengthy time, regularly inspect all rigging and installation equipment, and replace or repair it as necessary, and during long periods of non-use, disconnect the main power to the unit.
6. Use necessary ESD (electrostatic discharge) precautions when handling MIRACKLE© LED Video Panels, especially the LED screens, as they are ESD sensitive and easily damaged from ESD exposure.
7. The Null Line and Live Line connections from the computer and control system cannot be reversed, and should therefore only be connected in original layout order.
8. If the GFI (Ground Fault Interrupt) breaker-switch trips often, check the display or replace the power-supply switch.
9. When operating the MIRACKLE© LED Video Panels, power the computer before powering the LED Video Screens; conversely, when shutting down after operation, turn the LED Video Panels off before turning off the computer. If the PC is turned off first, a high intensity brightness might appear, causing catastrophic failure to those LEDs.
10. If while conducting an electrical test a circuit shorts, a breaker-switch trips, wires burn, and or any other abnormality appears, discontinue testing and troubleshoot units to find the problem before continuing with any testing or operation..
11. Only a qualified technician should operate a software system.
12. Remove any moisture found inside or outside of any MIRACKLE© LED Video Panels before dismantling video installation, and returning them to their optional flight cases. Ensure flight cases are free of any moisture.
13. When not in use, store MIRACKLE© LED Video Panels in a dry, well ventilated facility.

PANEL OVERVIEW

- 1) Folding handle
- 2) Integrated Horizontal Locking Panel Connector
- 3) Integrated Vertical Locking Panel Connector and
- 4) ESD Grounding Hole & Connection Plates.
- 5) Power Input
- 6) Power Output
- 7) Power/Data Signal Indicator (P5mm MIRACKLE© panels do not have such indicator)
- 8) Data Input
- 9) Data Output



Dimensions:

P1.99MM

25.2"x18.9"x3" (640x480x75mm)

P2.97MM/P3.91MM

19.75"x19.75"x3" (500x500x75mm).

P5MM

37.9"x37.9"x3" (960x960x80mm)

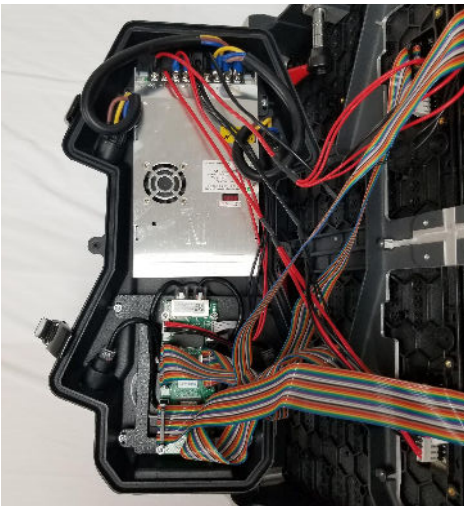
POWER SUPPLY AND RECEIVING CARDS

Each MIRACKLE© LED Video Panel includes a quick-release power supply with receiver card modules, allowing for easy serviceability and simple repairs whilst out on the road. The cover of the power supply box can be secured to protect all internal accessories and components.

1) First you will need to detach both handles to open the lid to the Power Supply and Receiving Card.



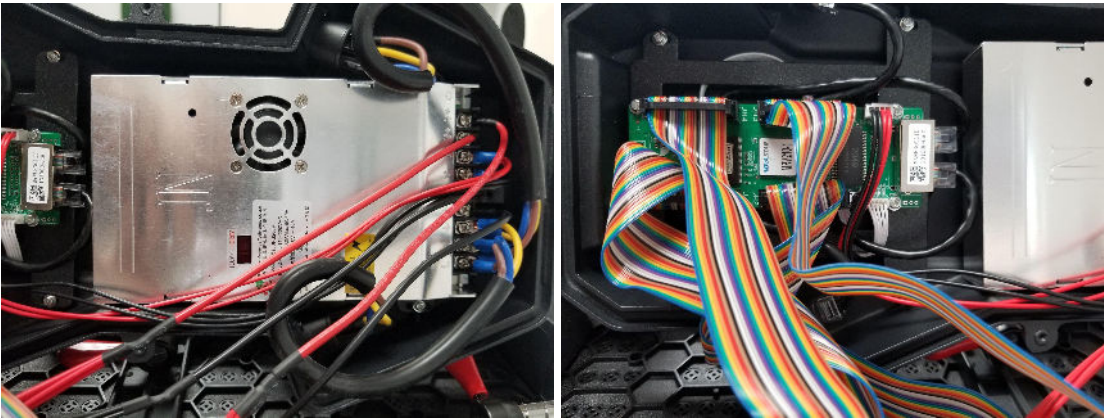
2) Open the lid.



3) Disconnect ribbon cables and power cables from the power supply or receiving card to the panel.

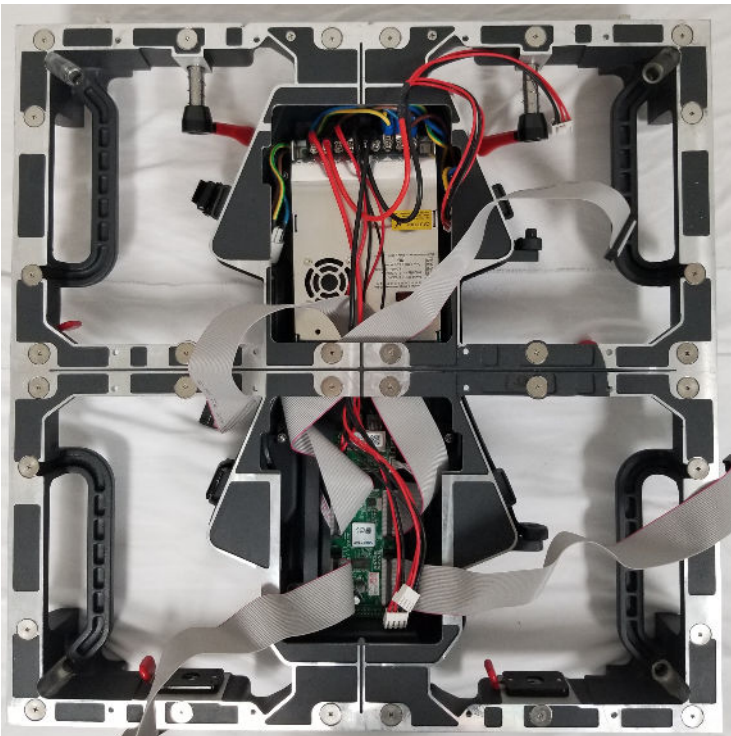


4) Finally proceed to remove screws and replace the defective part for the new spare.



FRONT SERVICE PANELS

Some MIRACKLE© LED Video Panels are a 100% front service. Each module is attached to the panel by a magnet that can easily be separated in order to change spare parts or to access the cable connections.



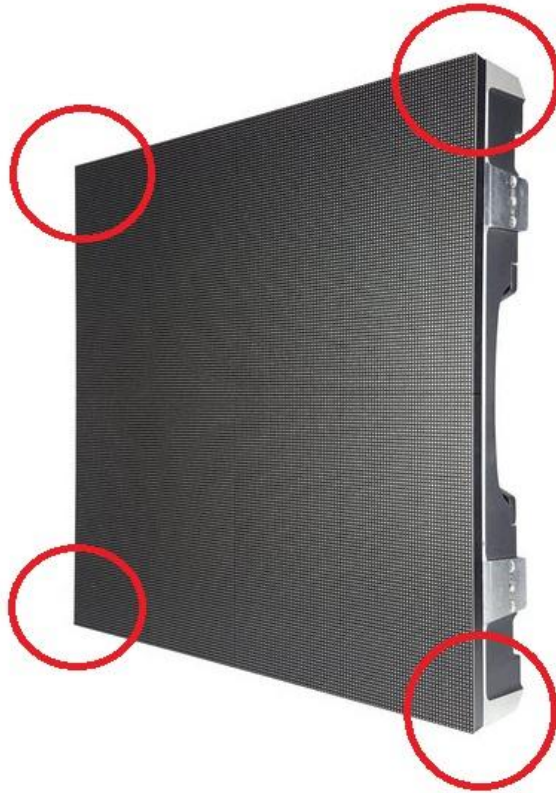
MIRACKLE© LED Front Service Panel - Modules removed.

***Once you've removed all modules from the panel you can proceed to remove screws and change spare parts.**

***We recommend taking a picture of Power Supply, Receiving Card and cable connections before disconnecting any of them. This will help you to not make any mistakes while connecting it back on.**

HANDLING AND TRANSPORTATION

The corners of the MIRACKLE© LED Video Panels are susceptible to damage during handling and transportation. When removing LED Video Panels from their respective Flight Cases, and before they are installed, take care to avoid damaging any of the 4 corners.



Because these are ESD sensitive units, use ESD precautions when removing the MIRACKLE© LED Video Panels from their flight case (ESD gloves, protective clothing, wrist straps, etc.). In addition to using standard ESD precautions, to reduce static building friction, be careful when lifting the panels without rubbing the LED panel surface along the foam-covered slots, which can generate static electricity that can damage equipment.

HANDLING AND TRANSPORTATION

MIRACKLE© Flight Case is sold with LED video panels. Included in final price.

The flight case features a full foam lining with slots for each unit. The case is robust, so will completely protect a set of panels on the road. Designed specifically for LED use, it is constructed from plywood and fitted with steel ball corners, aluminum edging, large swivel castors, professional butterfly latches, four sprung handles, and a hinged lid.



MIRACKLE© Flight Case

INSTALLATION



**DO NOT INSTALL THE PANEL IF YOU ARE NOT QUALIFIED TO DO SO!
INSTALLATION BY QUALIFIED TECHNICIANS ONLY!**



FLAMMABLE MATERIAL WARNING

Keep panel minimum 5.0 feet (1.5m) away from flammable materials and/or pyrotechnics.



ELECTRICAL CONNECTIONS

A qualified electrician should be used for all electrical connections and/or installations.



USE CAUTION WHEN POWER LINKING MULTIPLE PANELS AS THE POWER CONSUMPTION OF OTHER PANEL MODELS MAY EXCEED THE MAX POWER OUTPUT ON THIS PANEL. CHECK SPECIFIC PANEL CATALOG FOR MAX AMPS.

WARNING! The safety and suitability of any lifting equipment, installation location/platform, anchoring/rigging/mounting method and hardware, and electrical installation is the sole responsibility of the installer.

Panel(s) and all panel accessories and all anchoring/rigging/mounting hardware **MUST** be installed following all local, national, and country commercial electrical and construction codes and regulations.

Before rigging/mounting a single panel or multiple interconnected panels to any metal truss/structure, a professional equipment installer **MUST** be consulted to determine if the metal truss/structure or surface is properly certified to safely hold the combined weight of the panels(s), clamps, cables, and all accessories.

Inspect metal truss/structure visually to ensure it does not flex and/or become deformed due to the weight of the panel(s). Damage caused to panel(s) by mechanical stress is not covered by warranty.

Panel(s) should be installed in areas outside walking paths, seating areas, or away from areas where unauthorized personnel might reach the panel(s) by hand. Access under the work area must be blocked.

NEVER stand directly below the panel(s) when rigging, removing or servicing.

OVERHEAD RIGGING

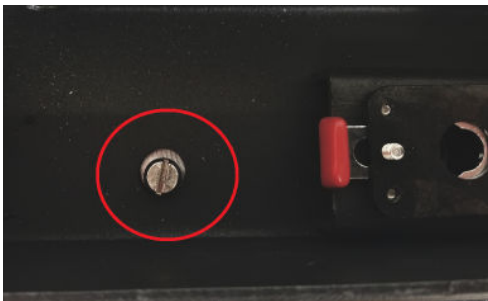
Overhead fixture installation must always be secured with a secondary safety attachment, such as an appropriately rated safety cable. Overhead rigging requires extensive experience, including amongst others calculating working load limits, installation material being used, and periodic safety inspection of all installation material and the fixture. If you lack these qualifications, do not attempt the installation yourself. Improper installation can result in bodily injury and property damage.

INSTALLATION - RIGGING

The MIRACKLE© LED panels are compatible with MIRACKLE©'s rigging bar (sold with panels), which easily and securely locks to the top of the first panel in a vertical hang, allowing them to hang from a truss, hoist, or lintel beam. A qualified technician or trained professional is required to fly the Rigging Beam/LED Video Panel assembly.



1)Align the vertical positional posts with their corresponding alignment holes in both sides.



2)Push locking connectors up through their corresponding slotted vertical tab-keyed connector sockets in the Rigging Bar, and with the vertical locking connector pushed up through its corresponding socket, slide the locking latch-mechanism to lock the vertical connector.



NOTE: DO NOT EXCEED MAX. PANELS PER RIGGING BAR. QUALIFIED TECHNICIAN IS REQUIRED.

FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC RADIO FREQUENCY INTERFERENCE WARNINGS & INSTRUCTIONS

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

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





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