

LED Display Installation & User Manual

A practical route from unboxing to a complete picture and daily playback.



Know the hardware. Follow the wiring. Verify the picture.

For Bluestar rental cabinets and common synchronous LED systems. NovaStar software is used for the worked example. Fixed screens, LED posters, Huidu systems and other controllers require their matching installation and software instructions.

Includes real product images, official NovaLCT screenshots, a two-port wiring example, Windows playback steps and measurable success checks.

Use the order-specific cabinet, structure, electrical and controller data. This guide does not certify a support structure or assign an electrical circuit rating.

01 Choose your starting point

A screen that is already configured should not be reconfigured without a reason.

Your situation	Start here
New installation / changed layout	Complete the job sheet (p.3), build and wire (pp.4-10), start safely (p.11), then configure and test (pp.12-16).
Factory-configured, same layout	Follow pp.3-11. Read existing settings, verify the picture and proceed to playback. Do not overwrite working receiving-card parameters.
Configuration missing / replaced card	Back up what can be read. Load the correct receiving-card file and rebuild or restore the screen map (pp.12-16).
Daily use after handover	Use the recorded settings, presets and opening/closing routine (pp.17-19).
Fault / maintenance	Use pp.20-21. Report the symptom and relevant photos before changing advanced parameters.

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Go / stop rule: continue when the success check passes. If it fails, follow the stated check or contact Bluestar; do not keep adding configuration changes.

02 Order-specific job sheet

Have Bluestar / your installer complete this sheet before commissioning. Blank limits are not permission to guess.

Required information	Your installation
Order / cabinet model / batch	
Screen width / height; columns / rows	
Pixels per cabinet: width x height	
Screen total pixels: width x height	
Controller / receiving card / software version	
AC voltage / frequency; max input power	
Approved power branches; cabinets per branch	
Cable / connector ratings; protection design	
Signal ports; first cabinet and chain per port	
Structure drawing / approved mounting plan	
RCFG file; screen map / system backup	
Front / rear view used for wiring diagram	

Pass: every hardware and safety-critical field is confirmed. If the power chain limit, structure plan or input voltage is unknown, stop before energizing.

03 Safety and site preparation

Qualified personnel install load-bearing structures and electrical circuits; operators handle approved routine tasks.

1

Confirm the support design

A rigger / structural installer verifies the frame, hanging bars, fasteners, anchorage, height, bracing, ballast and weather limits. A short screen still needs a verified anti-tip design.

2

Isolate before working

Disconnect and isolate all power sources, prevent accidental reconnection and verify absence of voltage before opening a power box or changing internal wiring. Waiting alone is not proof of isolation.

3

Verify the electrical installation

A qualified electrician checks supply voltage, protective earth, circuit protection, cables, connectors and the applicable tests. A quick multimeter reading alone does not certify grounding.

4

Protect people and LEDs

Keep a controlled work area; use rated access equipment and appropriate PPE. Carry by approved handles, protect fingers at locks and never press or stand on the LED face.

5

Check the environment

Keep indoor screens and controllers dry. Outdoor cabinet ratings do not automatically cover open rear doors, connectors or processors. Observe the actual temperature, humidity and weather specifications.

6

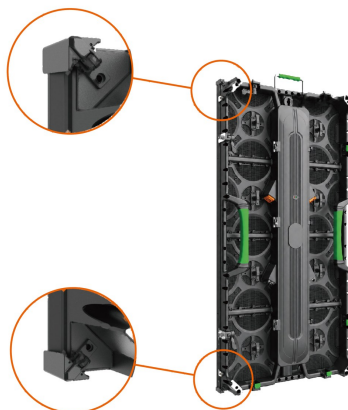
Stop on abnormal conditions

Smoke, unusual smell, water ingress, hot connectors, unstable structure or a tripped protective device: stop use, isolate safely and have the cause investigated.

Pass: site, structure and electrical checks are signed off, and the work area is controlled. Do not remove safety devices or bypass a protective trip.

04 Unpack and inventory

Record transport damage before assembly and keep the packing materials until acceptance.



Product image reused from the supplied Bluestar / MUSE review PDF.

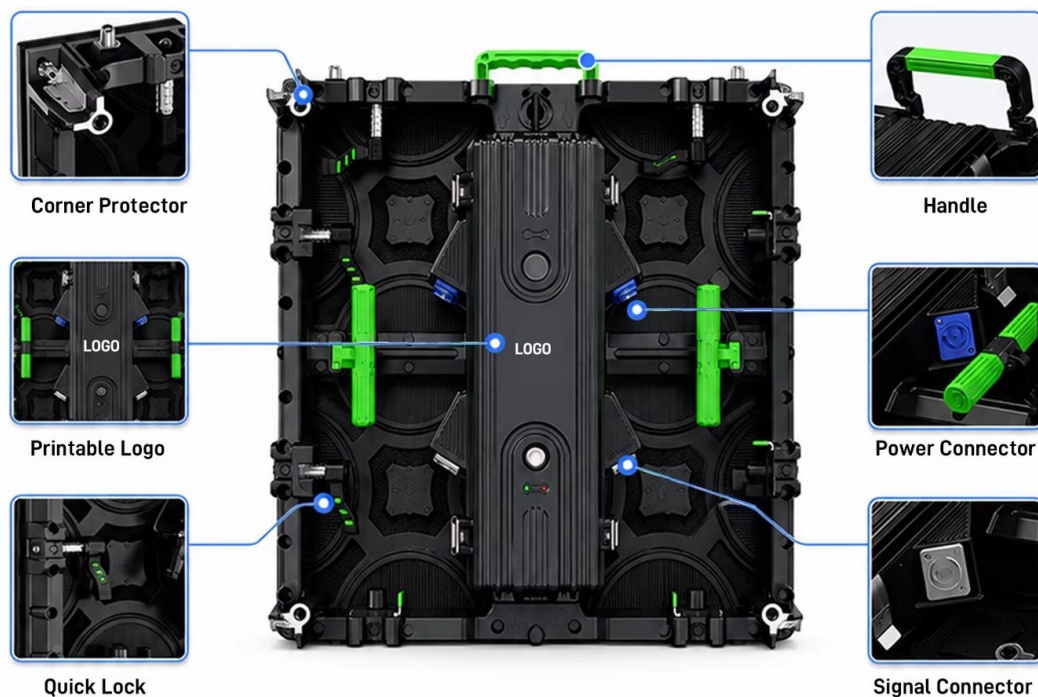
- 1** Inspect before stacking
Open one case at a time. Photograph damage, then inspect LED surfaces, corners, locks, pins, handles and connectors.
- 2** Count the complete system
Match cabinets, processor / sender, video cables, signal cables, AC cables, mounting parts and spares to the packing list.
- 3** Check labels and documents
Match model and serial labels to the job sheet. Confirm cabinet pixel size and input voltage from supplied data, not appearance.
- 4** Prepare files and tools
Have the correct RCFG file and screen-map backup. Install the specified official software / driver and prepare approved service tools.

Before connecting an individual cabinet for an inspection test, its power connection and earthing must already be approved. A power indicator proves neither normal display nor correct receiving-card configuration.

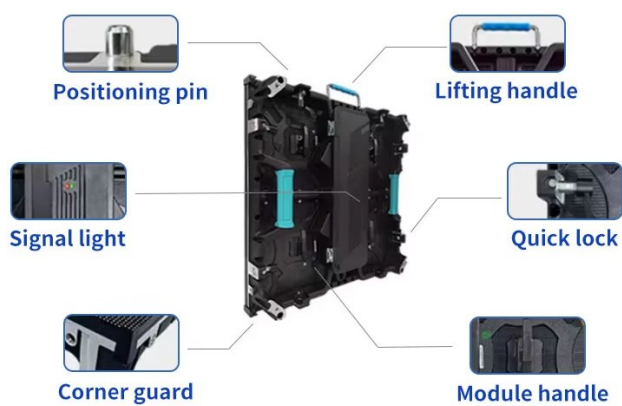
Pass: no unresolved damage, missing critical component or missing safety / configuration document. Set suspect items aside and report them.

05 Identify your cabinet

Connector positions and latch styles vary. Read labels on your actual cabinet.



Example cabinet parts. These labels do not establish a universal locking procedure.



Before wiring, identify:

AC IN / AC OUT

Signal ports and any direction labels

Cabinet orientation / TOP

Locks and positioning pins

Approved lifting and carrying points

Mark each cabinet R1C1, R1C2, etc. Use one agreed viewing direction.

Pass: you can identify power and signal ports on the actual cabinet. Do not infer function from connector color; do not open a live power box.

06 Assemble the approved structure

Photos illustrate concepts; follow the matching mounting kit instructions and project design.

**1**

Ground build: establish the base

Set and level the approved base; install rear supports, anti-tip measures and ballast as designed. Do not wait until a fixed row count to consider stability.

2

Build in the approved sequence

For stacking, install the bottom row then work upward. For a flown screen, qualified riggers install the hanging system and use its specified sequence.

3

Align and lock each cabinet

Engage positioning features and operate the actual lock as instructed. Do not assume every latch turns 90 degrees. Correct the alignment rather than forcing a lock.

4

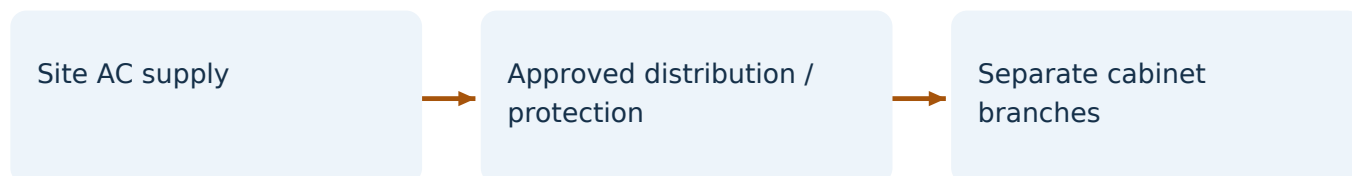
Inspect before adding load

Check locks, frame connections, cabinet flatness and cable access at each stage. Support the cabinet until mechanically secured; apply the specified final inspection.

Pass: structure is stable, all specified fasteners / locks are secured, and the installer approves the build. Fixed-wall anchorage needs a separate project drawing.

07 Power wiring and branch limits

The signal map does not determine the power branches. Use the approved electrical plan.



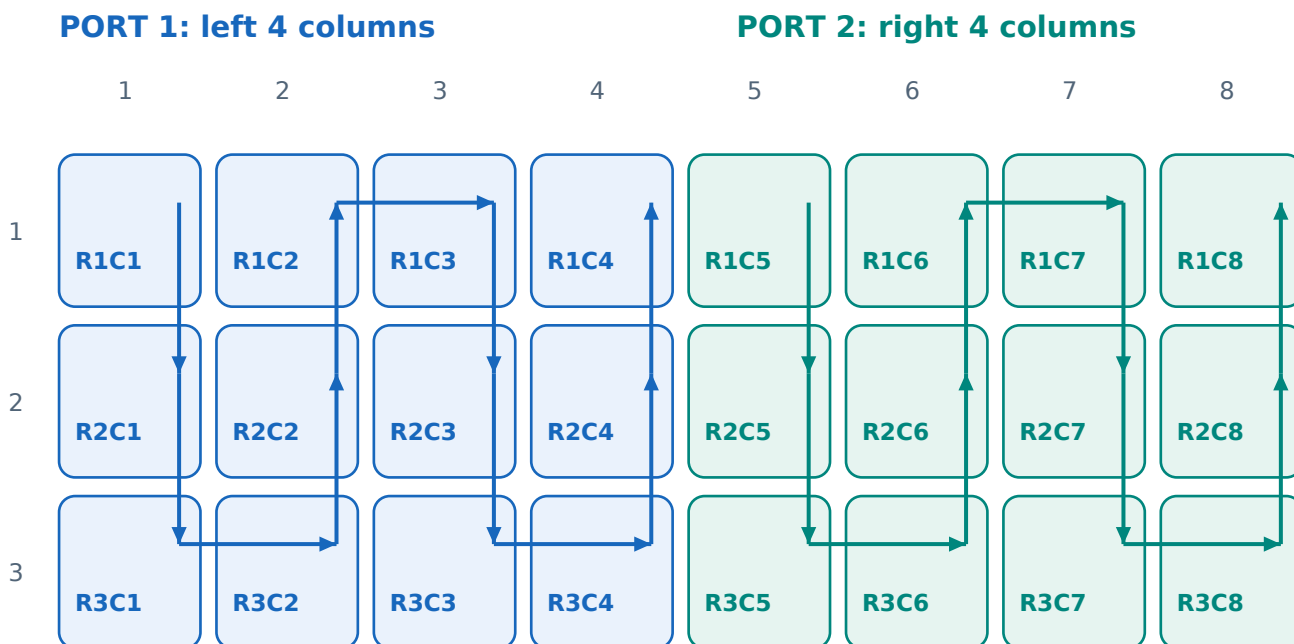
Power branch concept: distribution output → cabinet AC IN; an allowed AC OUT may feed the next cabinet only within every applicable rating. Label each branch separately from the signal port.

- 1** Confirm the actual voltage
Check every cabinet power-supply / system label. Some equipment is wide-range; other equipment is not. Do not apply a universal 100-240 V assumption.
- 2** Confirm the maximum branch size
Use the written cabinets-per-branch limit for this order, voltage and cable set. The electrician checks maximum input load, startup demand, cable / connector ratings, protection and voltage drop.
- 3** Connect with power isolated
Identify AC IN and any approved AC OUT. Fully mate and lock connectors, provide strain relief and keep unused connectors protected as instructed.
- 4** Have the circuit checked
The electrician performs the required earth, insulation and protection tests. Do not energize a branch with unknown ratings, exposed damage or a failed check.

Pass: voltage, branches and protection are confirmed. Example signal-port quantities in this manual are NOT an AC power-chain approval.

08 Connect and label the signal chains

Example: 4 x 3 m; 500 x 1000 mm cabinets; 8 columns x 3 rows. Front view throughout.



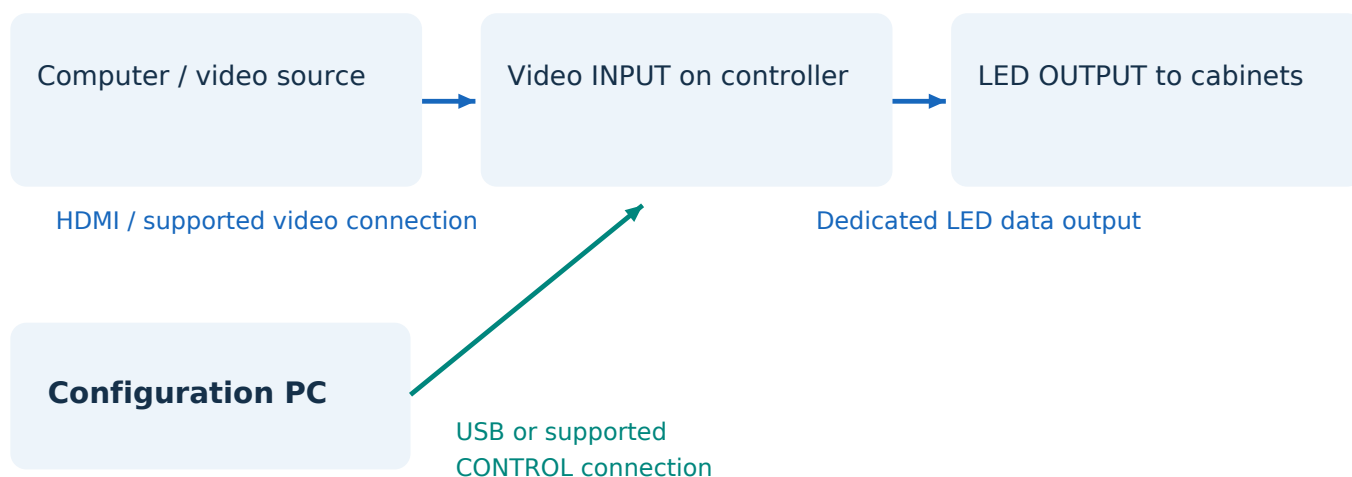
FRONT VIEW: row 1 is top; column 1 is left.

Connect controller LED OUT 1 to R1C1, then follow the blue chain. Connect LED OUT 2 to R1C5, then follow the green chain. Label both ends of every cable. See the exact click sequences on p.15.

Before using this example	Required confirmation
Cabinet loading	Example assumes ONE receiving card per cabinet and 128 x 256 pixels per card. Confirm your real hardware.
Controller capacity	Example uses 12 cabinets / 393,216 pixels per port. Check total, per-port, width / height, frame-rate and bit-depth limits.
Port type / cable	Use dedicated LED output ports and approved Cat5e-or-better cable / fiber equipment. Do not insert a normal network switch.
Pass: each actual chain matches its numbered map. When viewed from behind, front-view left and right reverse. Power branches remain independently labeled.	

09 Connect controller and computer

A USB control cable and an HDMI video cable do different jobs. One PC may provide both.

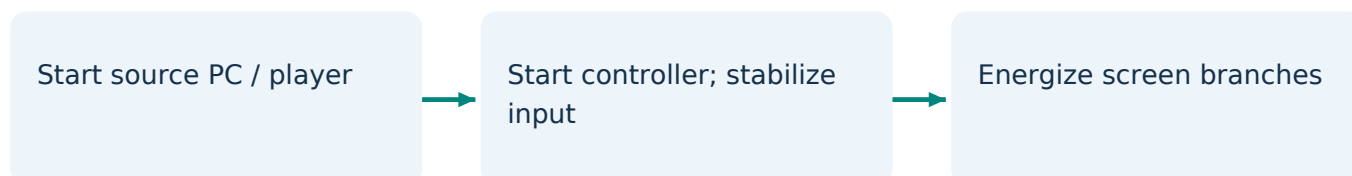


- 1** Connect the source to an INPUT
Use a supported video port, such as HDMI IN. If an adapter is required, confirm the computer port supports video output.
- 2** Connect the control interface
Use the controller-specified USB or control-network port. LED output RJ45 ports are not interchangeable with the control LAN port.
- 3** Connect the LED output chains
Connect each planned LED output to its first cabinet. A one-box all-in-one controller already includes sending functions; a separate sender is not always needed.
- 4** Record what is connected
Label the input name, LED port numbers and configuration connection on the job sheet. Keep power isolated until the startup checks pass.

Pass: HDMI feeds the video input, the PC control cable feeds the control interface, and LED outputs feed the cabinet chains. Check the actual rear-panel manual.

10 First startup: choose the right path

Use the dedicated equipment procedure if it differs. This is the general sequence for a synchronous system.

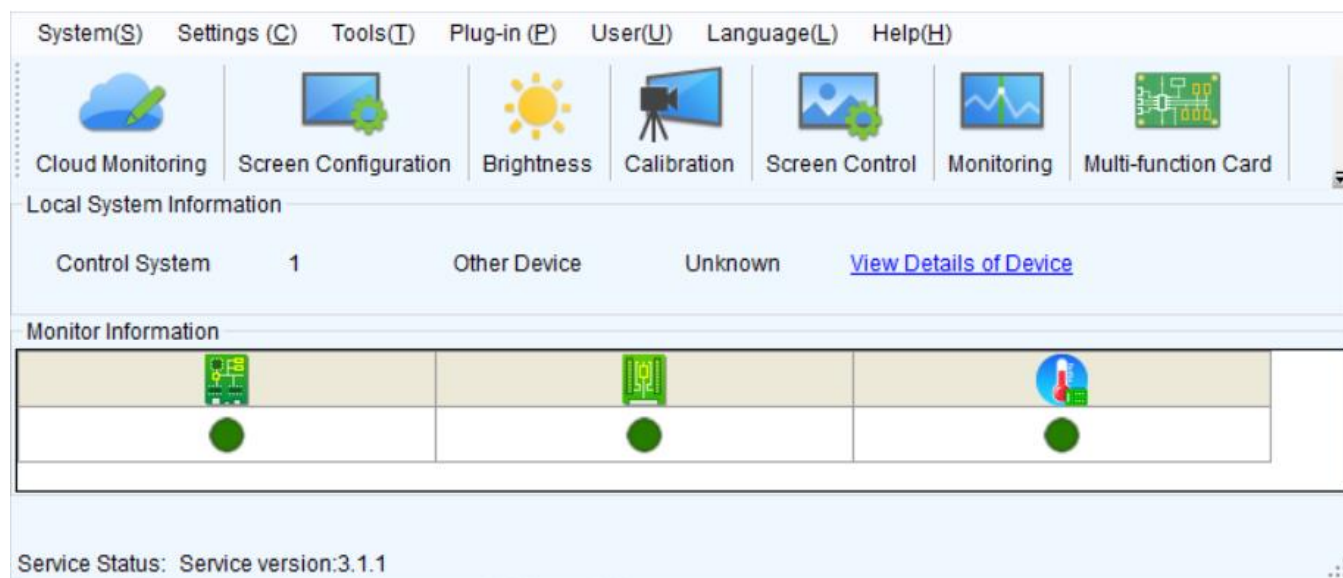


- 1** Confirm safe readiness
All structural and electrical checks passed; connectors are secured, ventilation is clear and no moisture / damage is present.
- 2** Start the source and controller
Start the playback PC / source and then the processing / sending equipment. Establish a stable supported input and select it on the controller.
- 3** Energize the approved branches
Turn on cabinet branches in the approved sequence. Begin with low brightness / black output where available and keep the working area clear.
- 4** If the screen was already configured
Read and back up the existing settings. Test the picture on p.16. If it is correct, continue to p.17; do not rewrite working receiving-card parameters.
- 5** If configuration is absent or layout changed
Follow pp.12-16 before expecting a complete picture. A black / wrong picture may involve power, signal, receiving parameters, mapping or input selection.

Shutdown: stop playback / set black → switch off screen branches → switch off controller → shut down the source as needed. Closing NovaLCT alone does not stop HDMI playback.

11 NovaLCT: connect and back up

Official interface example: NovaLCT V5.4.8 synchronous system. Use the version specified for your controller.



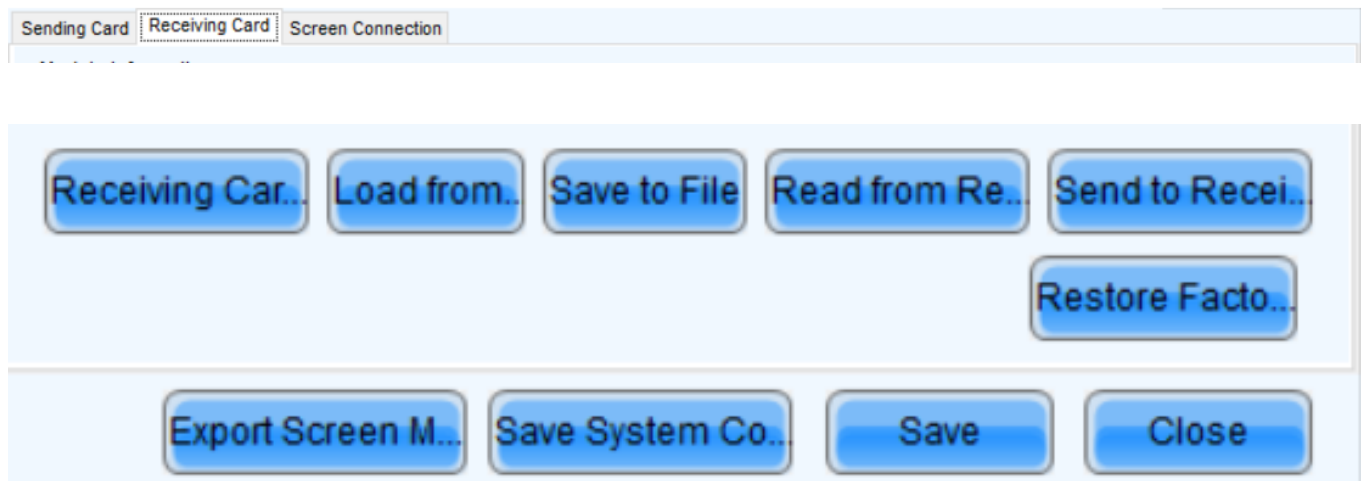
Real screenshot: NovaStar manual, Figure 4-1. Menu layout varies with device / version.

- 1** Install the official software and driver
Use the approved installer, not an unofficial download. Connect the supported control cable and power the controller.
- 2** Confirm a real hardware connection
Check that NovaLCT shows the sending device. If none is detected, check the control port, USB driver / cable and supported network setup.
- 3** Log in to the synchronous configuration mode
User → Advanced Synchronous System User Login. The cited version documents default password admin; use the current password if it was changed. Do not use Demonstration Login for commissioning.
- 4** Open the correct hardware configuration
Settings → Screen Configuration; select the communication port and open the configuration page. Read existing hardware settings where supported and save a backup before replacing them.

Pass: the real sending device and expected receiving-card counts can be read. If counts differ from the actual chains, correct detection / wiring before configuration.

12 Load the receiving-card file

RCFG / RCFGX sets how the cabinet drives its modules. It does not replace the complete screen map.



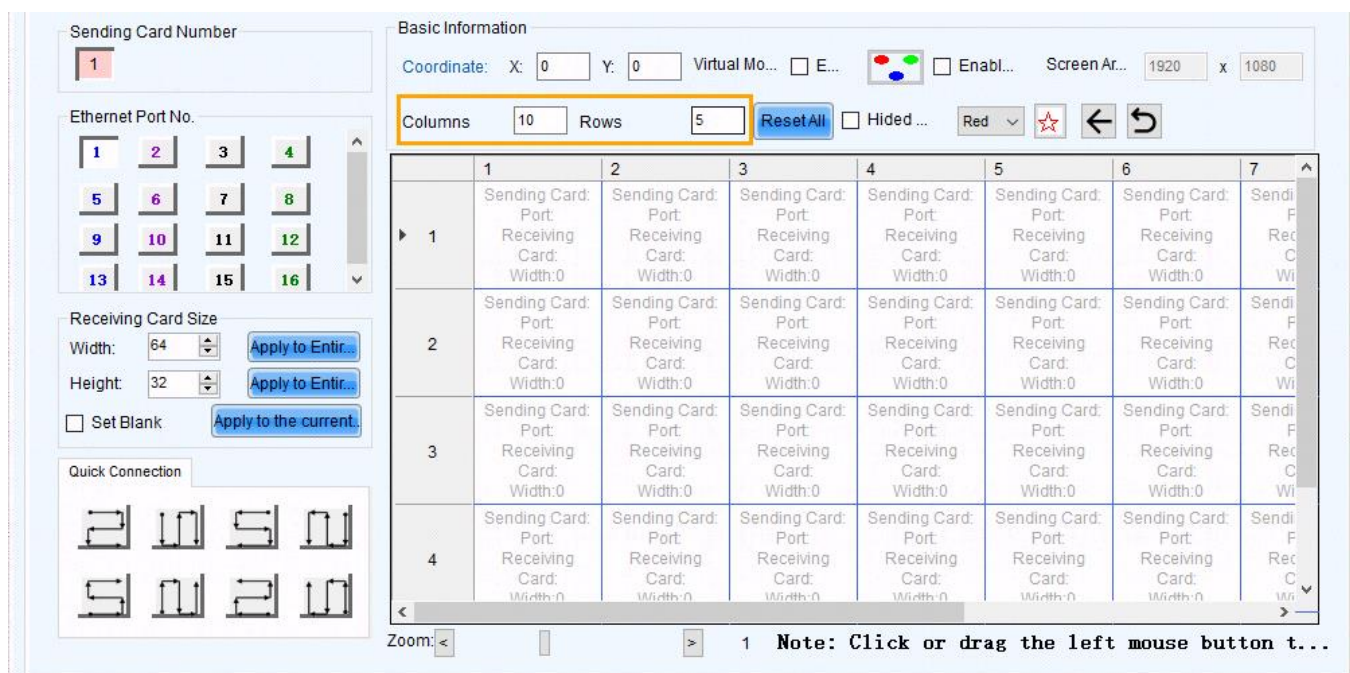
Official interface crops, Figure 5-7: Receiving Card tab and file / send / save controls.

- 1** Choose Receiving Card → Load from File
Select only the file approved for this order, module / IC, scan type and receiving card. Confirm the loaded cabinet dimensions against p.3.
- 2** Send to the intended receiving cards
Click Send to Receiving Card, select the correct target cards and send. Use All Receiving Card only if all targeted cabinets require this same file.
- 3** Preserve or rebuild the map deliberately
Resetting starting coordinates may make cabinets show the same top-left image. Do not reset them on a working screen unless the map will be rebuilt.
- 4** Confirm and save as supported
Confirm successful sending. Use the documented Save function to retain hardware parameters, then continue to screen mapping on pp.14-15.

Pass: the correct receiving parameters are sent without errors. Do not change scan type, timing, firmware or calibration values to experiment with a wrong picture.

13 Screen Connection and mapping

Map receiving cards to their physical position and actual signal order. RCFG import alone is not this step.



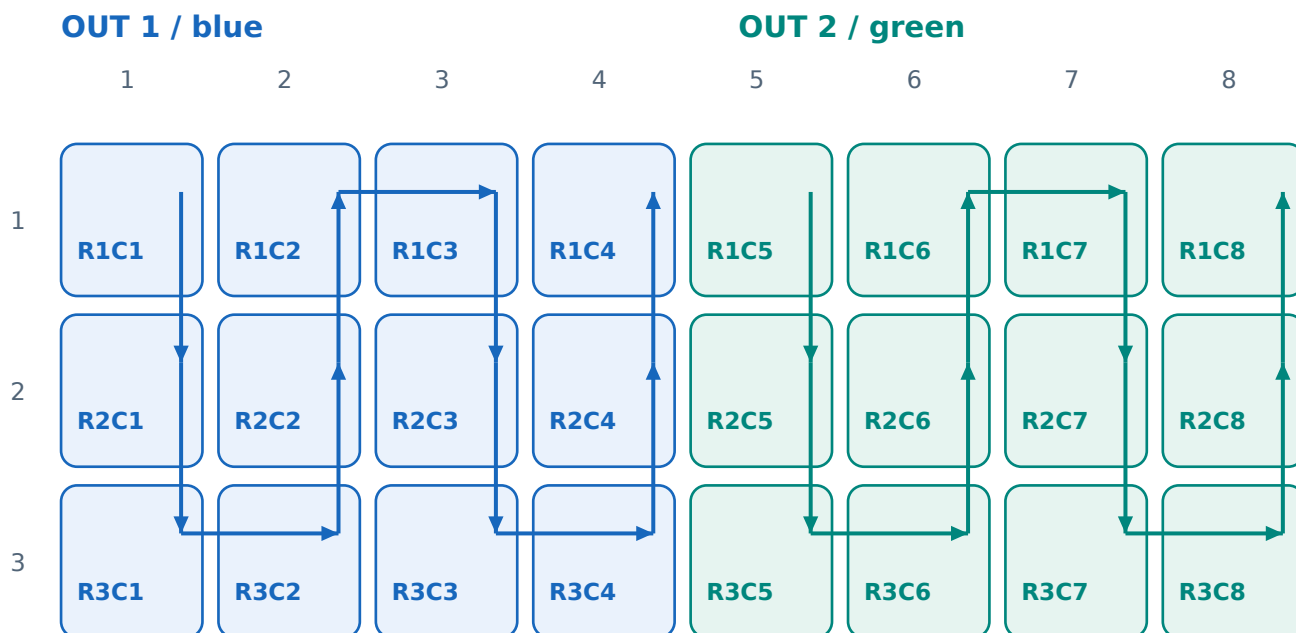
Official screenshot, Figure 5-24. Demo: 10 columns / 5 rows / 64 x 32 pixels. Not our example.

- 1 **Open Screen Connection**
Set screen quantity to 1 for one wall using multiple ports, then Configure. Choose the standard rectangular screen layout for this example.
- 2 **Set the full grid**
For the p.9 example: Columns = 8; Rows = 3; Sending Card Number = 1. Use the dimensions of YOUR wall if different.
- 3 **Select the output port and card size**
Choose Ethernet Port No. 1. Set receiving-card Width = 128 and Height = 256 pixels for the confirmed example hardware.
- 4 **Map the actual physical cable order**
Click or drag through the cabinets in the exact sequence shown on p.15. Then choose port 2 and map its chain. A quick-connection pattern is valid only if it matches the real cable route.

Pass: every cabinet is assigned once to the correct output port and position. Do not copy screenshot values; use the approved order values and actual wiring.

14 Worked example: map and pixels

Illustrative configuration, not a capacity approval for an unspecified controller. One card loads one cabinet.



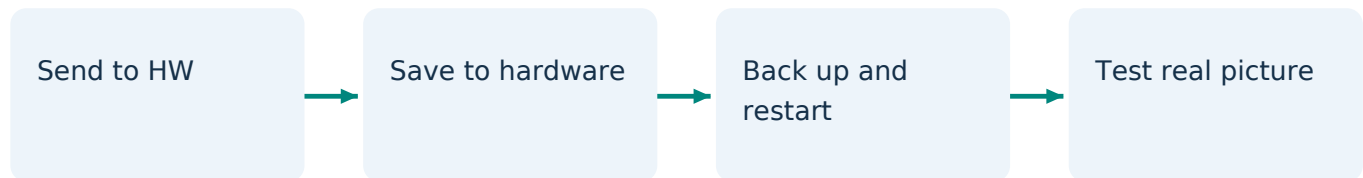
FRONT VIEW: row 1 is top; column 1 is left.

Setting	Example value
Physical size / cabinet count	4 x 3 m / 8 columns x 3 rows = 24 cabinets
Per cabinet / total wall	128 x 256 pixels / 1024 x 768 pixels
Per port / total pixels	12 x 32,768 = 393,216 / wall = 786,432
Port 1 click / cable sequence	R1C1 → R2C1 → R3C1 → R3C2 → R2C2 → R1C2 → R1C3 → R2C3 → R3C3 → R3C4 → R2C4 → R1C4
Port 2 click / cable sequence	R1C5 → R2C5 → R3C5 → R3C6 → R2C6 → R1C6 → R1C7 → R2C7 → R3C7 → R3C8 → R2C8 → R1C8

Check: front-view top-left is R1C1. Port 2 occupies the right half; do not place its chain over port 1. Keep the complete wall at its intended origin, normally X=0 / Y=0.

15 Send, save and validate the whole wall

A complete picture is the success criterion; “lights are on” is not enough.

**1**

Send the connection map

In Screen Connection, click Send to HW. Resolve communication or loading errors before continuing.

2

Save and back up

Click Save to retain hardware settings; save the screen connection / supported system backup to the PC. Keep the matching RCFG and final cable diagram together.

3

Restart with the correct sequence

Use p.11, then verify that parameters survive power cycling. Do not re-import on every daily startup.

4

Run low-brightness color tests

Select the supported test-pattern function on the controller / software. Check red, green, blue, white, black and grayscale; avoid prolonged full-white high-brightness operation.

5

Test spatial order with real content

Show a numbered grid and a picture with TOP LEFT, TOP RIGHT, BOTTOM LEFT and BOTTOM RIGHT labels. Text and lines must continue across cabinet joints without repetition or reversed blocks.

6

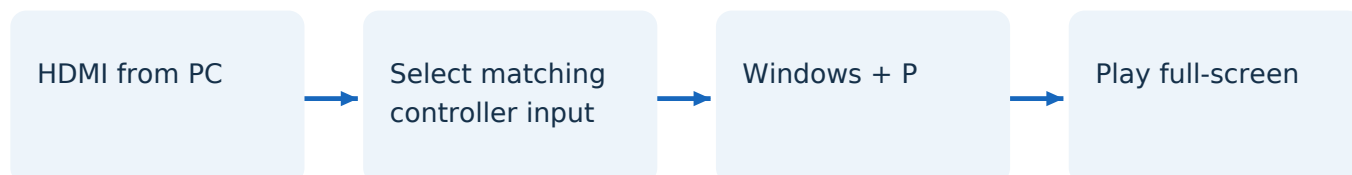
Confirm motion and record the result

Play moving video; inspect with your eyes and check for lost cabinets, unstable input or visible flicker. Save final settings and an installation photo.

Pass: one complete image spans the wall and remains correct after restart. If only repeated blocks appear, check mapping before repeatedly reloading RCFG.

16 Play video from a Windows computer

NovaLCT configures the LED system. Your computer / player supplies the actual HDMI video.

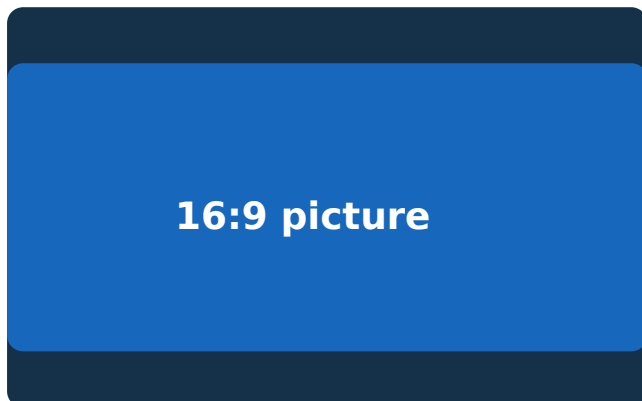


- 1** Connect and select the video input
Connect the PC video output to controller HDMI IN (or another supported input). Select that exact input on the controller. Confirm its status shows an active input resolution / frame rate.
- 2** Choose a Windows display mode
Press Windows + P. Duplicate is easiest for a first test because the LED receives the same desktop. Extend gives a separate playback desktop; your laptop desktop alone may then be all you see initially.
- 3** Check the external display settings
Start → Settings → System → Display. Identify and select the controller-connected display. Use a resolution / refresh rate supported by BOTH computer and controller. Keep changes only if the picture is stable.
- 4** For Extend: move the player to the LED desktop
Drag the video-player window to the external desktop, or select that display in the player where supported. Start full-screen playback there. A player full-screen on the laptop will not automatically play on the extended LED output.
- 5** Keep playback running reliably
Use a local test file first. Plug the laptop into AC, prevent sleep during the event and suppress disruptive notifications. Verify sound separately if audio is required.

Pass: the selected video appears and plays on the LED wall. If the wall shows only wallpaper, check the extended desktop / player location before changing RCFG.

17 Fit the picture without distortion

Input video resolution, LED pixel size and driver refresh rate are different settings.



1024 x 768 LED wall (4:3)

Worked example:

LED canvas = 1024 x 768.

A full-width 16:9 picture uses 1024 x 576 pixels.

Preserving the image leaves 96 pixels of black at top and bottom.

Illustrative geometry, not a processor screenshot.

- 1** Confirm the output / screen canvas
Use the actual total LED pixel width and height from p.3. In this example, 1024 x 768. Do not enter the physical size in millimeters.
- 2** Choose the picture treatment
Fit keeps the whole picture with possible black bars. Fill / crop removes edges to fill the wall. Stretch changes proportions; avoid it for faces, circles and logos.
- 3** Set position and scaling on the actual controller
Use the controller's supported layer / scaling / output controls. Start the target area at the intended screen origin; configure its width / height to match the map. Record the actual menu names and values.
- 4** Check with recognizable content
Show circles, text and four corner labels. Circles stay round; text is readable; all intended corners are visible. Save a preset only after this passes.

If controls differ: use the exact model manual. A sender without video scaling cannot perform a scaler's "fit / crop" functions; size the source content or add a suitable processor.

18 Daily opening, playback and closing

Use the approved setup and saved preset. Daily operators do not need to reload receiving-card files.

Routine	What the operator does
Before opening	Inspect cables, connectors, locks, support, ventilation and moisture. Confirm the source file / playlist and controller preset.
Start	PC / player → controller and stable input → approved screen branches. Begin at suitable low brightness; verify the full picture.
During use	Select the intended input, restore the correct preset, adjust permitted brightness and check the whole wall. Keep ventilation clear.
Change the program	Open the new file / playlist on the correct playback desktop. Preview proportions and audio; avoid changing the cabinet map.
Close	Stop / set black → switch off screen branches → controller → source as needed. Secure and protect equipment.

Record the working setup:

Input: _____ Source resolution / frame rate: _____

LED pixel canvas: _____ Preset: _____

Brightness guidance: _____ Playback display / app: _____

Pass: the operator can open, play, select the approved input / preset, adjust brightness and close the system without changing technical configuration.

19 Maintenance and module replacement

Determine the actual maintenance method before removing anything. A suction tool is not universal.

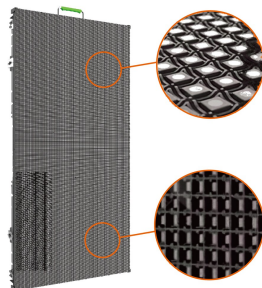


Image: module example from the supplied review PDF. No universal removal method is implied.

- 1** Identify the approved removal method
Front magnetic removal, screw-mounted rear service and other systems use different tools and restraints. Use the method for this exact cabinet / module.
- 2** Isolate and verify before removal
Turn off and isolate every applicable supply. Verify safe electrical state. A fixed two-minute wait does not replace isolation and verification.
- 3** Support and record
Mark module position and photograph connectors. Support the module against falling; release its retention system with the specified tool. Do not pull by LEDs or cables.
- 4** Fit a compatible spare
Match pixel pitch, size, scan / IC, interface, batch and calibration requirements. Connect with power off, restore retention and avoid pinched wires.
- 5** Test and restore protection
Check flatness, test colors and compare neighboring modules. Restore the required seals and covers. Have receiving-card or power-supply replacement performed by trained service personnel.

Routine care: follow the model's cleaning / storage instructions; inspect before each use. Never wash or chemically clean LED surfaces without the manufacturer's approved method.

20 Troubleshoot by symptom and scope

Change one thing at a time. Record the result and restore known-good settings.

Symptom	Check before making further changes
No picture anywhere	Check approved power status, controller startup, active input, blackout / brightness, first signal cable, configuration and map.
Software detects no sender	Check the supported CONTROL port, USB driver / cable or network setup. A live HDMI picture does not prove USB control is connected.
Dark chain after a cabinet	Check power to the dark group and the link from the last working cabinet. Cable, connector, card or downstream supply can cause this; not only a damaged OUT cable.
Repeated / swapped / shifted blocks	Check actual per-card pixels, output-port selection and cable order against Screen Connection. Read / restore the approved map.
One module has lines / wrong color	Isolate power, then have trained staff check module supply, flat cable and compatible spare. Do not hot-plug internal cables.
Desktop visible but no video	Check Duplicate / Extend mode, the player's display location, full-screen target and selected video input.
Missing edges / stretched picture	Check input format, output area, position and fit / crop choice. Confirm total LED pixel width and height.
Trip / hot connector / water ingress	Stop and isolate. Electrician / service staff investigate the fault. Do not repeatedly reset, increase breaker size or bypass protection.

Send Bluestar: full-wall + close-up video, controller model and input status, cabinet / port labels, configuration filename, affected area and recent changes. Internal photos only after safe isolation by

If visual flicker is camera-only: report camera shutter / frame rate as well. Do not randomly modify scan timing or firmware to remove recording stripes.

21 Handover, support and references

A successful handover includes the working configuration and an operator who can repeat the routine.

Acceptance checklist

- ☐ Structure approved; supports, locks and required fasteners checked.
- ☐ Electrical checks complete; branches and protection labeled.
- ☐ All cabinets mapped correctly; color, grayscale, corner and motion tests pass.
- ☐ Picture remains correct after restart.
- ☐ Input, canvas, scaling, brightness and preset documented.
- ☐ Correct RCFG, final map, system backup and actual wiring diagram delivered.
- ☐ Operator demonstrates startup, playback, input / preset selection and shutdown.
- ☐ Spare-parts list, maintenance method and support contact delivered.

Warranty

The signed order / sales terms determine warranty coverage and duration. Confirm display, controller and accessory terms separately; this manual does not replace the contract.

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References and image notes

[NovaStar NovaLCT synchronous manual V5.4.8: Sections 4, 5.2.2-5.2.4.](#)

[Microsoft Support: How to use multiple monitors in Windows.](#)

Cabinet product images are reused from the user-supplied MUSE v3 review PDF. Official NovaStar screenshots are interface references, not the parameter values for this order. Diagrams in this edition are explanatory drawings.

Installation record: date _____ installer _____ electrician _____
Operator _____ order / serial range _____ final backup filename _____