



Service Guide

020-001807-02

Extreme Series LCD Panels

FHD554-XZ, FHD554-XZ-R, FHD554-XZ-H, FHD554-XZ-HR

CHRISTIE®

NOTICES

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GENERAL

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WARRANTY

Products are warranted under Christie's standard limited warranty, the complete details of which are available by contacting your Christie dealer or Christie. In addition to the other limitations that may be specified in Christie's standard limited warranty and, to the extent relevant or applicable to your product, the warranty does not cover:

- a. Problems or damage occurring during shipment, in either direction.
- b. Problems or damage caused by combination of a product with non-Christie equipment, such as distribution systems, cameras, DVD players, etc., or use of a product with any non-Christie interface device.
- c. Problems or damage caused by misuse, improper power source, accident, fire, flood, lightning, earthquake, or other natural disaster.
- d. Problems or damage caused by improper installation/alignment, or by equipment modification, if by other than Christie service personnel or a Christie authorized repair service provider.
- e. Use of third party product enclosures for environmental protection during outside use must be approved by Christie.
- f. Problems or damage caused by use of a product on a motion platform or other movable device where such product has not been designed, modified or approved by Christie for such use.
- g. Except where the product is designed for outdoor use, problems or damage caused by use of the product outdoors unless such product is protected from precipitation or other adverse weather or environmental conditions and the ambient temperature is within the recommended ambient temperature set forth in the specifications for such product.
- h. Image retention on LCD flat panels.
- i. Defects caused by normal wear and tear or otherwise due to normal aging of a product.

The warranty does not apply to any product where the serial number has been removed or obliterated. The warranty also does not apply to any product sold by a reseller to an end user outside of the country where the reseller is located unless (i) Christie has an office in the country where the end user is located or (ii) the required international warranty fee has been paid.

The warranty does not obligate Christie to provide any on site warranty service at the product site location.

PREVENTATIVE MAINTENANCE

Preventative maintenance is an important part of the continued and proper operation of your product. Failure to perform maintenance as required, and in accordance with the maintenance schedule specified by Christie, will void the warranty.


REGULATORY (if applicable)

The product 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 when the product is operated in a commercial environment. The product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of the product in a residential area is likely to cause harmful interference in which case the user will be required to correct the **interference at the user's own expense.**

CAN ICES-3 (A) / NMB-3 (A)

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ENVIRONMENTAL

The product is designed and manufactured with high-quality materials and components that can be recycled and reused. This symbol  means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from regular waste. Please dispose of the product appropriately and according to local regulations. In the European Union, there are separate collection systems for used electrical and electronic products. Please help us to conserve the environment we live in!

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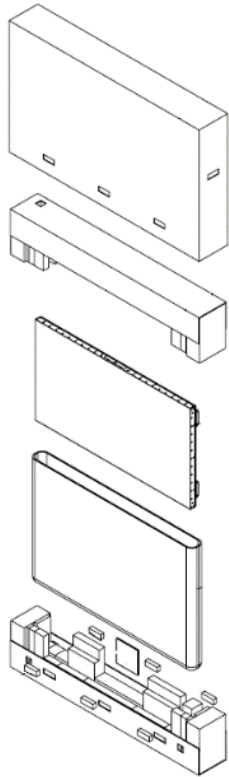
Package handling

Learn how to remove the display panel from the packaging and how to handle the display panel.

Unpacking the panel

Learn how to remove the panel from the packaging.

Each LCD panel is packed inside a box carton. To protect the panel during transportation, additional packing material has been placed within the carton.

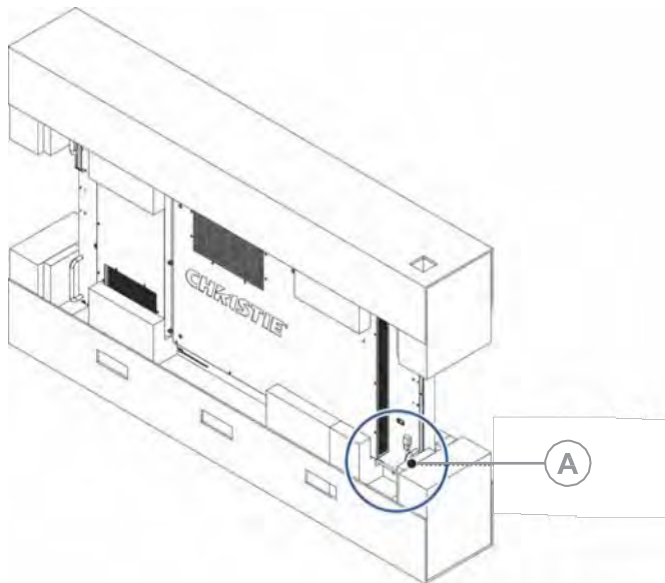


1. Before unpacking, prepare a stable, level, and clean surface near a wall outlet.
2. Set the box in an upright position and pull out the white carton locks.
3. Lift up the top cover carton.
4. Remove the polybag before removing the display from the bottom tray carton.
5. Remove any additional packaging, such as protective stickers, from the display panel.

Inspecting the display panel

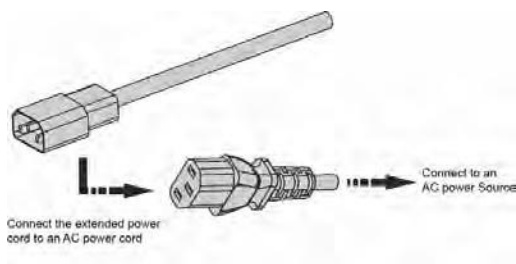
Conduct an inspection on the display panel and verify the panel functions as expected before unpacking. If any damage is identified, or the panel does not function as expected, contact Christie Technical Support.

1. Tear off the sticker for a small opening on the right bottom corner at the back of the display panel (A).

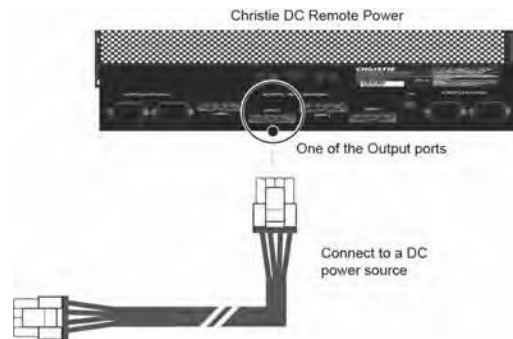


2. Pull the power cable through the packaging.
3. Connect the power cord to a power source and turn on the display panel.

For AC models, pull out the extended power cable and connect it to an AC power cord.



For DC models, pull out the DC power cord.



When connecting to a power source for the first time, the display panel automatically cycles through test patterns for 15 minutes (only).

4. As the display panel is cycling through the test patterns, inspect the display.

Handling and mounting guidelines for extreme narrow bezel series panels

Follow these best practices when handling and mounting extreme narrow bezel panels.



Notice. If not avoided, the following could result in property damage.

- When moving the panel, always use the handles. Do not carry the panel by the frame.
- Do not twist, bend, or tilt the panel.
- Do not apply excessive force to the sides of the bezel when mounting the panel or pushing into its locked position.
- Always handle the display panel from the sides or handles.

Follow the following guidelines before removing the panel from the packaging.

- To verify normal operation before handling, power on the panel in the packaging.
- Always use the handles to pick up and carry the panel.
- Leave the panel in the box until the mount is on the wall and you are ready to install the panel.
- To avoid putting undue stress on the panel when mounted, make sure the mount is square, flat, and level.
- Do not rest panels on top of a lower panel.
- When inserting the panel into the wall, pay close attention to adjacent panels.
- Make sure there is a minimum of 0.5 mm between mounted panels to allow for thermal expansion.

Cleaning the panel

Learn how to clean the display panel.

After disconnecting the power cable, wipe contaminated parts and each part of the product screen lightly with a dry and soft cloth.

Do not use a liquid, spray cleaners, or any abrasive cleaners to clean the LCD panel.

Washing with various cleaning agents, brighteners, abrasives, waxes, benzene, alcohol, solvent, surface active agent, may damage the surface of the product.

Important safeguards

To prevent personal injury and to protect the device from damage, read and follow these safety precautions.

General safety precautions

Observe these important safety rules to avoid personal injury or damage to the product.



Warning! If not avoided, the following could result in death or serious injury.

- **“Ensure that any external equipment is properly grounded before connecting to the display device”.**
- A minimum of two people or appropriately rated lift equipment is required to safely lift, install, or move the product.
- Do not drop the product.
- Do not apply excessive force to the sides of the bezel when mounting the panel or pushing into its locked position.
- Always handle the product on the opposing corners of the bezel to avoid direct contact with the glass.
- TIP HAZARD! When shipping a panel, use the provided packing materials and secure to a pallet.
- When moving the panel, always use the handles. Do not carry the panel by the frame.



Caution! If not avoided, the following could result in minor or moderate injury.

- Do not tilt the product more than ± 15 degrees.
- Use the handles when moving the shipping package.
- Do not twist, bend, or tilt the panel.



Notice. If not avoided, the following could result in property damage.

- Only clean the components with Christie approved products.

Remote Power Rack Shelf safety warnings (for FHD554-XZ-R and FHD554-XZ-HR)

To prevent personal injury and to protect the device from damage, read and follow these safety precautions.



Warning! If not avoided, the following could result in death or serious injury.

- This product must be installed within a restricted access location not accessible by the general public.
- SHOCK HAZARD! Disconnect the product from AC before installing, moving, servicing, cleaning, removing components, or opening any enclosure.
- A minimum of two people or appropriately rated lift equipment is required to safely lift, install, or move the product.
- A certified electrician must be present during installation to ensure the installation meets the local electrical code.
- Install the product near an easily accessible AC receptacle.

- Hazardous voltages are present at power system inputs. The DC output, though not dangerous in voltage, has a high short-circuit current capacity that may cause severe burns and electrical arcing.
- SHOCK HAZARD! Power supply uses double pole/neutral fusing.
- Before working with live power systems, remove all metallic jewelry (such as watches, rings, metal rimmed glasses, or necklaces) and wear safety glasses with side shields at all times during the installation.
- Motors and fans may start without warning.
- Use insulated hand tools while working on live power systems.

Product documentation

For installation, setup, and user information, see the product documentation available on the Christie website. Read all instructions before using or servicing this product.

1. Access the documentation from the Christie website:
 - Go to this URL: <http://bit.ly/2CqwJJO>.
 - Scan the QR code using a QR code reader app on a smartphone or tablet.



2. On the product page, select the model and switch to the Downloads tab.

Related documentation

Additional information on the LCD panels is available in the following documents.

- *Extreme Series User Guide (P/N: 020-001725-XX)*
- *Extreme Series LCD Panels Product Safety Guide (P/N: 020-001724-XX)*
- *Extreme Series LCD Display Panels External Commands (P/N: 020-001684-XX)*
- *FHD554-XZ-R and FHD554-XZ-H-HR LCD Panels Color Matching Guide (P/N: 020-001663-XX)*

Replacement parts

When ordering replacement parts, quote the part numbers of the items required.

Some parts identified in the service parts list may not be available separately. In addition, some parts stocked as inventory are available only until the current supply lasts. All part numbers are subject-to- change. When ordering replacement parts, provide the following information found on the product license label:

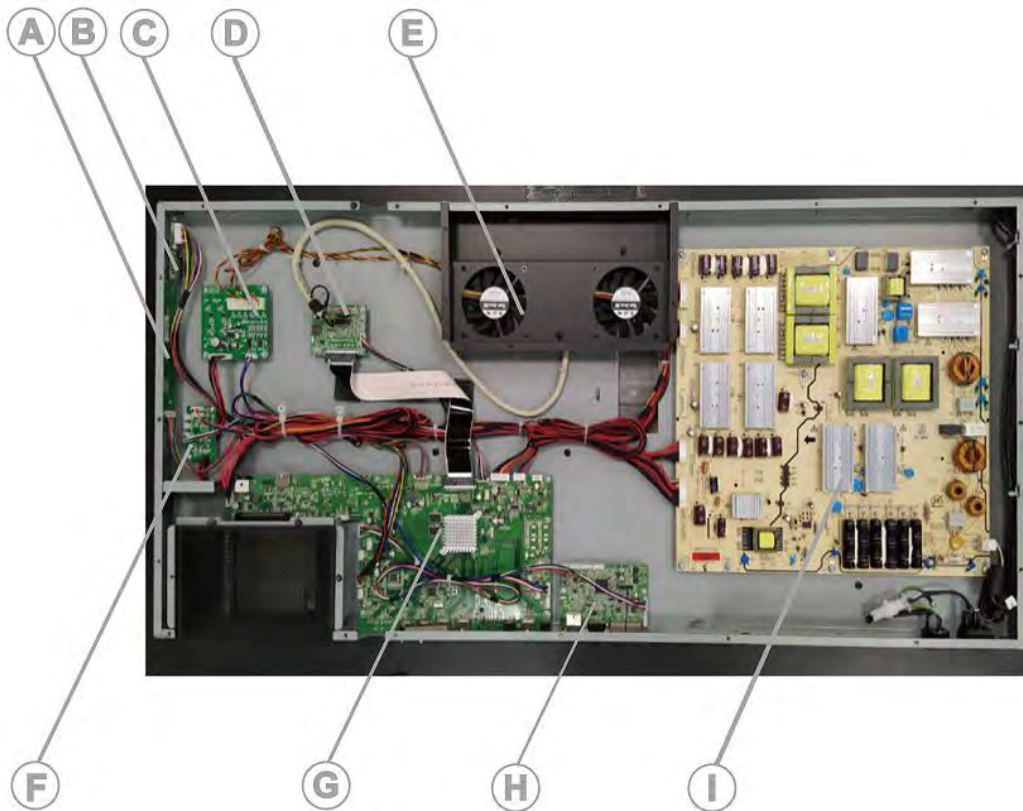
- Panel Model
- Panel Serial Number Manufacture Date
- Manufacture Date

Index of parts and modules

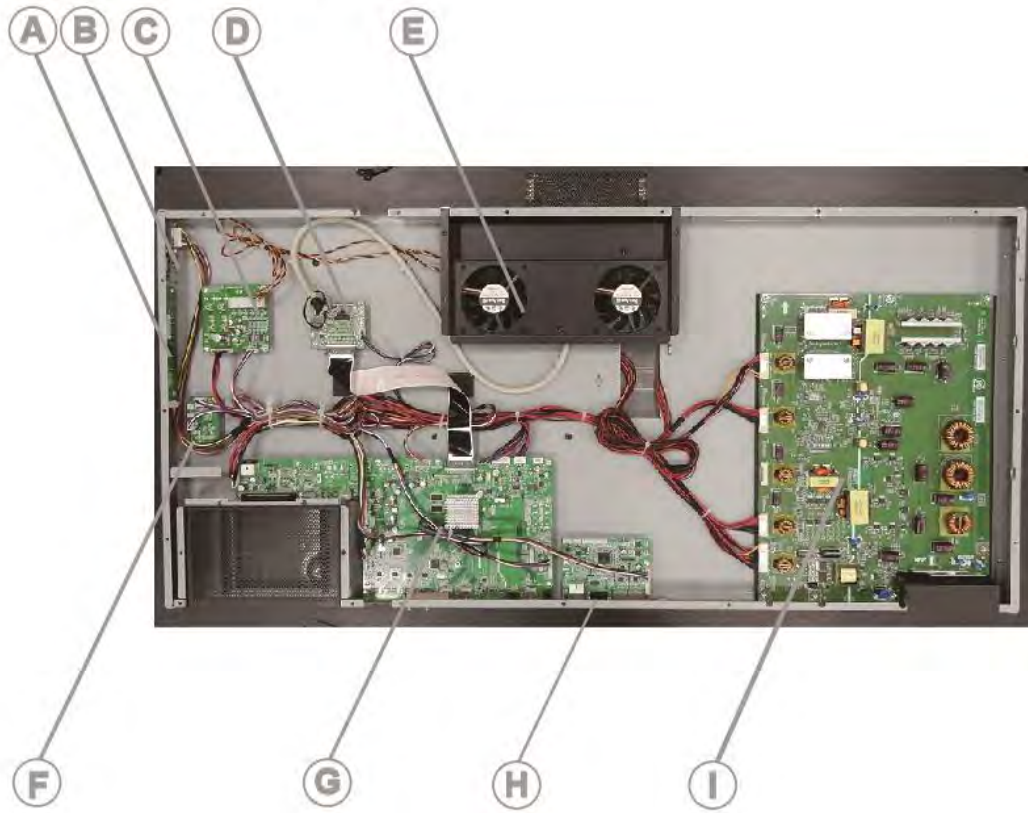
The following is a list of replaceable parts and part numbers.

Components must be replaced with exact equivalents. Failure to do so may result in unsafe operation.

FHD554-XZ & FHD554-XZ-H



FHD554-XZ-R & FHD554-XZ-HR



| Callout | Part number | Description |
|---------|---------------|--|
| A | 003-121585-01 | Keypad board |
| B | 003-121863-01 | IR board |
| C | 003-121583-01 | Fan board |
| D | 003-121879-01 | Vx1 Converter board |
| E | 003-121066-01 | Fan |
| F | 003-121584-01 | Sensor board |
| G | 003-121864-01 | AD board |
| H | 003-121865-01 | LAN and RS232 board |
| I | 003-121880-01 | Power board (FHD554-XZ & FHD554-XZ-H) |
| I | 003-121880-01 | Power board (FHD554-XZ-R & FHD554-XZ-HR) |

Replacement procedures

When reinstalling a module, follow the removal instructions in reverse unless otherwise indicated.



Caution! If not avoided, the following could result in minor or moderate injury.

- SHOCK HAZARD! Disconnect the product from DC before installing, moving, servicing, cleaning, removing components, or opening any enclosure.



Notice. If not avoided, the following could result in property damage.

- Observe all electrostatic precautions. Use a grounded wrist strap and insulated tools when handling, servicing, or cleaning electronic assemblies.
- Christie products must be installed and serviced by Christie qualified technicians.
- All procedures must be performed by Christie qualified technicians.

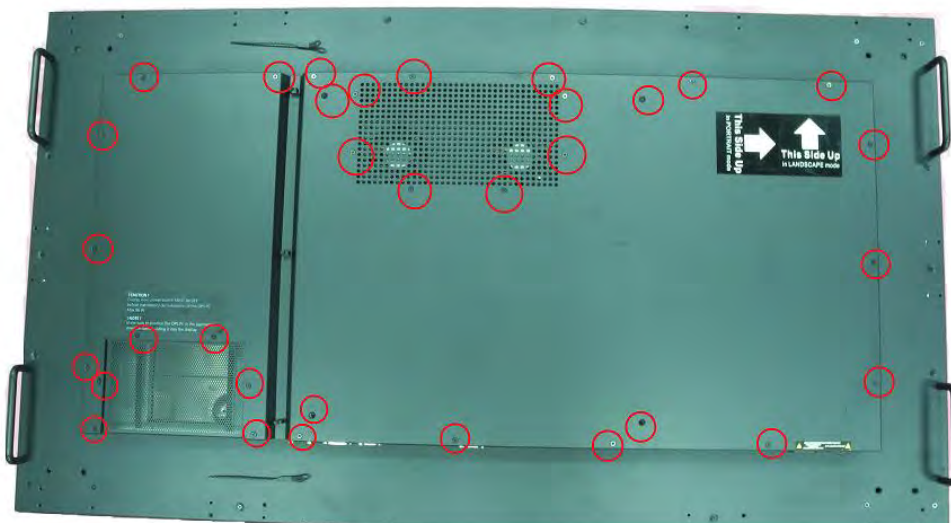
Follow all service safety guidelines. This panel is internationally approved and is designed for safe and reliable operation

Required tools

- #1 and #2 Phillips™ screw drivers
- ESD protective strap and pad

Removing the rear cover

The rear cover houses the replaceable components of the display panel.

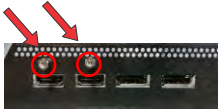


1. Place the display panel face-down on a clean, protective surface.
2. Remove the 33 Phillips screws securing the cover to the panel.
3. Remove the rear cover from the display panel.

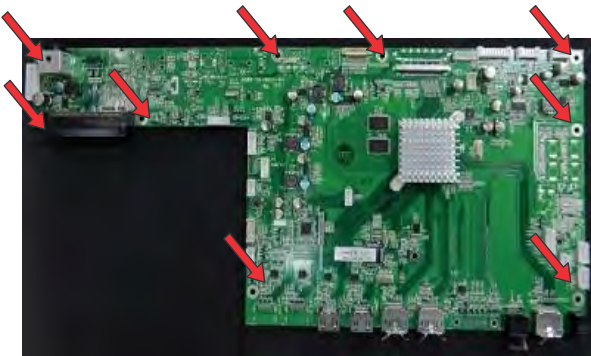
Replacing the AD board

The AD board is located on the bottom left-hand rear side of the display panel.

1. Remove the rear cover.
2. If present, remove the OPS module.
3. Remove the two standoffs from the ports.



4. Remove all connectors from the board.
5. Remove the nine Phillips screws from the AD board.



6. Replace the AD board.
7. To re-install, follow these steps in reverse order.

Replacing the keypad board

The keypad board is located on the left-hand rear side of the display panel.

1. Remove the rear cover.
2. Remove all connectors from the board.
3. Remove the two Phillips screws that secure the keypad board to the side of the display panel.



4. Replace the keypad board.
5. To re-install, follow these steps in reverse order.

Replacing the sensor board

The sensor board is located on the left-hand rear side of the display panel.

1. Remove the rear cover.
2. Remove all connectors from the board.
3. Remove the two Phillips screws from the sensor board.



4. Replace the sensor board.
5. To re-install, follow these steps in reverse order.

Replacing the LAN/RS232 board

The LAN/RS232 board is located at the bottom-center rear side of the display panel.

1. Remove the rear cover.
2. Remove the two standoffs from the ports.



3. Remove all connectors from the board.
4. Remove the four Phillips screws from the LAN/RS232 board.

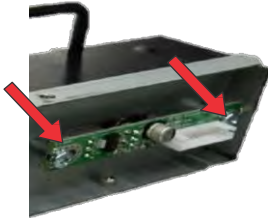


5. Replace the LAN/RS232 board.
6. To re-install, follow these steps in reverse order.

Replacing the IR board

The IR board is located at the top-left rear side of the display panel.

1. Remove the rear cover.
2. Remove all connectors from the board.
3. Remove the two Phillips screws from the IR board.

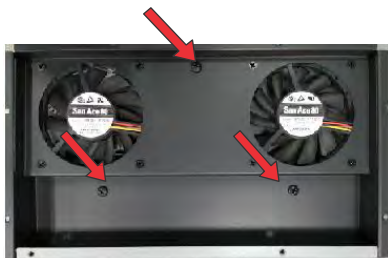


4. Replace the IR board.
When replacing the IR board, ensure the three sensors line up to the window.
5. To re-install, follow these steps in reverse order.

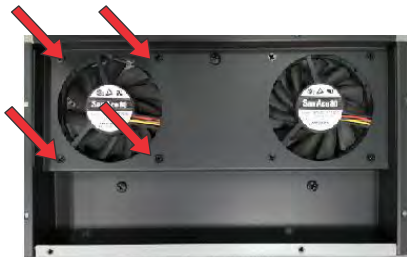
Replacing the fans

The IR board is located at the top-center side of the display panel.

1. Remove the rear cover.
2. Remove the three screws securing the mounting bracket to the panel.



3. Remove the four Phillips screws securing the fan to the mounting bracket.

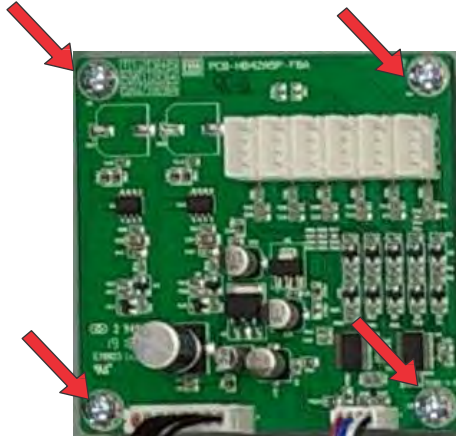


4. Replace the fans.
5. To re-install, follow these steps in reverse order.

Replacing the fan board

The fan board is on the middle-left rear side of the display panel.

1. Remove the rear cover.
2. Remove all connectors from the board.
3. Remove the four Phillips screws from the fan board.

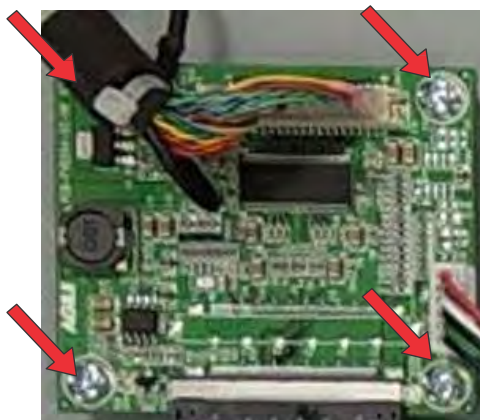


4. Replace the fan board.
5. To re-install, follow these steps in reverse order.

Replacing the Vx1 converter board

The Vx1 converter board is in the top-left and top-right rear side of the display panel.

1. Remove the rear cover.
2. Remove all cables connected to the board.
3. Remove the four screws securing the Vx1 converter to the converter bracket.



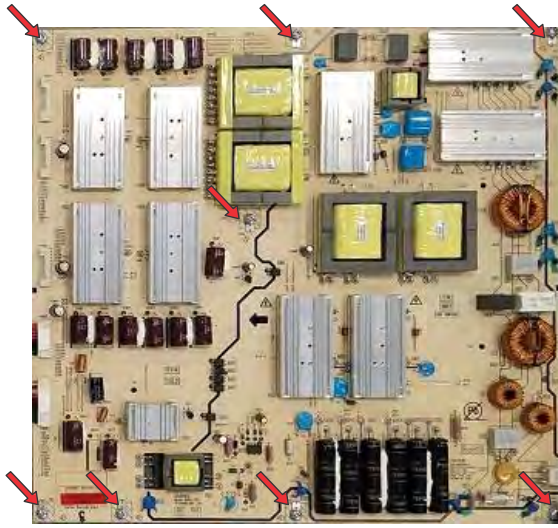
4. Replace the Vx1 converter.
5. To re-install, follow these steps in reverse order.

Replacing the power board

The power board is on the right-rear side of the display panel.

1. Remove the rear cover.
2. Remove all connectors from the board.
3. Remove the eight Phillips screws from the power board.

FHD554-XZ & FHD554-XZ-H



FHD554-XZ-R & FHD554-XZ-HR



4. Replace the power board.
5. To re-install, follow these steps in reverse order.

Maintenance and troubleshooting

Learn the information and procedures for performing panel troubleshooting.

Maintenance

FHD554-XZ Series display panels do not require any routine maintenance.

There are no user-serviceable or -replaceable parts. Unless you are a qualified, factory-trained technician, do not attempt to repair or replace any system component yourself. You will void the product warranty if you do so.

Troubleshooting

Learn about common issues and their solutions.

FHD554-XZ Series display panels do not require any routine maintenance. There are no user-serviceable or replaceable parts. Do not attempt to repair or replace any system component yourself unless you are a qualified, factory trained-technician, as doing so voids the product warranty.

The display does not turn on

No video is displayed on the panel.

Details

Possible causes for this issue include:

- The display is not plugged in or the power outlet is not active.
- The main power switch is off.
- The remote control batteries have run out.

Resolution

- Ensure that the display is plugged in and that the power outlet is active.
- Set the main power switch to the on position.
- Replace the batteries.

No picture appears on the display

The display is on and the menus appear, but there is no picture on the panel.

Details

Possible causes for this issue include:

- Incorrect source selection.
- Source component is not turned on.
- Source component is connected incorrectly or not at all.
- An unknown error occurred
-

Resolution

- Select the correct source.
- Turn on the source component.
- Check connections from the source component to the display.
- If there is an error code:
 - Use AC power switch to power cycle and try again to see if error persists.
 - Set Power On Delay so units in wall turn on in sequence, 1 sec apart.
 - View the factory menu to see error log and report to customer service.

The remote control does not work

Pressing buttons on the remote control does not affect the display.

Details

Possible causes for this issue include:

- The remote control batteries have run out.
- The buttons are locked.
- IR extender is not connected.

Resolution

- Replace the batteries.
- Unlock the buttons by pressing ENTER, ENTER, EXIT, EXIT, ENTER and EXIT, in sequence.
- Verify that the IR extender cable is correctly connected.

The image geometry is incorrect

The image is displayed with an incorrect aspect ratio.

Resolution

Select a different aspect ratio.

The content is jittery or unstable

The content on the display panel is poor-quality or the panel is improperly connected to the source.

In some cases, the horizontal or vertical scan frequency of the input signal may be out of range for the display panel.

Resolution

- Verify that the source is properly connected.
- Correct the quality of the content.

The image is too bright or lacks definition

The image contrast is set too high and the bright areas of the image have no definition.

Resolution

Decrease the contrast setting.

The image appears washed out

The dark areas of the displayed image are too bright.

Resolution

Decrease the brightness settings.

The image is too dark

The image appears too dark when the brightness or backlight are set too low.

Resolution

Increase the brightness or backlight settings.

Images from the HDMI source do not display

Source video over HDMI does not display on the panel.

Details

Possible causes for this issue include:

- The resolution and frequency of the video card in the computer are not compatible with the display.
- HDMI cable from source to display is either defective or too long.

Resolution

- Select a compatible resolution and vertical frequency.
- Try a known-good and/or shorter HDMI cable.

Computer images do not display correctly

Images that originate from a computer source do not display correctly on the panel.

Details

Possible causes for this issue include:

- The resolution and frequency of the video card in the computer are not compatible with the display.
- Clock and Phase settings need adjustment.

Resolution

- Select a compatible resolution and vertical frequency.
- Adjust Clock and Phase settings.

Lines or bands appears on the display

Screen shows vertical/horizontal lines or bands on the panel.

Details

Possible causes for this issue include:

- Dropped or damaged on the edges of the display.

Resolution

- Check the damage → Contact FAE → Replace the panel.

Cracked or broken screen

Screen has broken patterns or spots on the panel.

Details

Possible causes for this issue include:

- Dropped or damaged on the edges of the display.

Resolution

- Check the damage → Contact FAE → Replace the panel.

Abnormal display

The screen appears to have abnormal colors, a cloudy, white shadow, bright spots, flickering or flashing images.

Details

Possible causes for this issue include:

- Source component is connected incorrectly or not at all.
- The cable is not properly connected.
- Dropped or damaged on the edges of the display.

Resolution

- Swap the source with another display.
- Reconnect the cable to the display
- **Use Remote controller, press "Exit" for 5 seconds to run the test pattern. If the test pattern looks fine, or if the OSD menu looks fine, this suggests a source problem**
- If there is display damage then: check the damage → contact FAE → replace the panel.

Ethernet input loses IP address or MAC address

Ethernet can not detect IP address or MAC address.

Details

Possible causes for this issue include:

- Home IP address setting need adjustment
- Firmware is not the latest version
- Ethernet board fails to work.

Resolution

- Check the MAC address is started with 00:1F:B6.
- Check if the firmware is the latest version.
- Check the damage → Contact FAE → Replace the panel.

Some functions of display are not supported

Some configuration functions are not supported or not working.

Details

Possible causes for this issue include:

- The current firmware version is out-of-date.

Resolution

- Record the firmware version and the **serial number at “Info” screen**.
- Check if the firmware is the latest version. If not, update to the newest firmware version. Record all image settings (RGB gains, RGB offsets, backlight, color temp, etc.) before update.
- Reset to factory settings.

Escalation process

The individual steps of the escalation process. Carries out a problem description and analysis of the causes, and it prepares an action plan to eliminate the problem.

Steps

1. Execute troubleshooting steps in previous section.
2. Record OSD settings then perform a factory reset.
3. Swap the cable and source with another display.
 - 3.1. If problems persist with external devices, plug them into different ports. The problem may be poor inputs rather than the display itself. Replace the cables to make sure that is not the main issue.
 - 3.2. If problems following to the source, the source is the issue.
 - 3.3. If problems following to the display, the display is the issue.
4. Record the serial number and firmware revisions in Info screen.
5. Record the information as much as can be about the installation (wiring diagram, sources etc.).
6. Record any special OSD settings.
7. Record any special installation requirements (fast motion, low color temperature, dim lighting etc.).
8. Contact Christie Technical Support.

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